

The
Source[®]
for
Oral-Facial
Exercises
Updated & Expanded

Debra C. Gangale



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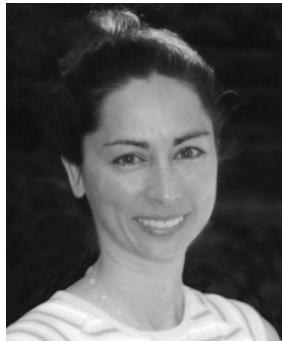
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Debra C. Gangale, M.A., CCC-SLP, has been in private practice for over 19 years. She wishes you much love and joy on your path. She can be reached at debragangale.com for information on consultations, therapy, and seminars.

Dedication

To Dominic and Emilie Gangale, my parents. Their capacity for kindness, generosity, and love goes unparalleled in their commitment to service to others. Thank you for teaching me the way.

Acknowledgment

Special thanks to Lauri Whiskeyman, Chris Buysse, Deborah Curzon Crocker, and Carolyn LoGiudice for their creative spirit and expertise in bringing this book to life

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Foreward

All treatments should be part of the treatment plan which is signed and approved by the individual's primary physician. If the individual does not show pain relief or increase in function, it is best to suggest another type of intervention such as physical therapy, occupational therapy, advanced myofascial therapy, neuromuscular massage intervention, counseling, or other pain management strategies referred by the physician.

Disclaimer

The *Source for Oral-Facial Exercises: Updated and Expanded* is a resource book to assist you in developing a therapy program for individuals with oral-facial disorders. Please remember that aspiration can occur even with strict adherence to proper positioning and precautions. This book may accompany the individual home for independent use. It is best used with the supervision of a licensed speech-language pathologist, occupational therapist, or physical therapist. The Author and LinguSystems assume no responsibility for the inaccurate interpretation or application of the theories, procedures, and techniques presented in this book.

Introduction

The Source for Oral-Facial Exercises: Updated and Expanded includes everything you'll need to evaluate a client with oral-facial disorders and to implement a therapy program. This comprehensive listing of interventions and exercises provides you with a wide variety of tools to meet your client's needs. The large type and clear line illustrations make the simple exercises ideal to reproduce for clients.

It's important to consider each client individually when establishing a remediation program. Each situation brings a unique set of needs and may require ongoing modifications to the number of therapy sessions per week, short-term and long-term goals, and overall progress. The exercises in this book will benefit clients with a variety of oral-facial disorders including those associated with:

- cerebral palsy
- Parkinson's disease
- mental retardation
- head trauma
- cranio-facial anomalies
- Bell's palsy

Exercises and intervention goals may be as follows and are listed per exercise:

- balance flaccid and tense musculature
- inhibit and facilitate movement
- relax and focus the client
- stimulate flaccid muscle tissue
- decrease tactile defensiveness
- increase productive usage of musculature for deglutition, articulation, and voicing
- decrease pain response
- improve vocal quality and vocal projection
- improve attention span
- improve communication
- improve energy awareness
- strengthen client, clinician, family, and support staff communication in rehabilitation
- increase oral awareness
- develop more precise oral movements for eating and drinking
- increase speech intelligibility through phrasing or motor planning

The goal of *The Source for Oral-Facial Exercises: Updated and Expanded* is to allow the individual to work with you to manage a program of recovery that is all inclusive to the individual. This book is intended for use with inpatients, outpatients, home healthcare, or as a take-home workbook for clients.

You'll notice that some of the exercises are written to you, the speech-language pathologist (SLP), and some are written directly to the client. This is because many of the exercises can be performed directly by the client or with assistance from an SLP or aide. Become familiar with each page so that you are better able to locate the intervention that specifically fits your needs for rehabilitation.

An oral-motor team that supports attainment of the client's oral-motor goals is vital to success. The ideal situation is to include all people who interact with the individual for his overall health and recovery. Use the members of the team on a regular basis for support, instruction, and care plan development. Team members may include:

- patient
- family members
- physicians – primary physician or any other M.D. directly or indirectly related to patient recovery (e.g., otolaryngologist [Ear, Nose, and Throat specialist])
- nurses
- speech-language pathologist (SLP) – certified individual trained to develop and rehabilitate communication, voice, and swallowing
- occupational therapist (OT) – certified individual trained to develop and rehabilitate gross, fine, and perceptual motor functions for living and vocational skills
- physical therapist (PT) – certified individual trained to rehabilitate overall skeletal-muscular strength and range of motion
- audiologist – certified individual trained to test and treat hearing-related difficulties
- neuromuscular massage therapist – specialist in all forms of deep tissue work, myofascial release, integrative body therapy, and/or experience with medical conditions
- augmentative communication specialist – may be an SLP who will develop an alternate means of communication (e.g., sign language, communication board, picture cards, letter board). Augmentative communication relieves the stress of communication while regaining speech intelligibility during oral-motor therapy.
- social worker
- music therapist

- art therapist
- Feldenkrais movement specialist – individual trained to develop body awareness and improve posture and movement
- yoga instructor
- meditation instructor – specialist trained to teach people how to release tension, become centered, and relax through release of the breath
- acupuncturist

Many of these specialists can be located through the yellow pages. If not readily available by phone, the Internet or a local librarian can direct you to resources to help you build your team. You'll also find many contacts listed throughout this book.

As much as possible, *The Source for Oral-Facial Exercises: Updated & Expanded* emphasizes self-recovery. Insist that the individual help as much as possible in the recovery process. This assures the individual that he can make a difference and be a force in his own growth and recovery from the start. This will also allow intervention to continue when the individual is dismissed from formalized therapy.

Much joy and success,
Debra

Motivating the Client

Throughout therapy, it is important to gauge the motivation of the individual and his desire to be helped. Passive interventions such as massage, acupressure, and sensory stimulation are good ways to help an individual test the water. Many times an individual is fearful of hurting himself when stretching or when doing a repetitive movement. Success at lower levels can prove to a client that it is safe to move forward.

Begin by giving the individual a mix of exercises. Include more difficult exercises with easy or achieved motor movements. This will assure follow-through and continued participation. Then incrementally move toward greater proficiency, strength, and function of movement. Slowly attained, small gains are better than fast and constant failures. Setting easy, attainable goals builds confidence, patience, and endurance for later goals that will be more challenging.

Positive Affirmations

Some clients may be motivated through the use of positive affirmations. Affirmations are positive statements concerning ways we want to think, feel, and behave. They help paint a mental picture of what a person wants to achieve. When a person gives attention to a particular goal, more energy is focused on it. The more something is desired, the more likely it is to be realized. Using positive affirmations during therapy can help a client focus on the goal he is trying to achieve.

When starting an exercise, explain the goal to the client. For example, you might say, "We're going to work on moving your tongue tip up. This will help you swallow more efficiently. We're going to use this tongue depressor for you to push against. It will give your tongue resistance and make it strong. The goal is to get your tongue tip to go up. Let me show you what that looks like."

Then help the client restate the goal using positive affirmations. For example, the client might say, "I can move my tongue tip up. I can push against the tongue depressor. I can make my tongue strong. I can swallow more efficiently." If needed, shorten the affirmation to "I can make my tongue strong," or "I can swallow better."

You might want to write the affirmations on an index card for the client. If the client cannot express himself verbally, it will serve as a positive mental note to practice. Encourage the client to repeat the affirmation(s) as often as needed.

Suggestions for Performing and Scheduling Exercises

When performing exercises on a client, it's important to first touch him on the shoulder or arm to acquaint him with the texture and pressure of your hand. This will also reduce a startle reflex which can occur if you begin by directly touching the client's face.

As the exercises are performed, tell the client what your next move will be and what to expect. Many patients show tactile defensiveness due to lack of touch (e.g., neglected, serious illness) or fear that the exercise might inflict pain.

The exercises can be performed one to five times per day – seven days a week. It's important to develop a program for the client that designates which exercises to do, the number of repetitions per exercise, and the number of times per day. If tolerated, the average routine is 10 repetitions per exercise, three or four times per day unless otherwise noted. The best results will occur with daily exercise. You'll often find clients who enjoy exercising so much, they far exceed the prescribed number of exercises.

If any exercise causes pain, have the client try it again using a shorter range of motion and less muscular effort. A change in how the exercise is being performed may relieve the discomfort. Minor discomfort can be expected in the beginning because the client's muscle groups may be atrophied, very weak, and/or unaccustomed to movement. Generally, clients find the exercises to be soothing. The exercises also tend to relieve the discomfort associated with restricted range of motion and weak musculature.

When the client is performing the exercises for the first time, it's best to eliminate any distractions like the radio or competing conversations. Once the client is familiar with the exercises, soft background music can be relaxing.

Universal Precautions

Universal precautions refer to the laws set in place to maintain healthy safe interactions with any individual in any setting. These precautions are usually available at the facility or through your employer. It is imperative that they are followed. Basically for oral-motor interventions, it is advised:

- wash hands between each client
- wear a new set of gloves for each client
- avoid touching yourself when wearing the gloves as they may have been in or around the client's mouth or an open wound
- wash and disinfect all materials (e.g., pens, toys, vibrators) between clients
- use tongue depressors, lemon swabs, bite blocks, Chewy Tubes, laryngeal mirrors, and Toothettes for one client only and dispose after use

Remember that some individuals may be allergic to latex, tape (e.g., adhesive tape, therapy tape), or plastic. Check with the nurse, the family, and/or the individual before using them or any other new materials.

See the Resources list on pages 254 – 261 for medical suppliers and companies that sell various types of gloves and tools for oral-motor interventions.

Note: Intra-oral tools may be purchased by the SLP, the facility, the family, or the client. Check with the social worker or director of nursing for funding information.

Materials List

Therapy Tools

- large portable mirror
- watch with a second hand
- variety of toothbrushes, including an electric toothbrush and a Nuk toothbrush
- latex gloves
- facial tissues
- nose clip
- tongue depressors
- acrylic bite blocks
- toothettes
- Chewy Tubes
- laryngeal mirror 00
- small hand-held vibrator
- chin cup
- dental floss and dental floss holder
- gauze
- washcloth
- 2" wide soft bristle paintbrush
- rubber band

Food Items

- peanut butter
- jelly
- lemon ice/Italian ice
- Popsicles
- Cream of Wheat or Cream of Rice
- pudding
- ice cream, frozen yogurt, or soy ice cream
- ketchup
- soft chocolate (e.g., chocolate syrup)
- ice block (See Facial Sensory Stimulation Exercises, page 56.)

Music

- variety of music (CDs or audiotapes)
- CD, tape player, or radio
- noisemakers (e.g., toy horns, party favors)
- musical instruments (e.g., flute, horn, drum, cymbals, kazoo)

Miscellaneous Items

- Gummy Bears/dental floss/sewing needle (See page 202.)
- various scents (e.g., perfume, potpourri, garlic, vanilla, cedar, rubber, chocolate, cinnamon, plus other oils with no preservatives or additives for clients with allergies)
- corks of various sizes
- variety of textures (e.g., emery board [rough], piece of wood [hard], a drinking glass [smooth], fur [soft])
- variety of cloths (e.g., flannel, burlap, silk, satin)
- feather
- small soft ball

Chapter 1:

Breathing and Visualization

“It has been known for centuries that it is possible to induce profound changes in body, mind, and spirit by techniques which involve breathing.” — Stanislav Grof

“How could I have forgotten how to breathe?”

This is the most common remark made by individuals experiencing difficulties with inadequate breath support or improper breath usage. The ability to breathe in (inhalation) and out (exhalation) for sound (phonation), tone (resonation), and speech (articulation) is taken for granted. The individual experiencing difficulties might:

- use short breaths
- shallow breaths
- hold breath while attempting phonation and word production
- exhaust air supply before the words are spoken and speak on residual air
- fail to replenish air supply and trail off voice followed by a large, strained, audible inhalation
- mouth words only with little or no attempt at coordinating speech on a voice exhalation

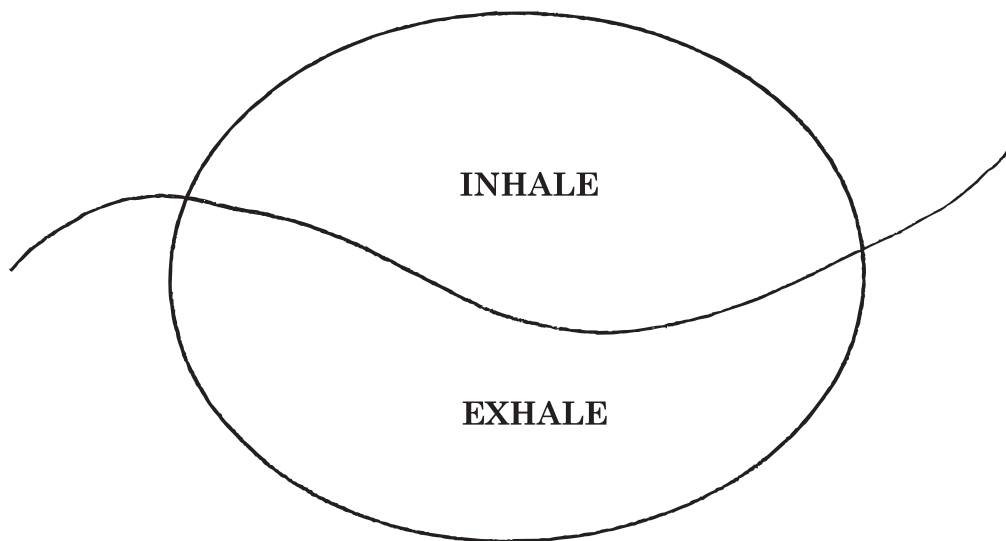
Exercises to provide adequate respiration are key to any program for relaxation, phonation, and/or articulation. The client learns to produce a breathing pattern of inhalation and exhalation for rest breathing and for speech. The amount of air necessary for rest breathing is the same amount as is required for speech.

Using the diagram on the next page, describe the Circular Breathing technique to the client. Explain how the technique will help her:

- visualize the breathing cycle
- monitor rate and length of inhalation and exhalation
- reinforce facial, neck, and body relaxation through imagery

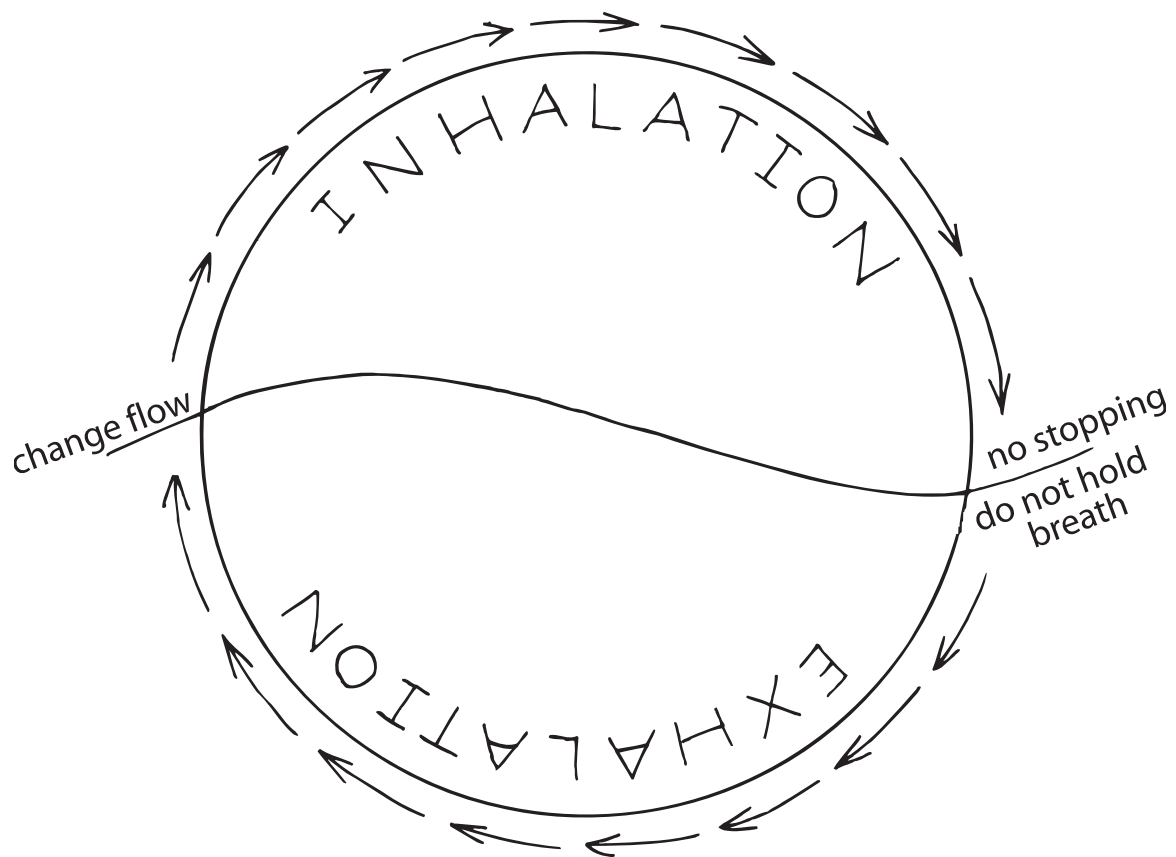
- establish rhythm to breathing cycle
- learn to lower breathing pattern to abdominal-diaphragmatic without confusing details or explanations
- voice upon exhalation using gentle onset of phonation
- replenish air based on kinesthetic (feeling the need for new air supply) approach

Circular Breathing without Voicing



Circular breathing is a simple way to help relax and focus clients. By establishing a slow, relaxed rhythm for inhalation and exhalation, it can help clients improve voicing and articulation. It also releases overall body tensions and can help reduce frustrations when learning a new task. This technique can also be used to slow down or speed up a client's energy level.

This breathing technique is effective for patients with Parkinson's disease, Alzheimer's disease, cerebral palsy, multiple sclerosis, and Amyotrophic Lateral Sclerosis (ALS) as well as patients who have had head injuries (e.g., cerebral vascular accident [CVA]).



- Relax face, head, neck, shoulders, and body.
- Make slow, full inhalation/exhalation while tracing the diagram with your finger.
- Inhale slowly, with full inhalation on the upper half of the circle.
- Exhale slowly, effortlessly on the bottom half of the circle.
- Establish a slow, relaxed rhythm as you inhale and exhale.
- Breathe air in and down as if into the stomach when inhaling.

Imagery

The following descriptions can be paraphrased or read to clients to further help them visualize the Circular Breathing technique. Take the time to demonstrate how it is done properly. Repeat information as needed.

Inhalation: Use a slow, quiet, unforced full breath. Imagine slowly filling your stomach with air. Don't overfill it, just let the air flow into your stomach. As you trace the diagram, maintain a slow, even inhalation. You want your inhalation to last as you trace the top half of the circle. If you hear noise when you inhale, it means there's some stress or tension. Breathe through your nose with your mouth closed. Concentrate on quiet inhalation. If you can still hear your own breath, continue by inhaling more slowly.

Change Flow: Exhaling the air should be easy. Just let the air fall out. Concentrate on feeling the sensation of air moving slowly, without effort, out of your nose. The flow of air should never stop. Your index finger should continue tracing the circle without stopping, slowing, or speeding up. Relax into an even, rhythmic flow around the circle.

Exhalation: As you exhale, completely let all of your muscle effort go. If it helps, silently count to 10 or say the word *exhale* or *release* as you exhale.

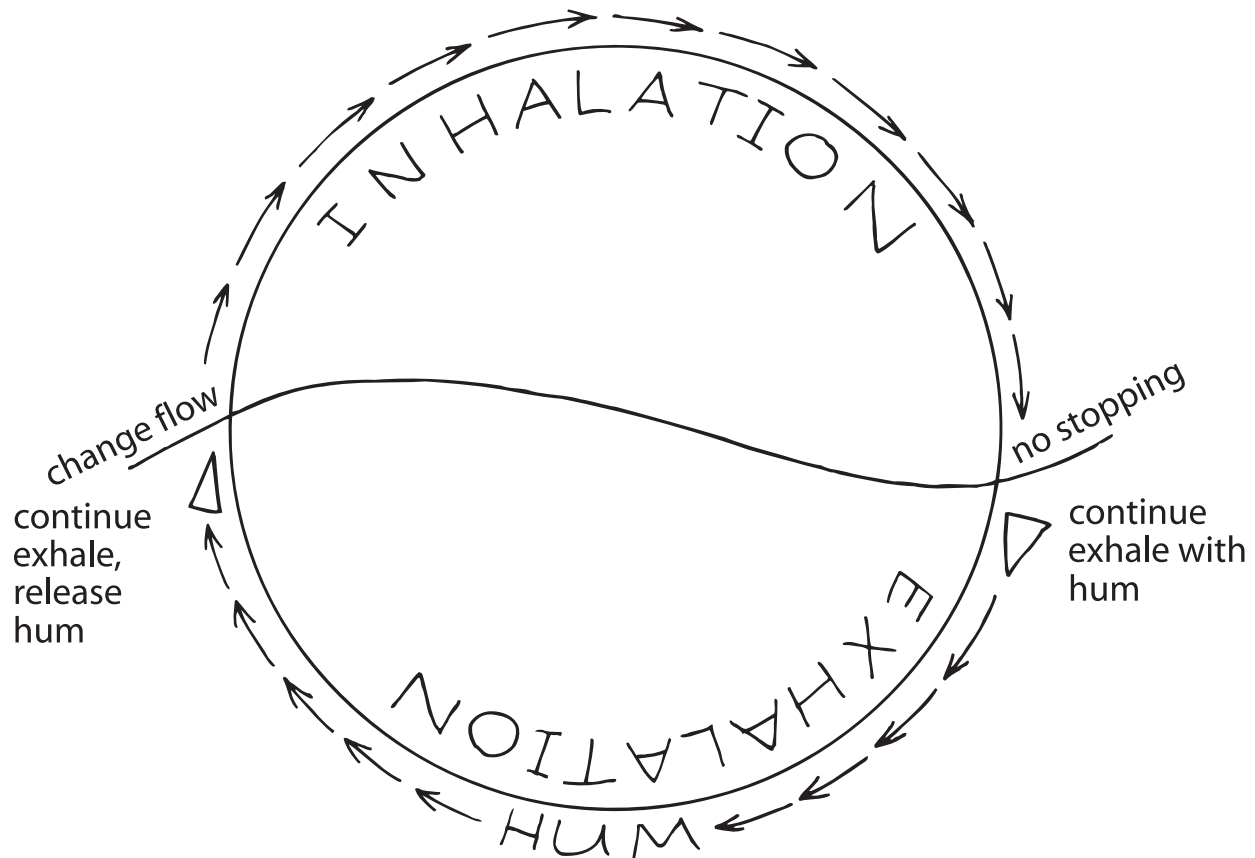
Relaxation: It's important to relax as you practice your breathing. Start by releasing your facial muscles and then your jaw muscles. As you exhale and trace the diagram, concentrate on relaxing your neck, shoulders, arms, and hands. Then relax your stomach, buttocks, legs, and feet. Think about how relaxed your body feels while your eyes are closed. Trace the diagram in your mind, feeling your stomach fill as you inhale and empty as you exhale.

Suggested practice is 20 times around the diagram, five times daily or when physically and/or emotionally stressed.

Circular Breathing with Hum

The transition to voicing can produce unwanted habitual glottal attacks or improper breathing patterns of holding the breath while voicing. This will cause the client to attempt to speak using an insufficient residual air supply. The transition from exhale-only breathing to exhaling while humming will transfer optimal breathing patterns to voicing.

Recommended practice is 20 times around the diagram, five times daily. This exercise will help your client control her breathing as she learns to coordinate words and phrases with air flow.



Inhalation: This is the same as in Circular Breathing without Voicing. Slowly and quietly inhale as you fill your stomach with air. Trace your index finger around the circle to indicate your place in inhalation.

Change Flow: Do this the same as in Circular Breathing without Voicing. Release into a relaxed, unforced, light, and effortless flow without stopping.

Exhalation: Initiate sound shortly after you begin to exhale. It requires little muscular effort. Keep the same Circular Breathing rhythm going with no change in air pressure, muscular effort, or rate. Begin humming quietly, slowly, and effortlessly. Feel the sensation in the back of your nose as the vibration from the hum fills your nasal cavity. Stop humming shortly before your index finger approaches the change flow indicator. Continue exhaling until you reach the change flow indicator. Then repeat the cycle on the diagram.

The hum should be relaxing. Trace the diagram with your index finger, establishing a rhythm. When the change flow and the phonation are initiated without stopping, close your eyes and concentrate on relaxing your face, neck, and shoulders. Continue relaxing the rest of your body with each hum.

Building on the Circular Breathing with Hum

1. After the client demonstrates proficiency at the hum level, progress during the next session to /h/ phoneme-initiated syllables:

he hi ho ha hih huh hoo

Ask the client to elongate the vowel sound like a sigh as she exhales.

2. Continue with /h/-initiated one-syllable words such as:

he	hill	hair	ham	whose
hum	hi	hot	help	hole
his	hoop	hope	head	hear
him	who	home	hall	heat

3. Progress to other phoneme-initiated, one-syllable words or continue to /h/-initiated bisyllabic words or phrases. As new phoneme-initiated syllables and multisyllabic words are introduced, return to the Circular Breathing with Hum to review and maintain the optimal flow of air.

Note: The phonemes /b, p, t, d, k, g/ and the vowel sounds *oh, eye, ah, ay* may increase muscular involvement, interrupt exhalation, and decrease optimal voice production. If so, teach each phonological group (i.e., back phonemes /k, g/ or plosive phonemes /p, b, t, d/) separately with vowel elongation on exhalation.

4. Refer to Box Speech on page 109 to teach the client to phrase and replenish air supply at the sentence level.

Muscle Relaxation

Muscle rigidity is one factor associated with many disorders and diseases, such as Parkinson's disease. This rigidity can be caused by improper positioning, stress, and muscle fatigue. Medication can help reduce its effects in some cases. In clients who are mild to moderately affected, relaxation exercises can be useful in reducing muscle rigidity. The following exercise is excellent for body orientation as well as for relaxation.

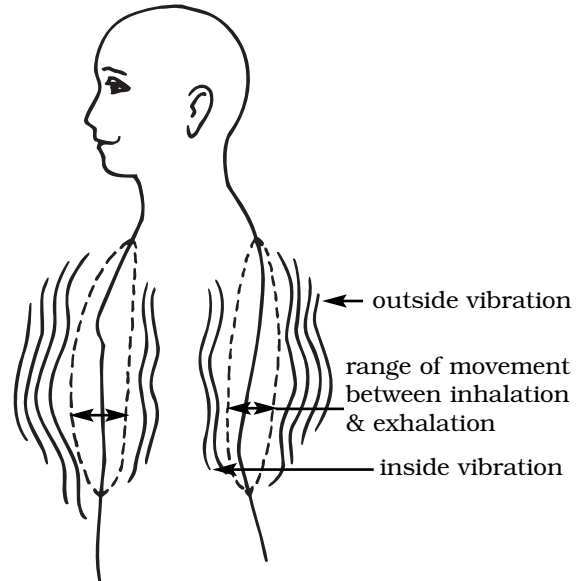
To begin, ask the client to make two fists, stiffening her hands and arms. Have the client hold the tense muscles for five seconds. Follow this with deep relaxation of the same muscles. Repeat with the same muscle group three times. Allow at least five seconds of relaxation between each clench.

Continue the exercise with the neck, jaw, stomach, back, legs, and feet, first stiffening and then relaxing each muscle group. If you observe the client stiffening a part of her body not being worked, repeat the tensing of that muscle group to remind her of the relaxed feeling.

Deep Full Breath

This exercise helps individuals learn (or relearn) how to take a deep, full breath.

A spontaneous breath that is full and free helps establish a flexible center (e.g., soft, responsive neck, vocal folds, rib cage, and thoracic area) and releases the vocal cords and neck for resonant voicing. Clavicular breathing and/or breathing high in the upper chest can interfere with voicing, causing audible inhalations and subsequent strain to the vocal folds. Inhaling so the breath goes into the lower chest and diaphragm may help to decrease tension in the jaw, neck, face, and shoulders. It gives the ribs an inner stretch to improve overall body relaxation and well-being. Inhaling deeply so the air goes into the lower chest and diaphragm creates a larger breath capacity which, in turn, increases vocal intensity (loudness).



This exercise is especially useful with clients with Parkinson's disease as their breath tends to become shallow and restricted. Increasing breath volume can have a direct affect on attention span, concentration, and mood stabilization.

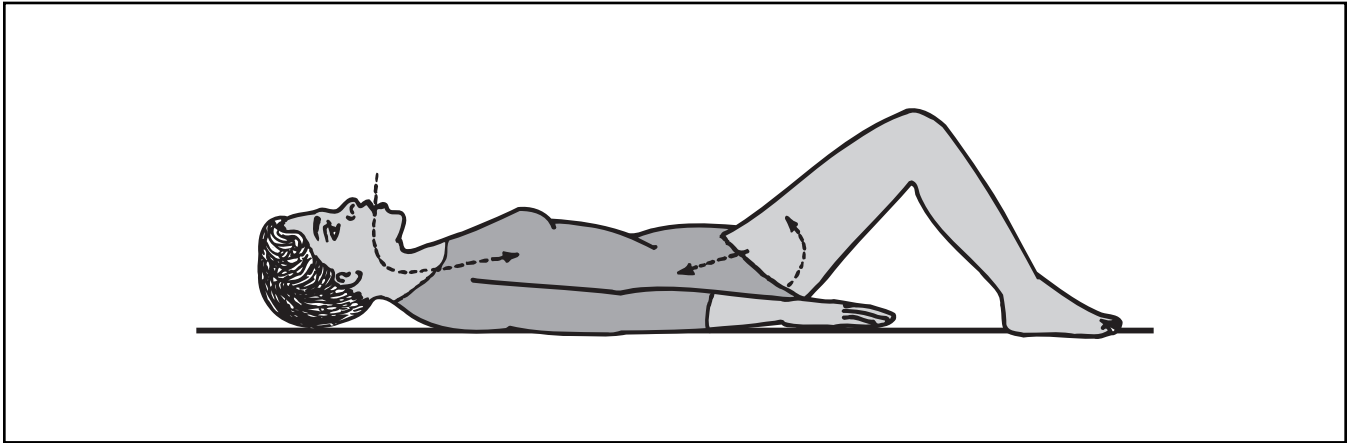
The result of learning this exercise is body and mind centering. An alert, relaxed, and energized individual can offer more to her own recovery process. Her input and feedback can help you plan therapy and revise goals.

Say to the client:

“As you inhale, your breath expands and vibrates throughout your entire rib cage. As you exhale, your breath spontaneously lets go without any pushing or assistance from a forced or deliberate squeeze of your stomach. No effort is required to exhale. Do not squeeze your chest. Simply inhale and then let go of the air. Just let it fall out. Let your body decide when it is time to bring a fresh inhalation back into your lower chest.

“Sometimes it's useful to think about filling your belly with air and letting it go. Then take another breath and fill your belly and your pelvic area with air. Let it go. Finally fill your belly, pelvic area, and legs and feet with air and let it go. This visualization will deepen and expand your breath. Keep yourself focused as you breathe in lower and lower and then exhale by merely letting go.”

Supine Breath Expansion



1. Lie relaxed. Make sure your back and neck are comfortable. Bend your knees naturally, place a pillow under your knees, or adjust yourself to what feels comfortable.
2. Inhale. Allow the air to flow into your chest. Exhale.
3. Inhale again, but now allow the air to flow through your chest into your abdomen. Exhale.
4. Now inhale so the air feels like it is filling your chest, abdomen, and pelvis. Exhale.
5. Continue breathing in and out slowly and fully. Be sure the air fills your abdomen and pelvis. Exhale naturally. Repeat 10 to 15 times.

There is no goal to achieve here except a feeling of well-being so relax, breathe, and expand!

Breath work changes who we are, our attitude, and our view of ourselves. It also allows us to be and achieve far more than our mental self-imposed limitations.

Visualization

Visualization is the process of letting the mind and body act together through guided imagery. Spoken words, written words, and/or pictures can enhance a person's ability to perform an exercise. Often when a client visualizes outcomes or uses a symbol to represent the achieved goal, it can increase the likelihood of success.

Before the visualization begins, make sure the client is comfortable. Have the client close her eyes.

During the visualization, use a nice tone of voice (e.g., soothing, appropriate loudness). Speak slowly so the client can sense and visualize the meditation. As you talk, remember to breathe evenly. Release any tensions you feel with a deep breath.

At the end, provide time for silent reflection. Ask the client to open her eyes when she is ready. As she opens her eyes, make eye contact and smile. Ask the client if she wishes to talk or write about the experience. You might want to establish an anchor word or symbol (e.g., cross [faith], star [focus], sky [expansion], tree [steadiness]) to help the client describe the feeling or awareness from the visualization. You can then use that word or symbol later to quickly center the client.

To get you started, three visualizations are included on pages 23, 24, and 25. These visualizations can be performed on the same day or on different days, and they may be performed in any order. However, they are very effective when taught in order as Body Breathing helps with increasing inhalation, the Cleansing Breath works to release the exhalation, and Breath Awareness brings inhalation and exhalation together.

1. **Body Breathing:** This is a good starter breath visualization to gain focus and increase attention span. It is very relaxing.
2. **Cleansing Breath:** This visualization helps to release tension, anxiety, and feelings of tightness. It provides renewed energy.
3. **Breath Awareness:** This visualization is a very effective breath visualization to use with the Circular Breathing chart on page 16.

Body Breathing

“Breathe in and out through your nose and feel, sense, or imagine that with every inhalation, you can draw energy in and through the entire surface of your body. Simply imagine that each slow, deep, inhaled breath is drawing energy in through each cell of your body; that the whole outer surface of your skin opens to and receives energy with each deep, inhaled breath; and, as you listen, you feel, sense, or imagine that with every exhalation, you radiate energy outward, like a glowing light or a burning flame. With every exhalation, the entire surface of your body releases and radiates energy. Continue breathing in through your skin and radiating out through your skin for a few minutes more . . .”

Cleansing Breath

“Breathe in through your nose and with each inhale, sense that the air is coming in through the soles of your feet. Then breathe in as if you have to pull the air up through your feet, ankles, legs, hips, and torso until you blow it out through your open mouth. Continue for several breaths, drawing the air in through your feet and up through your body and then blowing it out slowly and calmly.

“Imagine that as you draw the air up through your body, you are sweeping all of the contracted energy — blocks, hesitations, illnesses, weaknesses, and fears that keep you from being your highest, best self — along with it. Breathe up through your feet and your body, sweeping along all contracted energies and then blowing them out with the air calmly and slowly. Feel the movement of air and the sweeping of energy as vividly as you can.

“Now imagine that as the swept-up energy hits the open air, it bursts into a shower of colorful sparks. The bright sparks sprinkle down light and positive healing energy throughout your body.”

Breath Awareness

“Gently close your eyes, breathing in and out through your mouth with the jaw hanging loosely open. You’re breathing slowly, quietly, calmly, gently. Feel your belly moving with each breath, expanding gently with each inhale, drawing in life, and releasing gently. With each exhale, let life go. Every inhale, fill your belly. Every exhale, let go . . .

“Now allow yourself to breathe in and out through your nose and mouth at the same time so that exactly the same amount of air is passing in and out through both openings while continuing to take each breath from deep in your belly.

“Continue this breathing for the next few minutes with equal amounts of air passing through your nose and mouth, your belly gently rising and falling with each easy breath as your eyes remain softly closed.

“Stay with your breath. Focus on it moving down into your body and then release it up through your body. Continue to release the tension in your jaw, then your neck, and finally your shoulders.”

Navigating Between the Analytic Mind and Intuition

Planning client care, whether by the clinician or by the client, can be greatly enhanced with the active practice of using intuition alongside book knowledge and/or past clinical experiences. We may not think our gut instinct is right, but often, over time, the information we gather (e.g., facts, client response) can lead us back to the same thoughts that had crossed our minds in the first place. “I knew it!” is frequently said when we realize that our intuition, or our gut feeling, was right.

Using intuition can lead to a sense of truth or rightness. It will guide you when there are many choices that demand your attention. It is generally not possible to follow each and every choice. Often, no given treatment program sticks out as the best solution, requiring you to guess. Dancing between what you know and what feels right will give you direction when no direction is apparent.

Intuition is greatly enhanced by a well-educated mind that knows many options for solving a problem. Intuition will help make the path simple and clear.

There are five steps to making intuition accessible as written by Judith Orloff, M.D. (2000) in *A Guide to Intuitive Healing: Five Steps to Physical, Emotional, and Sexual Wellness*.

1. Notice your beliefs.
2. Be in your body.
3. Sense your body’s subtle energy.
4. Ask for inner guidance.
5. Listen to your dreams.

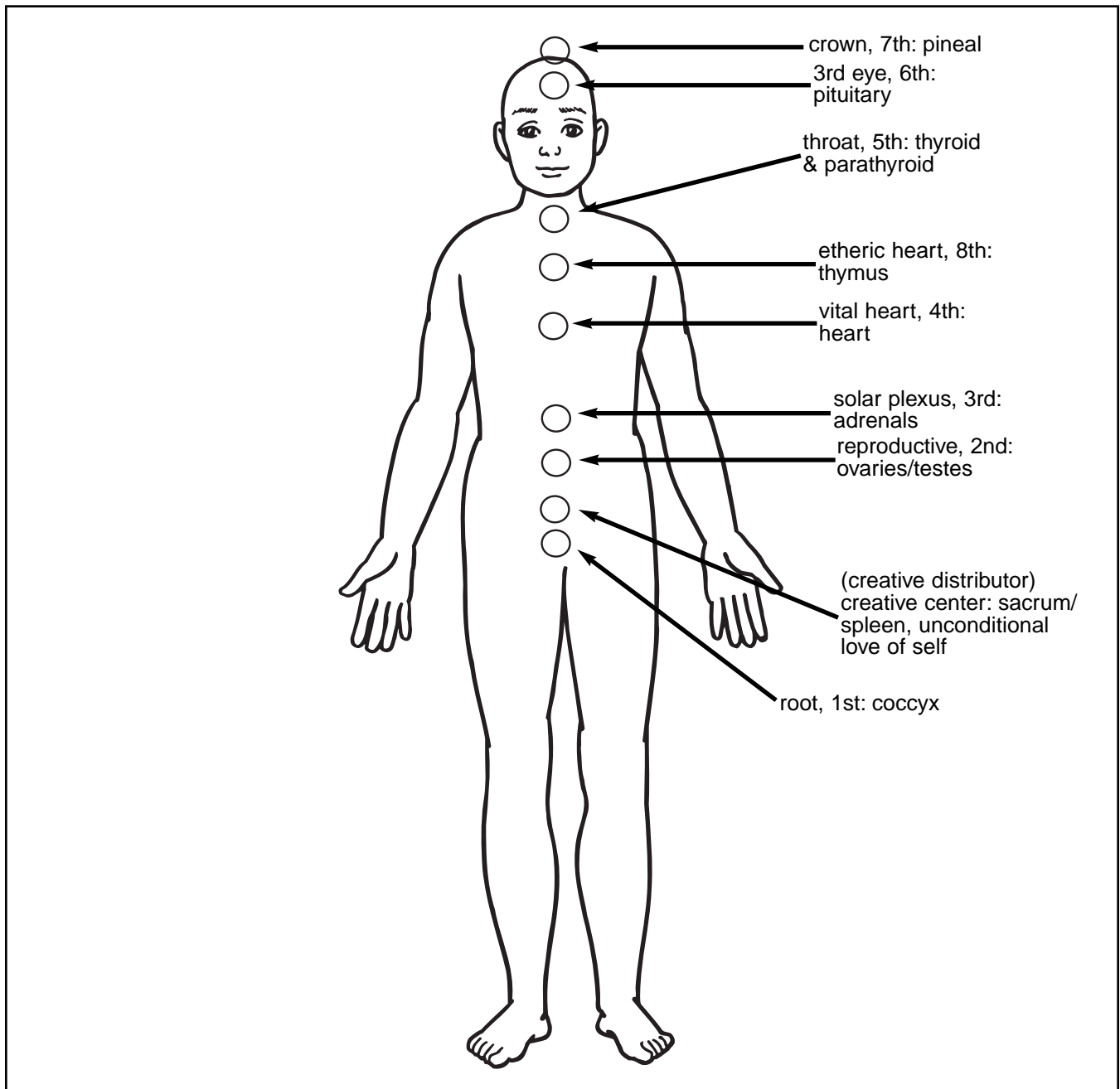
The number one factor in noticing your beliefs is being aware that everything comes from love. This is essentially the core factor in healing. If you can see a client through the eyes of love, it is very different than just looking at her clinically.

Secondly, it is essential that fear does not override intuition. Many questions may arise in the course of a day. It can be difficult to stay focused and to make decisions that will get the health care rolling. Fear can and does paralyze. It takes surrendering self-imposed agendas, compassion, strength, and determination to make that monumental, conscious leap into action and away from fear. Trusting yourself to know where to start is difficult. Your intuition can help you make decisions.

Remember, though, that intuition does not replace medical practices and/or a sound therapeutic intervention. It does, however, offer you a different perspective. You can take all the facts and synthesize them to see what the next step might be. What feels right? Where do I begin? How long will it take?

Encourage your client to “be in her body” and to learn about her specific diagnosis. She needs to know her body. There are many books available to teach your client. She can also look on the Internet; contact her physician; speak to a social worker, therapist, or mentor; call someone who has been through the same thing; and/or join a support group. It will help your client to make herself intellectually savvy.

Help the client sense her body energy through the use of chakras. Chakras are energy centers in the body (e.g., throat, heart). These centers are like hubs that feed life-force energy directly to the body's organs. The flow of energy when the chakras are open is like a river bringing vital nutrients. When it is free, one senses a healthy vibrancy. When it is blocked, one feels tiredness, discomfort, sickness, or disease. For more information on chakras, see *Anatomy of the Spirit: The Seven Stages of Power and Healing* by Caroline Myss (1997).



Asking for inner guidance can help clients focus on the positive rather than the usual attention to illness, continued loss, and pain. Inner guidance can be a prayer, a positive affirmation, or a statement of intent. What makes inner guidance different is that it is not analyzing or controlling. It is merely a heartfelt, sincere request. By saying, “I feel better when I breathe. What else will promote improved health?,” the client is taking an active role in her recovery. It is a ray of light showing that the client is part of the growth process through awareness and inner intuitive intellect.

Stressed with the job to rehabilitate the individual, you may ask, “How can I best help this individual today?” Throughout therapy, follow what you are feeling inside and then talk to the client. Combine your information with the client’s. This can give you a different perspective and can often help you make better therapy choices. Once you have done this, often the pressure and fear to solve the problem will dissolve.

Dreams can be powerful tools for insight and healing too. Encourage the client to think about questions like “How will my body heal?” when she goes to bed at night. You can think about questions like “What kind of intervention should I use with a particular client?” Then make it a point to remember your dreams. Upon waking, refrain from talking for the first few minutes to allow yourself to remember. Keep a notepad by the bed to write down anything that comes to mind no matter how vague or odd. Later in the day you may remember more and make sense of the dream. For more information on interpreting dreams, you might search the Internet or go to your local library.

Even if the client is unable to communicate verbally or shows language comprehension difficulties, ask her to point to her choice of equally effective intervention strategies. “What is your intuition on this?” or “Which one would you like to start with first?” Intuition aside, it is a worthy gesture to include the individual in the therapy process as well as to address her comments and concerns during therapy.

Medical Assistance Team Visualization and Healing Practice

One intervention for building intuition is for the client to put together a medical assistance team in her mind. The team can include anyone, living or deceased, who will help the client’s health and well-being. Team members might include a deceased spouse, a trusted professional, or a spiritual leader.

Encourage the client to spend some time with her team each day. The client may look to the team to bring attention to specific medical intervention that is needed or to help her clarify her needs to talk to her primary physician. The use of this meditation or visualization allows the individual to “give” her problems to higher powers. This can give the person a sense of relief and help her relax. Having the client take good care of herself through introspection and daily wellness strategies are often the fastest ticket back to health and independence.

This medical assistance team visualization has been very effective in helping individuals soothe their minds and start the healing process. It is, of course, not meant to take the place of medical care, but rather to augment it and allow an individual who is experiencing a great deal of fear, loss of function, and isolation a time to be embraced and comforted. Difficult questions can be addressed and better dealt with while relaxed.

- Do I need to see my doctor or other healthcare professional?
- Is there a symptom or health problem that I need to address?
- Do I need to get more rest or sleep?
- Would I feel better if I got a massage?
- Do I need to talk to a friend, loved one, or therapist?
- Do I need to stop a bad habit?
- Do I need to remember to breathe?

Love and true concern can be the most healing force in the universe. Individuals at any level of functioning will feel your patience, your attention, and your regard for them even if they are not able to respond back in like fashion. Using all of your resources, your intuition, common sense, and clinical knowledge will bring the fastest and most long-lasting results.

Daily Health Reminders

1. Follow your nutritionist's or medical doctor's recommendations for eating. This may include eating soft foods only or eliminating sodium and/or fatty foods in your diet.
2. Drink plenty of water (e.g., six to eight glasses a day). If you are on a thickened consistency diet, thicken liquids as shown by your speech-language pathologist. If you are unable to meet your hydration needs, make sure to notify your physician. Dehydration can cause tiredness, a decrease in mental acuity, mood swings, and damage to your vital organs.
3. Avoid excessive use of sugar and caffeine unless stated otherwise by your nutritionist or medical doctor.
4. Avoid smoking and secondhand smoke inhalation. They both cause dehydration and have been found to cause cancer.
5. Exercise 30 minutes every day. If needed, break the exercises up into five-minute stretches or small walks. If in a wheelchair, stretch your arms and neck. Massage your hands and face. Follow through on any exercises given to you by your therapists.
6. Spend at least 30 minutes every day doing something fun. Take a break. Do something creative or simply breathe and clear your mind of what has collected throughout the day.
7. Be positive and surround yourself with positive, affirming people.

Chapter 2: Communication

It is important to build rapport and self-esteem with the client so he is motivated in therapy. The client may be worried about many things such as:

- loss of physical abilities
- high medical expenses
- loss of independence
- loss of control

All of these can contribute to depression and anger in the client as well as in the primary caregivers. Acknowledging the client's emotions and maintaining a positive and productive relationship is a primary goal in therapy. The following techniques can be tried with clients to develop good, open communication.

The Disarming Technique

Find some truth in what the client is saying, even if you feel it's incorrect. Acceptance is not agreement. For example, the client might say, "You don't know the first thing about my condition. You're a lousy therapist." A good response is, "It's true I don't have **your** insight into your condition, but through my education and work with many clients who have similar conditions, I have gained some insight and understanding. Please help me learn more." When you use this type of disarming response, you're showing the client that you're acknowledging his feelings.

Empathy

By paraphrasing what the client is saying or feeling, you are acknowledging what he is going through and showing concern. Being empathetic will show the client that you understand what he is thinking and feeling. You'll validate the client's feelings which will ultimately lead to greater bonding. For example, if a client says, "I can't take it any more. I've had it." You might say, "I hear you. You're frustrated and feel that you've gone through so much already."

Inquiry

Probe for more information by asking what the client is thinking or feeling. Look beyond negative comments, moodiness, or apathy to the client's true concerns by asking sensitive and thoughtful questions. For example, you might say, "You don't seem very interested in your exercises today. Is something bothering you?" or "I sense something is on your mind today."

“I feel” Statements

Using “I feel” statements are a good way to avoid blaming someone for how his actions affect you. It’s important to tell the client the feelings you’re experiencing as a result of his actions or comments. You might say, “I feel discouraged when you choose not to work because I see that you’re capable of acquiring more skills.”

The best guideline is to start comments with “I feel . . .” and to avoid blaming statements which characteristically begin with “You . . .”

Positive Reinforcement

Make genuinely positive comments to clients even when you’re not happy with how things are going. If you notice something positive, mention it. For example, “Good eye contact, you’re so alert today,” or “I see you’re really trying.” You want to say something positive even when a client is not making significant progress.

While helping clients with their exercises, remember to always explain what you’re doing. Use positive statements to keep clients alert, on target, and motivated. After completing an exercise, say things like, “Good, great, that’s it, good try,” or “It’s nice to spend time with you.” Be sincere.

Avoid negative statements. Don’t say, “No, do the exercise this way.” Instead you might say, “Good try! Let’s do it again this way.”

Be short and to the point. Instead of saying, “Okay now Mr. Harrison, I’d like you to pick up your left hand.” You could say, “Please raise your left hand. That’s good.” Short commands with an acknowledgement that the exercise was performed correctly are appropriate and efficient.

Things to Consider When Communicating

- If a client’s speech becomes unintelligible or difficult to understand, try saying, “Sometimes it’s difficult for me to understand what you’re saying. Try saying one word at a time. Take a new breath before each word. Say each word loudly.” If the client doesn’t seem to understand you, say each statement individually with adequate time for response. You might also ask the client to open his mouth and jaw wider during word formation.
- Hearing loss might inhibit your client’s communication. If so, the client will benefit from your increased eye contact by naturally reading your lips. An audiological examination is indicated if hearing loss is suspected.

- When giving directions or conversing:
 - Make sure the client can see your face.
 - Maintain eye contact.
 - Initially state your name and occupation.
 - Use short sentences that explain what you're going to do therapeutically. "We're going to work with your lips today . . ." Wait for the client to process the information and then continue with, ". . . to try to help stop your drooling."
- Explain every detail of the therapy session, including rationale with the family, caregivers, nurses, doctor, and other therapists. The more involved these people are, the better for the client's progress.

Remember to include the client in any conversations you have. Talk to him even if there is no eye contact, gestures, or verbal response. Try to establish a system of yes/no responses with arm squeeze or eye gaze.

- Due to the number of therapies the client is involved in, it will be necessary to create a routine time schedule. Discuss with the client and caregivers as to which times are best for therapeutic intervention involving exercises. Remember that factors such as time of medication and feeding may interfere with the client's attentive state.

It's important to be flexible when setting up the program because each client is different. Adjust the therapy program to the client's specific needs. As exercises are added into the program, you may wish to delete previous exercises to shorten or maintain the time schedule.

- If the client's voice becomes inaudible or his writing becomes illegible, a picture or written communication board can be useful. The client can point to the desired picture, word, or sentence. An eye gaze method is often effective for patients with severe tremors because they can scan from a field of many choices provided visually.

Commercial communication boards with voice capabilities are also available. There are a variety of models on the market for purchase or rental. When using a communication board, give the client plenty of time to locate the picture, word, or sentence. It's helpful to practice with various types of communication boards before any purchase or rental to determine which one is most effective. For more information, see the Resources list, pages 254 – 255.

- It's common for affected individuals to experience changes in vision. Loss in peripheral vision or visual neglect are commonly associated with a stroke. Consult an ophthalmologist for the type and scope of the client's visual disturbance.

Emotional Associations with the Body Segments

When someone has a physical problem such as tension in the neck, it can create emotional problems. The person might repress his feelings and/or have difficulty expressing himself. It can also go the other way in that when someone has emotional problems, the problems might manifest themselves physically. For example, if someone is repressing his emotions, he might have neck tension or pain in his chest. Helping this person learn how to express his emotions can lead to physical improvement.

Body Segment	Emotional Association
ocular (eye) and oral area	difficulty expressing feelings shows difficulty in rational thinking
neck area	division between rational thoughts and actual feelings chokes down feelings difficulty expressing feelings
shoulder area	doesn't take responsibility or takes on too much responsibility judgment (including self-judgment)
chest area	restricts the flow of emotions heartache or heartbreak
diaphragm and abdominal area	lack of emotional and intrapersonal power fear of losing oneself to one's feelings
pelvic area	difficulty talking about sex and elimination fear of our primary survival needs or of losing control to our primal self

(Teeguarden 1987)

Projecting the Positive

Positive messages start any session off on better footing. They can counteract negative messages going on in the individual's mind that may have been there since childhood or appeared as a result of a recent decline in function. Negative messages can provoke pessimism. Help your client learn to assert the positive with the examples on the following pages.

Negative Statements	Positive Affirmations
<p>I'll have to . . .</p> <p>I'd hate to see you fail.</p> <p>We can't fight this.</p> <p>This creates a problem.</p> <p>You're no good at that.</p> <p>This is impossible.</p> <p>I've just been here three months, but . . .</p> <p>You just don't understand.</p> <p>I was wondering if you could . . .</p> <p>Here's why we failed . . .</p> <p>If only you had . . .</p> <p>Here's what you have to do . . .</p> <p>I disagree with you.</p> <p>My life is finished.</p> <p>I can't and won't deal with this.</p> <p>I am just getting worse and worse.</p> <p>Why does everything happen to me?</p> <p>This is unbearable.</p> <p>I will never be able to do any of the things that are important to me.</p>	<p>It's in my best interest to . . .</p> <p>I want to see you succeed.</p> <p>We can improve this by . . .</p> <p>This opens up an opportunity.</p> <p>You're improving at that.</p> <p>This requires special effort.</p> <p>I've observed carefully and . . .</p> <p>I haven't made it clear.</p> <p>When will you be able . . .</p> <p>Here's what we learned.</p> <p>Next time . . .</p> <p>Here's what we can do.</p> <p>I understand you would like to consider . . .</p> <p>My life is different and well worth living.</p> <p>I am doing the best I know how. Do you have any suggestions on how I can deal with it more effectively? I am open to suggestions.</p> <p>I am handling whatever happens.</p> <p>Difficulties happen to everyone. I am sure others have also gone through this. Is there someone I can talk to who has gone through this and can offer advice and solace?</p> <p>I can adjust and live through this.</p> <p>I will get to do many of the things that I enjoy doing.</p>

More Positive Comments for Clients

Repeat these during the session for support, copy them on daily homework sheets, and/or post them in the room for motivation.

Act as though it is impossible to fail.

We are not retreating; we are just advancing in another direction.

Everything is for the good.

Pain is blocked energy. Let it pass through you with each breath exhalation.

Find the space between two thoughts. Put your thoughts into boxes to take a break. Breathe in the middle. Your thoughts will be waiting for you when you are ready.

I would like you to suspend doubt for the next two days so creativity and learning can flourish.

The word *courage* in French means *from the heart*. It takes great heart to care, to be vulnerable, and to train your body and mind again. I respect you for your continued effort.

Chapter 3:

Posture and Stretches

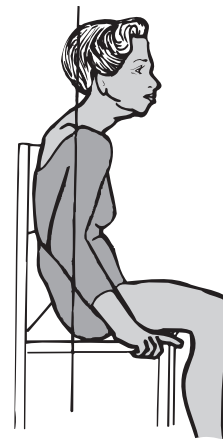
Consult the client's physician before beginning any stretching or exercise program.

Posture

Help the client recognize the benefits of a daily stretch and tone program by explaining how improper posture affects respiration and rhythm of speech. By correcting improper posture, the client's vocal quality can be improved.

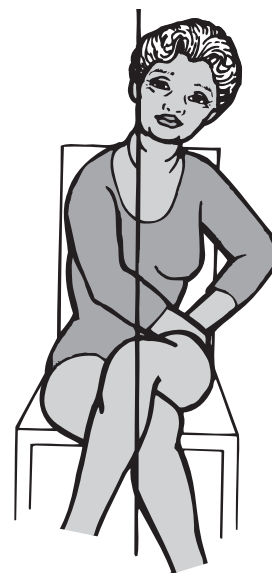
Improper posture is characterized by:

- head and neck extended forward
- sunken chest
- rounded shoulders
- leaning to one side
- protruding abdomen
- slouched lower back with no lumbar support
- knees extending beyond support of seat

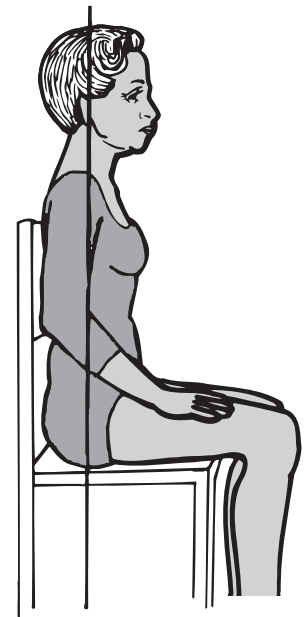


Secondary effects of improper posture include:

- low voice level
- breathy voice
- higher risk for aspiration
- coughing
- food spillage
- overall fatigue
- improper eye contact
- poor hand-eye coordination



To correct improper posture, begin by having the client sit down. Proper posture can be visually identified by drawing an imaginary line down the client's body with equal alignment on either side. The shoulders and buttocks are back and the legs are fully supported by the bottom of the seat. The line check for posture can be assessed from the side and front, showing equal body distribution on either side of the line.



Posture has a direct link to fatigue due to an interference with adequate respiration. Changes in posture will allow for deeper respiration which will create a louder voice. By changing posture, muscle tone is improved. This, along with increasing caloric and nutritional food intake, can give a client energy to improve voicing, speech skills, and gross and fine motor movement. When a client is tired, she isn't able to function to the best of her ability.

If a client is exhibiting shallow breathing due to improper posture, she'll have an insufficient air supply for voicing. The client will only be able to produce one or two words in a weak, nearly inaudible voice and then mouth the remaining words.

Teach the client to sit up properly using pillows or supports under her arms and behind her lower back.



It's important that the client change positions frequently throughout the day. This will help the client rest her musculature, stretch her back, and relieve tension in her neck. Having clients sit too long in one position can increase drooling as well as weaken and misalign neck musculature.

The general rule is to keep a client seated for no more than one hour at a time. If the client is able to walk, taking a walk and doing some basic calisthenics are recommended. Keep in mind that the best exercise for good posture is to use good posture. Daily body stretches and exercises are described on pages 39 – 45.

To make a low back support, fold a small towel in half and roll it into a cylindrical shape. Place the rolled-up towel between the client's lower back and the back of the chair. This will maintain the arch of the client's lower back.

Muscle Tone

It is important to address atypical muscle tone and movement patterns prior to working on the mouth. Mixed muscle tone throughout the body can lead to fluctuations in muscle control during the oral-motor movements needed for speech and swallowing. Therefore, to achieve mobility of the oral-motor mechanism, shoulder and trunk stability is necessary. The shoulders and lower body work as an anchor to support the movements of the face. Once the lower trunk is stabilized, you can pursue the finer points of stability throughout the body for the intricate movements needed for precise oral-motor range of motion (e.g., shoulders stabilize the jaw, jaw stabilizes the tongue). To help the client achieve trunk stability when seated, use pillows and/or a tray for support.

In addition, changes in posture can help reduce inappropriate spasming as well as the stiffness that often accompanies weakened low tone areas. Overall body balance can also be enhanced with massage, acupressure, and stretching and strengthening exercises. Bringing the body to a higher level of postural stability can give the oral cavity freedom of motion with efficient and precise functional movement.

Stretches

Stretching exercises increase the ability of the tissues to lengthen. This enables joints to have greater range of motion before meeting resistance from tension and muscle contraction. A daily stretch routine keeps the muscles toned and flexible, reducing atrophy. It also keeps bones healthy and strong. Stretching is a series of regular movements that the body learns to look forward to. For a person who has had a CVA or for a client with a neurological impairment, stretching exercises can also provide emotional and physical balance and release. Stretching opens the breath, allowing new energy and vital force to enter the body system for concentration, vocal output, and renewed confidence.

A daily stretching program will give the client energy rather than exhaust her. The body stretches in this section are for the client to perform between meals to maintain tone and flexibility. The exercises may be performed one at a time or collectively. Have the client go slowly and move into each new position gently. Avoid abrupt or sudden movements. Encourage the client to hold each stretch for at least a 10-second count or as long as stated without undue strain. Remind the client to move slowly out of position.

The degree of stretch or the range of motion may increase over a period of time. The best results are achieved when the exercises are performed one to three times daily. Simple stretches will help the client:

- maintain posture
- relieve aches and pains
- feel rejuvenated

- stimulate appetite
- strengthen and tone musculature

The stretches will strengthen arm, shoulder, and neck musculature. Arm stretches and exercises can be performed from a standing or seated position. These exercises are excellent additions to therapy programs for clients with:

- vocal strain
- temporomandibular joint problems
- reduced range of motion for the neck
- poor posture
- laryngectomy with radical neck dissection

If a physical limitation such as unilateral weakness or paralysis limits full body stretching, the client may choose to work her unaffected side or limbs only. However, it is important to try to work bilaterally. A referral to a physical therapist and/or occupational therapist to establish a client's physical capability will help you develop a plan of stretching, toning, and range of motion.

Remind the client that stretching is meant to feel good. Provide a simple model or help the client adjust her body into position. Have her move her limbs gently and freely without force. Remind the client to only move to the point of a comfortable stretch. It is wise to have the client stretch up to the point of pain and then just let the stretch relax. The goal is for relaxation and expansion, not for tension or fear of stretching. Remind the client to take deep full breaths as she stretches. She will start to see improvement in flexibility, strength, pain reduction, and freedom of movement.

The Stretch Routine

Start with the first exercise and do a routine or you can start anywhere. It is better to do at least one exercise versus none.

- Rise and Shine Stimulating Breath Exercise
- Full-Face Scrunch
- Hand Crawl
- Upper Body Stretching Exercises
- Lower Body Stretching Exercises

Rise and Shine Stimulating Breath Exercise

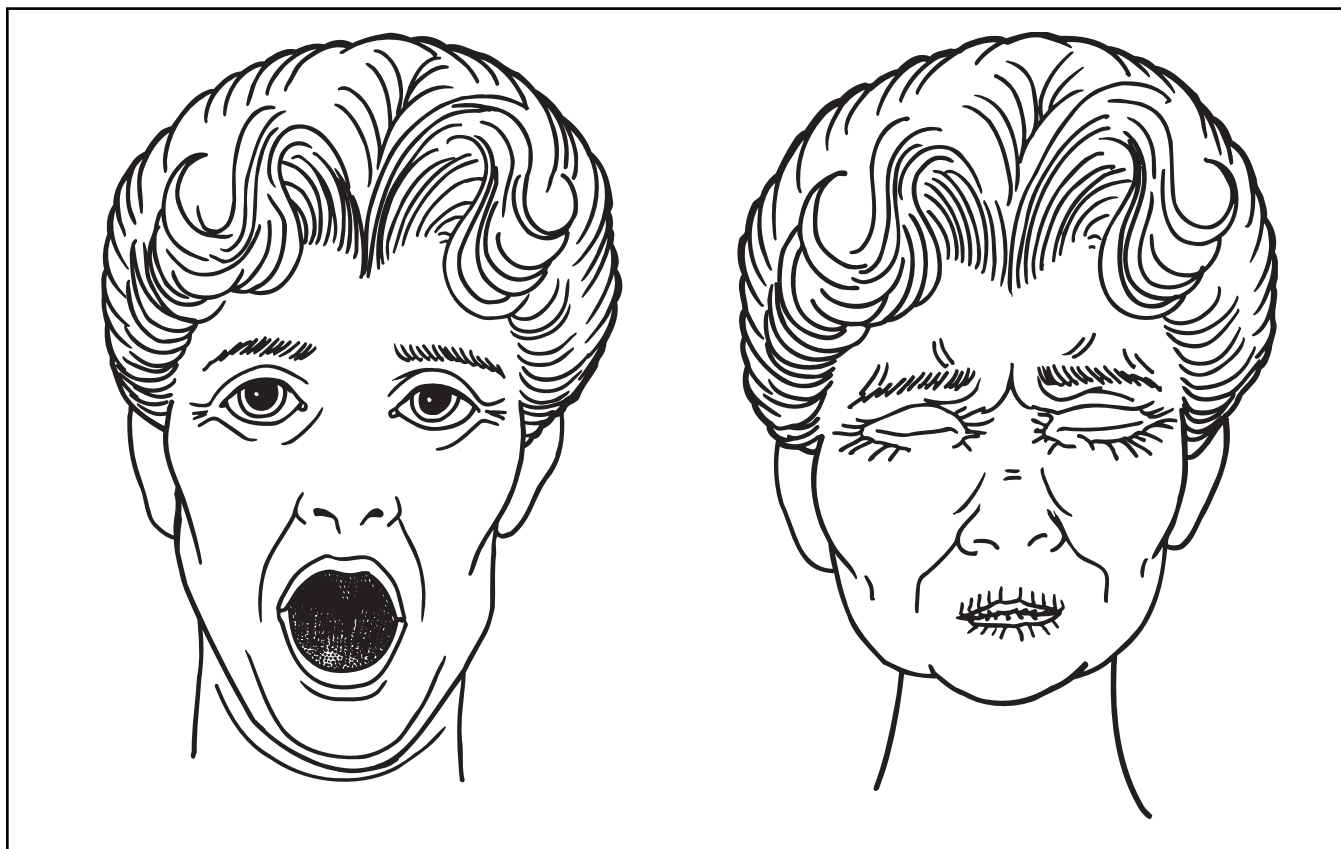


Open your eyes very, very wide. Force your eyeballs to open wide (bug-eye) and inhale with all of your might. Then let out all of your air and relax your eyes. Repeat 5 times.

Benefit

- prepares for the interventions and exercises that follow

Full-Face Scrunch



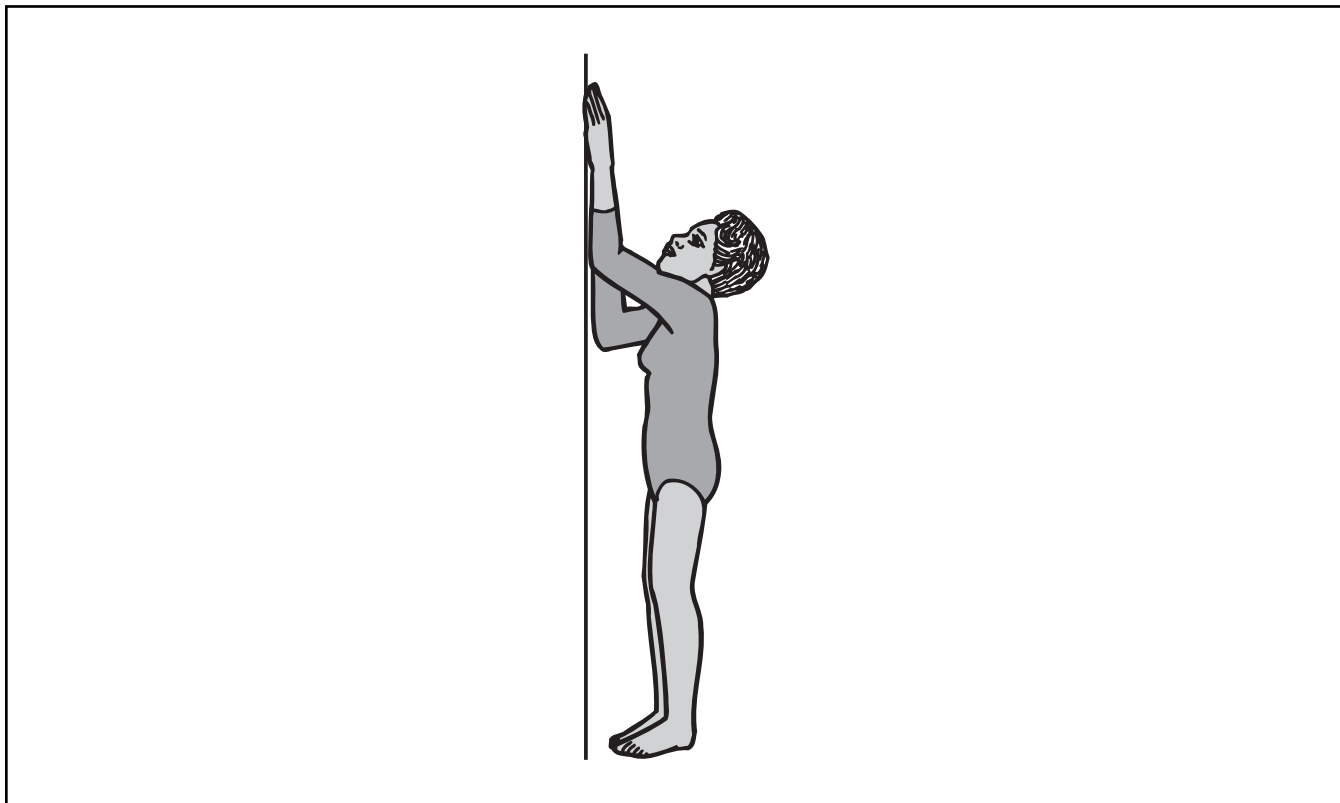
Have the client stretch and contract her facial musculature several times using different examples and visuals.

1. Have the client make a wide-open expression of surprise. Then have the client scrunch up her face hard.
2. Tell the client to pretend she is trying to make a baby smile and to over-exaggerate a wide-open expression of amazement. Then ask her to make the baby laugh by scrunching up her face as much as possible.
3. Say, “Make your face 3 times smaller than it is.” Then say, “Make your face 5 times bigger than it is.”

Keep going back and forth to stretch and contract the facial musculature. Try to have the client hold each expression for a few seconds before releasing to the other expression.

Note: This is an excellent exercise for the ocular area (around the eyes), the forehead, the nose, the cheeks, the jaw, and the lips. It will also help to stretch and strengthen the neck. It’s fun and a great way to energize the individual.

Hand Crawl



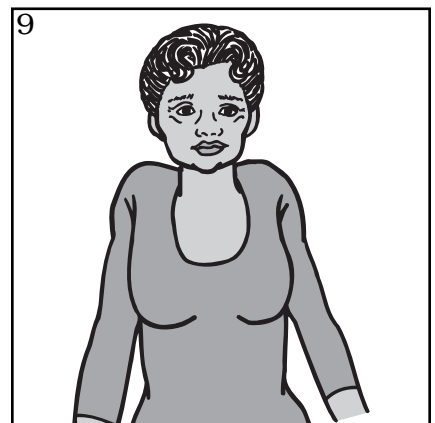
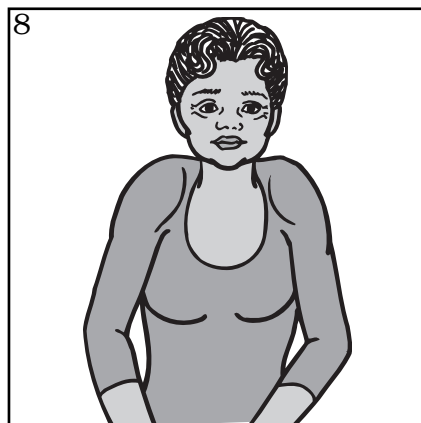
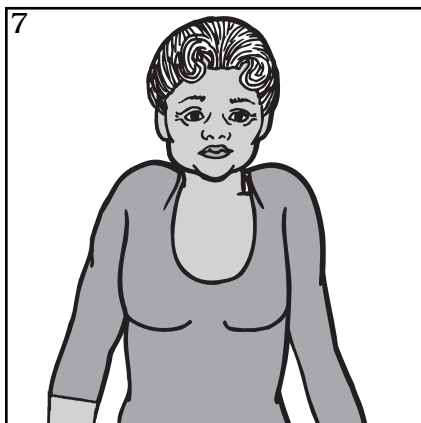
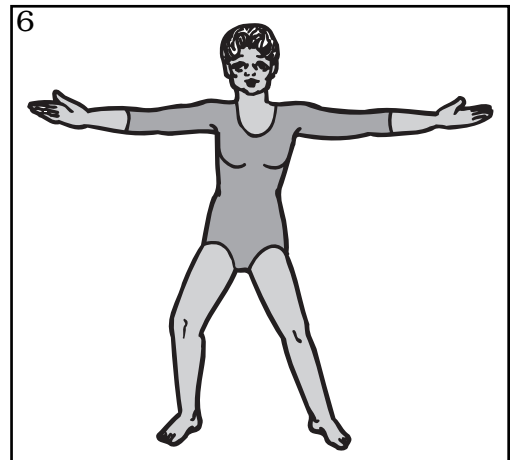
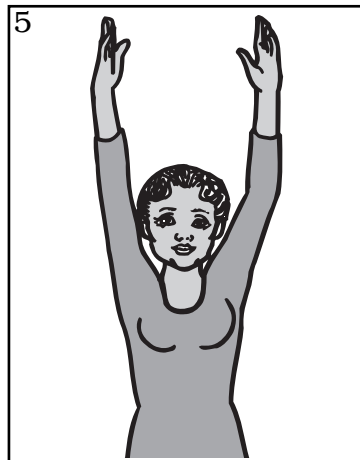
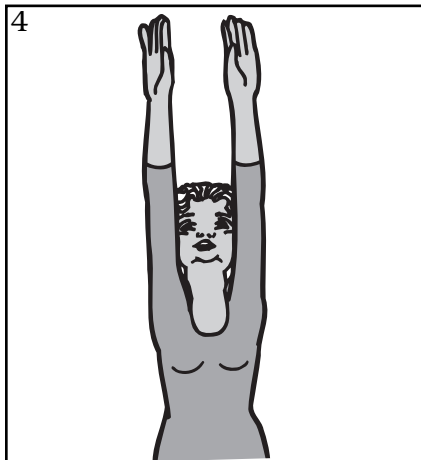
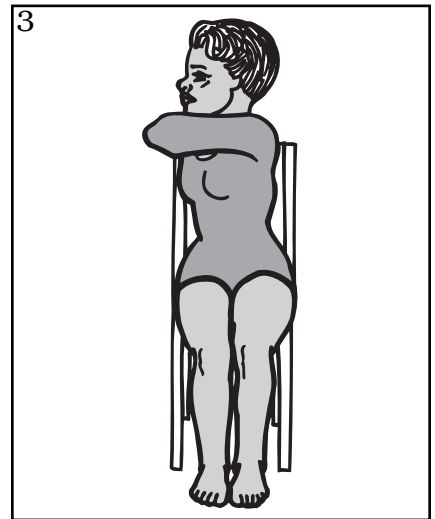
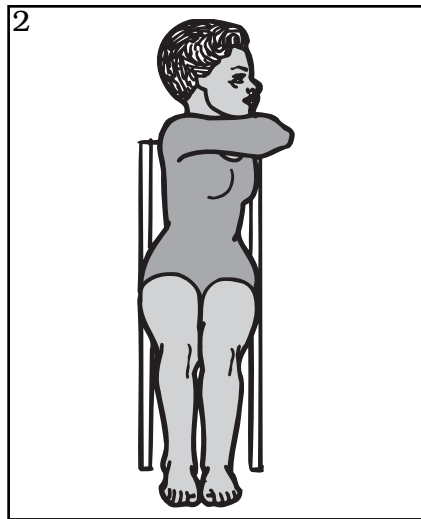
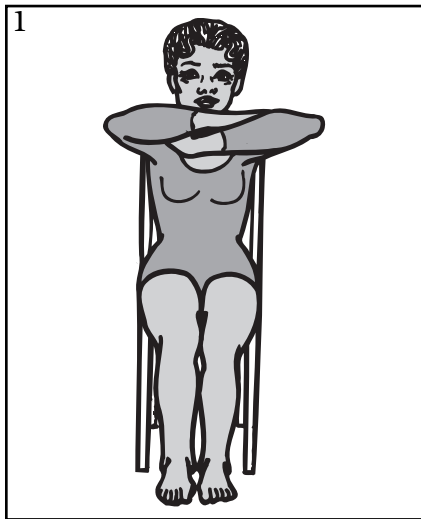
Stand facing a wall and put your hands on the wall at stomach level. Crawl them little by little up the wall, alternating left and right hands. Stop at a predetermined point or until you can't stretch any further. Then slowly crawl hands back down the wall to stomach level.

Note: This exercise is particularly beneficial for clients with laryngectomies involving radical neck dissections.

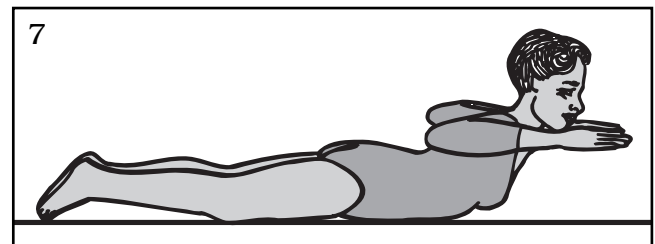
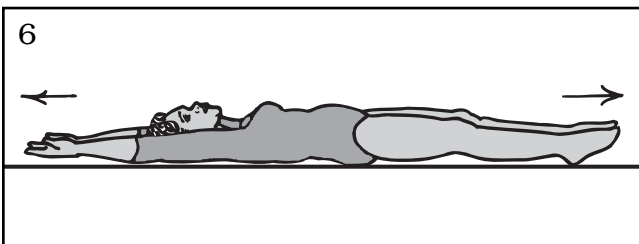
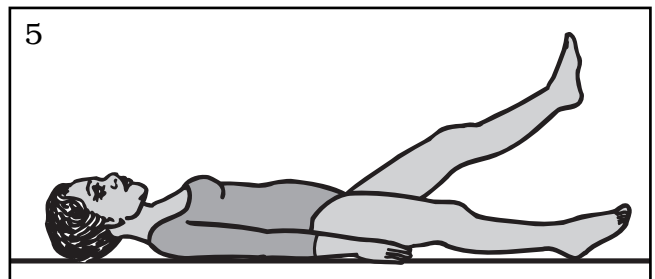
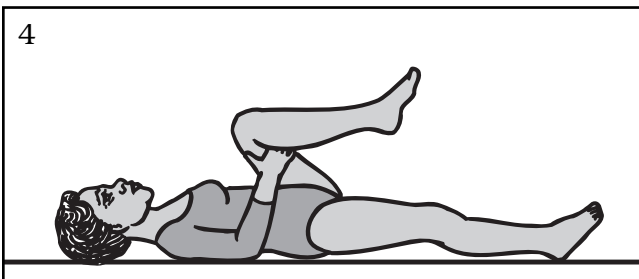
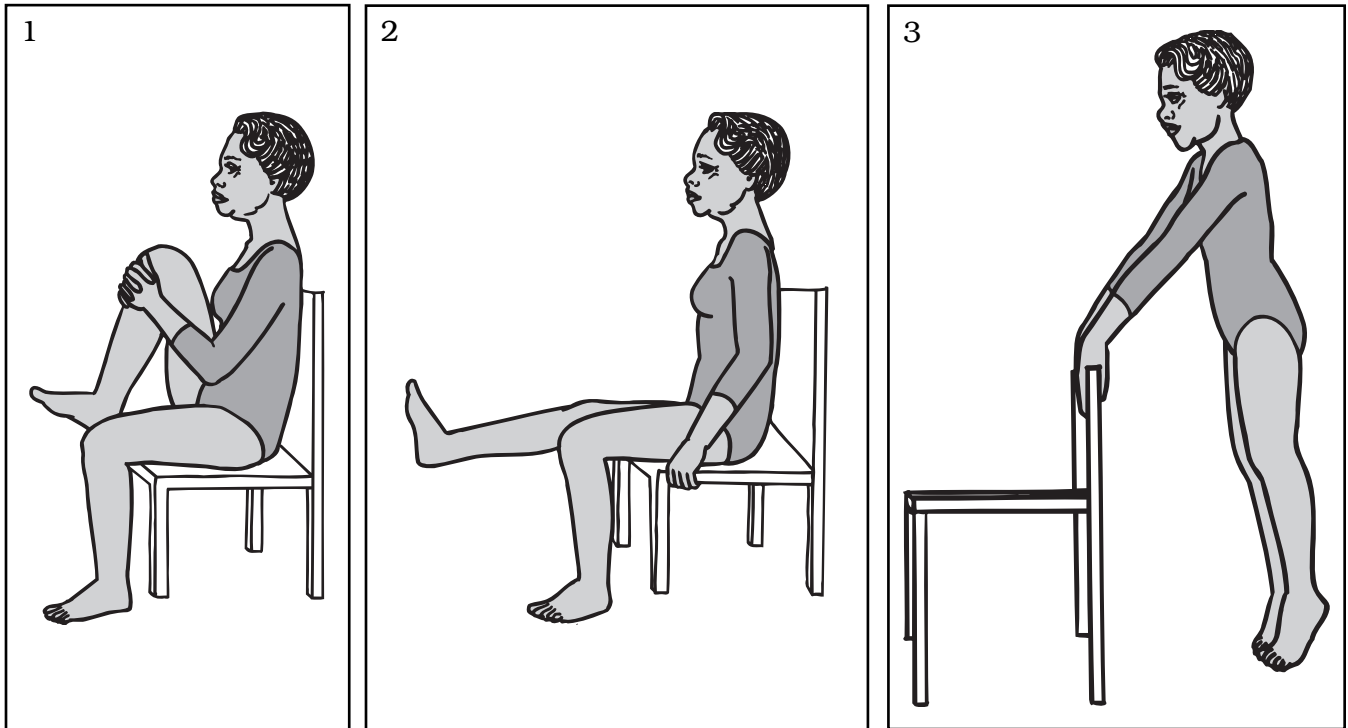
Benefit

- strengthens head, neck, and arm musculature

Upper Body Stretching Exercises



Lower Body Stretching Exercises



Chapter 4:

Drooling Management

Drooling affects the general well-being of an individual and may present daily problems for the caregiver. The goals of drooling management are to promote a better quality of life for speech, swallowing, and social interactions.

Basically, saliva aids in protecting the teeth from decay and the gums from inflammation and periodontal disease. Saliva keeps the oral mucosa comfortably moist, acts as a lubricant for swallowing, and works as a solvent for facilitating taste. Saliva is anti-bacterial and helps reduce breath odor by cleaning the mouth. Average production of saliva is between .5 to 1.5 liters daily in adults. This diminishes with age, depending on environmental stimuli and conditions. Saliva also promotes the breakdown of carbohydrates and proteins.

Drooling Level Indicator	
Mild Drooling	can be distinguished as spill of saliva onto the lips but not beyond the lip border
Moderate Drooling	saliva reaches the chin
Severe Drooling	saliva drips onto clothing
Profuse Drooling	saliva spills onto everything (e.g., books and equipment)
Anterior Spill	visible anterior oral or labial (lip) which can create impaired oral-motor function affecting speech, swallowing, and breathing
Posterior Spill	oral secretions that pool or collect in the back of the throat (hypopharynx) where, in normal situations, they should stimulate a swallowing reflex. Posterior spills will cause retention sublingually, in buccal pools, in the pharynx, and in the faucial isthmus. This posterior pooling of liquid and the absence of a normal swallow creates coughing, gagging, congested breathing, bad breath, and vomiting which can lead to aspiration into the trachea.

The causes of posterior drooling can be related to severe oral-motor dysfunction, pharyngeal sensory deficit, and/or a central disruption of the sensorimotor connection which interferes with the swallowing reflex.

Weakened or paralyzed musculature combined with a sagging and inappropriate habitual head-down posture increases the flow of saliva as well as the amount of liquids and foods coming out of the mouth. This, in turn, will cause drooling. Treatments to improve body positioning and posture along with oral-motor interventions are integral in the management

of drooling. You might want to contact a physical therapist or occupational therapist for input on exercises; transferring techniques; assistive equipment available for improved head control; balanced muscle tone; and/or jaw, shoulder, and lower body stabilization.

It is best to work toward appropriate jaw tone and stability, lip closure, improved swallowing competency, and sensory discrimination. Remember that practice makes permanent, but not necessarily perfect. A reduction in overall drooling through many of the techniques listed will help the individual to better adapt and acclimate to his body's physical limitations. Elimination of drooling is the goal but any help that can be attained to limit and manage drooling must also be seen as success and documented as such. Use the Drooling Level Indicator on page 46 to chart varying degrees of competency.

Neurodevelopmental treatment (NDT) and oral stimulation techniques have also been shown to improve the sensorimotor feedback loop to reduce drooling.

Interventions for Drooling

Posture/Positioning	See information for posture and positioning on pages 37 – 38.
Oral-motor Interventions	See sensory stimulation, massage to lips and cheeks, intra-oral massage, lip exercises, facial massage, neck releases and stretches, and jaw interventions throughout the book.
Chewing Gum	This is only to be used with individuals who are not at risk for aspiration and who show a normal swallow reflex. Chewing gum stimulates lip closure and frequent swallows for saliva management. For mild drooling related to lip seal, it is effective for reminding the client to keep his head up so the gum won't fall out of his mouth.
Chin Cups	Chin cups can be used to collect the saliva. However, combined interventions (e.g., improved posture, facial massage) show greater success than solely using the cup to reduce spillage to the chin, face, and clothing.
Auditory Cues	Auditory cues are used to remind the individual to swallow at regular intervals. These cues could be someone saying "swallow" or a bell or a beeper that goes off every minute or two to remind the person to swallow.
Biofeedback	Like auditory cueing, biofeedback gives information to the moderate- to high-functioning individual regarding swallowing frequency. Receptors are attached to lips and neck to give feedback to the swallowing function. For example, if a client hears a high sound, he possibly didn't initiate a strong enough swallow.

Behavior Modification Behavior modification is intended to break habits, bring awareness to the spillage of liquids, give praise to appropriate saliva management, and to build self-esteem needed for continued instruction. “Suck and Swallow” is a valuable prompt that can be given verbally, written on a card for a visual reminder, or played on a tape player. Using the chin cup to show how much saliva has been collected will informally gauge how much the individual has been listening or remembering to use the cue.

The goal is to be able to decrease the cues, the behavior modification intervention, and the direct therapy managed care of the individual’s saliva spillage problem.

However, even with oral-motor training, posture changes, and equipment modification, spillage may persist. Pharmaceutical intervention or surgery are options to manage severe drooling. Another strategy is the use of a prosthetic channel which is created to route or change the flow of saliva using the force of gravity to revert excessive unmanageable saliva into the esophagus, thereby bypassing the trachea.

Each of these interventions has benefits in the management of saliva, but it is important to note that they frequently come at some cost to the individual’s overall well-being. Contact the client’s physician for the latest medical research information on rehabilitative technology.

Other Tips for Managing the Effects of Drooling

- Use a plastic-backed absorbent pad (e.g., Chux) as a bib to absorb the excessive spillage onto the chest and pants. It converts the thin liquid to a thicker consistency. This pad can also be placed on a pillow to absorb liquid during rest time.
- Plastic shields and/or soft plastic coverings are effective in protecting books and equipment.
- Protect the skin from constant wet rash with barrier creams commonly used by artists and industrial chemical workers to protect their hands. Topical cream is frequently used around ostomy sites to avoid infection and rash. Contact the client’s primary physician or a dermatologist for further information.

Saliva Case Management Information

Client Name _____

Age _____ Male Female

Diagnosis _____

Phase of Illness acute severe
 long-standing condition recent onset

Social/Work/Caretaker/Home Factors _____

Oral-Motor Dysfunction Measure of Severity (Use the Oral-Facial Swallowing Evaluation and Rating Scale, pages 228 – 235.)

mild moderate severe

Eating Method/Ability (Check one and explain.)

self caretaker feeding nasal tube feeding gastrointestinal tube feeding

Food Consistency (Check all that apply.)

thin liquids thickened liquids pureed mechanical soft
 hard foods all consistencies

Positioning/Postural Information _____

Nutritional Status (Caloric needs being met? Restrictions/additions to diet?)

Dental Status _____

Medications (List all medications.) _____

Location of Intervention

clinic home school nursing home workplace

Chapter 5: Stimulation Therapy

Stimulation treatments are designed to improve the client's cognitive and motor abilities in the case of head trauma, cerebral palsy, low-functioning developmental delay, stroke with cognitive impairments, or Alzheimer's disease. The activities described can integrate naturally into family visitation and therapy sessions. These stimulation techniques are important for all caregivers to do to help alert and orient the client as much as possible. The therapy should:

- occur three to five times per day
- be in 10 – 20 minute sessions
- use a variety of techniques
- not be painful or noxious

It's important to document all stimulation techniques used in order to evaluate the effectiveness of intervention. You might use the Stimulation Chart on page 62 to report:

- baseline responses
- pretreatment status
- target stimulation applied
- client responses
- observations

Examples of Stimulation (See Materials List on page 13.)

1. Auditory Stimulation

For clients in a coma, or who have had a CVA or head trauma, auditory stimulation is often used to help pull them back to reality. Music, everyday sounds, and speech can alert and orient the client.

- Music (For more information, see pages 59 and 60.)
 - favorite songs
 - musical instruments like drums, whistles, noisemakers, harmonicas, bells, buzzers (present in loud/soft and long/staccato contrasts)
 - music therapy by a registered music therapist
- Environmental
 - home/outdoor sounds – dog barking, door slamming, teapot whistling, programming microwave, television playing, toilet flushing, phone ringing, birds chirping, police car siren
 - speech – family, friends, co-workers, talk shows, favorite movies

2. Tactile Stimulation

Check the client's chart for any allergic sensitivities and/or allergies prior to use in therapy. You might also question the family, caregivers, nursing staff, or dietitian.

- human touch – holding; slowly stroking arms, face, and hair; massaging; grasping palm; tickling; lightly stroking with fingertips; brushing hair; lightly brushing skin on arms, legs, or cheeks with a soft bristle painter's brush
- textures – feather, sandpaper, dry washcloth, wet washcloth, cotton swab, tongue blade, flowers, leaves, grass, brush, comb, fur, foam, or any other type of soft, hard, bumpy, smooth, or coarse texture
- temperature – ice-cold washcloth, warm washcloth, neutral temperature items like Play-doh or a textured ball

Verbally and visually introduce the object/texture to your client, even if you're unsure as to whether the client is comprehending the message.

Depending on the client's functioning level, orient him to facial body parts, to his location, his name, the time of day, your name, his occupation, and/or his relation to you. Ask for basic responses like eye twitch, eye open, or mouth open.

- Begin with the client's palms.
- Progress to the underside of the arms, then the neck.
- Continue onto the cheeks.
- Avoid direct contact with eyes and nose areas.

3. Olfactory Stimulation

- strong familiar smells – perfume, aftershave, food odors (coffee, vanilla, garlic), cedar, rubber

Avoid toxic items, medicines, detergents, alcohol, ammonia, or any other chemical which could cause a reaction (e.g., skin or eye irritation and burning).

Introduce each item visually and verbally before a 5 to 10 second olfactory stimulation. Hold the item at least 12 inches out and below the client's face. Describe common uses for each item and familiar places the odor may be detected. Encourage clients to identify the odor with cues if necessary.

4. Gustatory Stimulation (Taste)

Check the client's chart for any allergic sensitivities or allergies and/or any dietary restrictions prior to use in therapy. You might also question the family, caregivers, nursing staff, or dietitian.

Exercise caution with individuals exhibiting any swallowing difficulties. Taste stimulation is not advised with individuals who are receiving nothing by mouth (NPO). A swallowing therapist (SLP skilled in swallowing therapy) can recommend consistencies which can be tolerated safely.

- favorite and familiar tastes – any comfort food or nonalcoholic beverage the individual enjoys such as spaghetti, pie, sauce, jelly, or chocolate
- taste contrast – salty/bitter, sweet/sour, mildly spicy/bland

Increasing taste awareness may allow the individual to increase tolerance to oral-motor stimulation and to increase appetite for oral feedings. Wrap the food item in cheesecloth or organza for the individual to suck on. Thicken any liquids to manage transition time through the oral and pharyngeal cavity. When using taste stimulation, keep in mind that sweet receptors are found on the front of the tongue, and salty and sour taste receptors are found a bit farther back and to the sides. Bitter taste receptors are positioned toward the back of the tongue. Various types of food items for taste stimulation are:

- Popsicles
- fruit smoothies
- fruit puree
- vegetable puree
- Mrs. Dash's
- cinnamon
- vanilla
- jams
- jellies
- syrup

Present these items chilled, frozen, at room temperature, or slightly warmed as is tolerated and deemed safe for oral feeding.

The client might also benefit from:

- thermal stimulation (iced stimulation designed to trigger an immediate swallow reflex)
- intra-oral massage (digital or swab massage in the intra-oral cavity)
- toning (stretching, elongating, and firming musculature)
- range of motion exercises
- passive exercises (performed by the client or aide without assistance from target musculature)
- active exercises (client actively attempts to move target musculature)

5. Visual Stimulation

Any of the following items can be presented to the client to increase awareness, cognition, attention, naming, memory, and orientation.

- familiar photos, videos, movies, objects, toys, tools, food, functional daily items (e.g., pen, comb, purse, mirror, toothbrush)
- variation of lighting – sunlight, room light on or off, penlight or flashlight in darkened room (give light to client to manipulate and track)
- variation of color – bright or contrasting clothing or objects

6. Vestibular (Movement) Stimulation

Movement helps increase body awareness as well as increase vocalization and communication. The client needs to be upright, alert, and have relatively good head support and trunk stability in order to eat and communicate well.

- changes in positioning – transfers to and from bed, therapy apparatus, water therapy, occupational and physical therapy

7. Intra-oral Stimulation

Note: Remember to wear gloves when working in and around a client's mouth.

The following stimulation activities and all other passive exercises may be introduced at all levels of cognition and at all ages. For the client who is orally hypersensitive, stimulation to the oral cavity will reduce tactile discomfort to textured foods. It will also decrease an excessive gag reflex. For the client who is orally hyposensitive, this stimulation will increase oral sensitivity and muscle activity thereby improving feeding, articulation, and resonance.

Use a toothette, gauze, and/or soft bristle toothbrush to brush the client's inner cheek walls. If using a toothette, twirl the stick in your hand to provide a circular stimulation to the inner cheeks. From your client's cheeks, move down to the lower gums, stimulating the outer gum surface with a soft brushing motion or use your index finger to apply firm pressure, gliding front to back and back to front once. Gradually increase tolerance to five times up and back.

Take the toothette and begin at the alveolar ridge. Brush or twirl it backward along the hard palate. Gradually increase stimulation to the soft palate as tolerated. Once the client can tolerate toothette stimulation to the soft palate, twirl the toothette over to the left gum line and move it back to midline. Repeat to right gum line. Stop short of the gag reflex.

8. Intra-Oral Vibratory Stimulation

Vibrator stimulation can provide information for the client to process. The response may just be reflexive, but the muscle is still processing the increase in blood flow. This can eventually lead to normal, unassisted movement. Using a vibrating toothbrush promotes cheek and tongue awareness as well as increases cheek tone.

Gently apply light pressure to the client's lips with the back of the vibrating toothbrush. Move inward to one of the inner cheeks. Push the cheek outward with the back side of the vibrating toothbrush and then pull it out of the mouth in a sweeping motion. Do the same on the other cheek. Then with the vibrating brush, apply gentle stimulation to the sides of the tongue, the tip, and the top of the tongue from the mid-tongue to the tip.

Oral-motor awareness can be increased by adding tiny bits of flavoring to the brush. If the individual is at risk of aspiration of saliva, posture the individual with a slightly downward head position to allow the secretions to flow forward/out. Frequently check the applicator brush to make sure it is on securely.

9. Electrostimulation

Electrostimulation significantly aids recovery of muscle strength following stroke according to a recent study conducted by William Stason, M.D., and his colleagues from the Harvard School of Public Health.

Muscle strength enables muscles to contract. This allows movement and improved function. Muscle strength is only one aspect of neurological deficit that occurs with a stroke-induced upper motor neuron injury. Proprioceptive input, which is responsible for receiving stimuli in the muscles and tendons, the level of spasticity of the muscle, and the coordination of antagonistic or opposing muscle groups determine functional recovery from a stroke.

Functional electrostimulation (FES) is a technique that applies short, programmed bursts of electrical current to the neuromuscular region affected by the stroke. It applies the stimulation to the partially paralyzed (paretic) muscles directly or to the associated peripheral nerves. The researchers (Stason) conducted four studies of middle-aged men and women who had suffered strokes 1.5 months to 2.5 years earlier and were treated with FES for 3 – 4 weeks. They looked at the change in muscle force of contraction following FES compared with no FES.

Results of the four studies showed a change in force of .63 (0.20 being the smallest effect and 0.80 being the largest effect), showing a statistically significant increase in strength. Continued research is needed to confirm sustained improvement in muscle strength and/or actual functional improvement.

The researchers point out that FES units can be purchased for the home. The units are extremely durable and reliable and can be used by the patient or family member without the ongoing assistance of a professional. The researchers concluded that the large burden of stroke-related disability and the cost of direct and ongoing therapy with professionals can be cost prohibitive. Therefore, with selective intervention of the therapist to set therapy goals, suggest related exercises, and follow up on progress, the use of FES is warranted. (Glanz et al 1996)

One type of portable, hand-held device that electrically stimulates treatment points is the STIM-PRO. It has been proven to relieve pain and strengthen musculature. It is easy to use and can be used by the patient, the therapist, and/or the caregiver. STIM-PRO is safe with all individuals except clients with cardiac pacemakers and expectant mothers.

This device works in the same manner as acupuncture by stimulating the release of endorphins. It works to relax contracted and spasmed musculature. Strained musculature places the nerves in a hypersensitive state. The theory suggests that this amplification of neural sensation called “denervation super sensitivity” and the subsequent muscle contraction/spasm may be at the physiological basis of many chronic pain syndromes. By applying acupressure and/or using the STIM-PRO, you reinnervate the neural pathways and allow the individual to return to a more normal functioning and pain tolerance level. Circulation is increased, or in some instances decreased, in the injured area. Like heat or ice application, activity to the area is warmed and circulation increases or it is cooled and circulation subsides. STIM-PRO can also balance hypo- and hyper-musculature imbalance in that it can help stimulate weaker musculature. It can reduce tension and build muscle when there is little or no activity.

STIM-PRO is recognized as a transcutaneous electro-neuromuscular stimulation (T.E.N.S.) device which uses a low-frequency microcurrent impulse. It comes with an easy-to-follow guidebook, video instruction, and a toll-free support line. You can use STIM-PRO along with the exercises in this book. It may also be used on the upper and lower limbs. It should not be used in or close to the eyes, in the mouth, or in the ears. For ordering information, see the Resources list, page 258.

Facial Sensory Stimulation Exercises

Introduce the following exercises as passive exercises for clients who are unable to follow commands and show no response, but would benefit from sensory stimulation. The exercises also reduce further atrophy and stimulate muscle activity.

1. **Brush Cheeks**

Use a soft bristle, two-inch wide paintbrush and make rapid upward motions on the client's cheeks.

2. **Circular Cheek Pinch**

Gently pinch the client's cheek musculature with your index finger and thumb, beginning at the lip corners, moving up to the cheekbone, and then circling down and back to the masseter muscle. Continue the circular motion or randomly pinch the cheek musculature.

3. **Ice Block Stimulation to Cheeks**

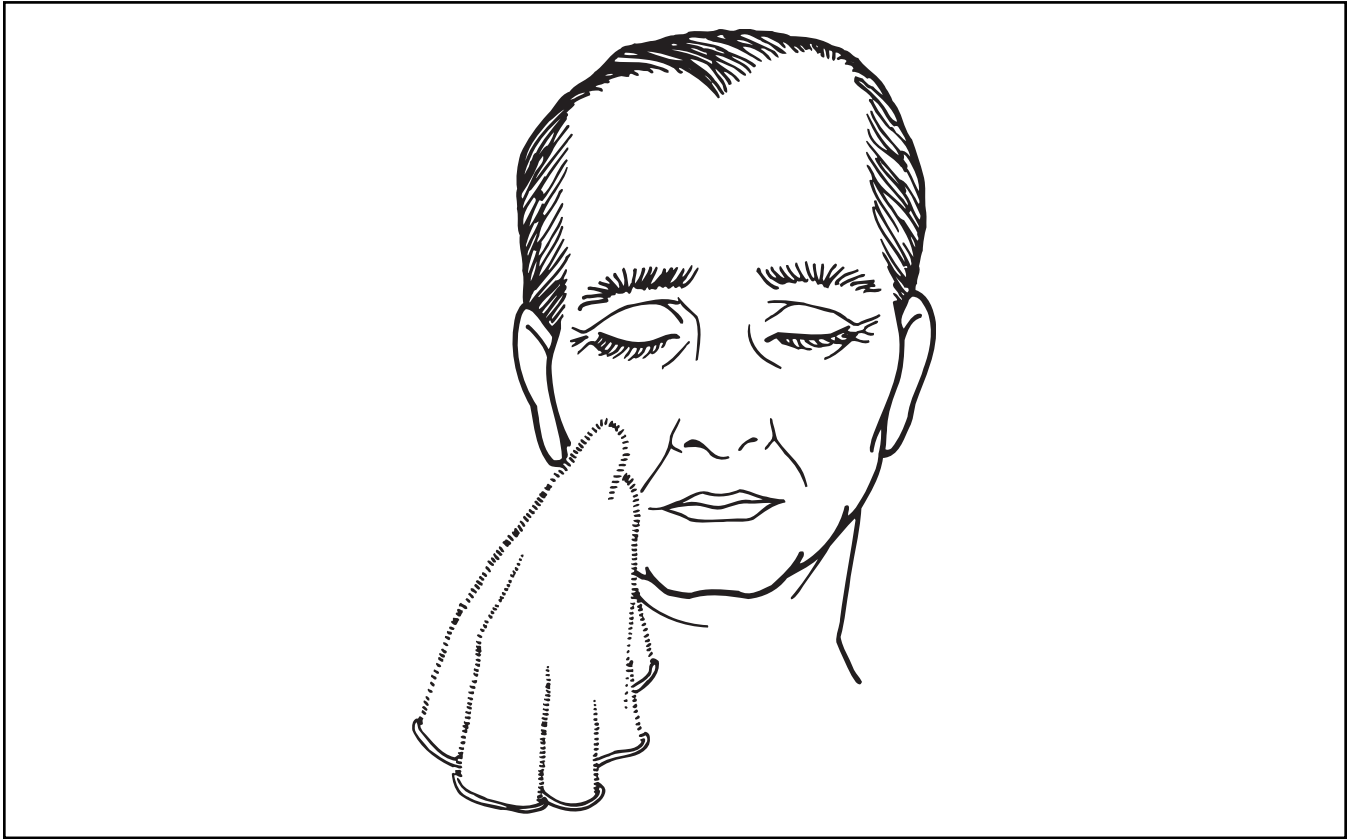
Apply an ice block to the one of the client's cheeks by stroking backward from lip corner toward the ear lobe. With each stroke, start at the lip corner again, and fan back and upward, stopping at the cheekbone. Do not allow the ice block to touch the client's eyes, ears, and/or nose. After each stroke, wipe the cheek dry using an upward motion. Discontinue if client strongly objects or shows aversive reaction. Do not overstimulate.

4. **Cheek Tap**

Tap cheeks and temporomandibular joint in a rhythmic fashion. Tap both sides simultaneously. This increases jaw stability and cheek tone.



Washcloth Stimulation



Go around the entire face in a large sweeping massage. Then pat the entire face in a tapping motion.

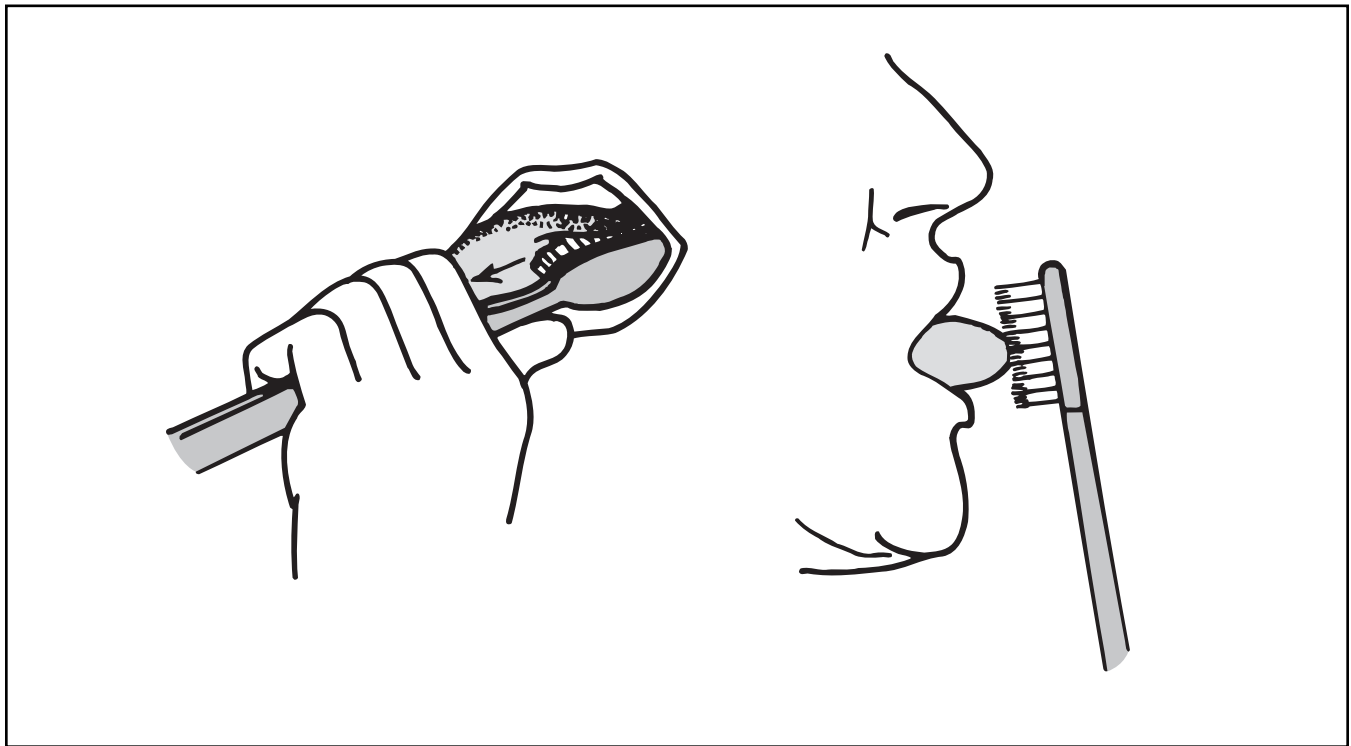
Gently squeeze a small portion of skin between your index finger and thumb with washcloth. Release quickly. Continue this around the entire face.

Switch from dry to wet washcloth, varying from cool to warm every couple of minutes for a change in stimulation. Avoid eyes and nostril openings. Perform no longer than 10 minutes.

Benefits

- stretches cheek musculature
- improves facial tone
- assists in orientation

Toothbrush Stimulation



Gently apply a soft bristle toothbrush to one side of your tongue. Start in the back and move the toothbrush toward the tip. Push your tongue gently against the toothbrush. Do the same thing on the other side. Repeat once.

Then brush the tip of your tongue up with toothbrush. Incorporate this exercise into regular toothbrushing activity.

This exercise can also be done with a fingertip, toothette, or iced cotton-tip applicator.

Benefits

- stimulates lateral widening of tongue
- increases range of motion laterally
- promotes tongue tip awareness

Note: This exercise can be done by the therapist or caregiver if the client is unable to perform or when teaching the client how to perform.

Intervention Tools

1. Microphone

The use of a microphone to amplify speech is effective in oral-motor training. Many individuals will try harder to articulate more precisely when the sound is amplified because the feedback loop for correction is emphasized. Echo-Mic is an inexpensive type of microphone that is available at most children's stores. Other similar types of microphones may be purchased at stores like Circuit City or Radio Shack.

2. Music

Individuals with Down syndrome, dementia, Parkinson's disease, dysarthria, stroke, or any unspecified neurological impairment may have experienced failure after failure trying to produce intelligible speech. Music has been found to help these people communicate. Music bypasses the left side of the brain and goes right to where music is processed. Many times the individual can learn new songs with new words. Being able to say a few words, even with delayed response time, gives the individual a sense of control and coordination. It allows the client to interact, even if it is only a short greeting.

Music can act as a timekeeper, aiding the individual with muscle movement by stimulating the brain's motor systems. Rhythmic sounds tapped to or listened to in a song can help the individual with repetition and movement. Rhythmic sound aids the brain to time and sequence movement properly. Music therapy can involve rhythmic drumming, singing, instrument playing, or listening to recorded music.

Music has been found to improve orientation, reduce pain, ease stress and depression, and decrease memory loss. It also increases personal empowerment and emotional empathy, stimulates the immune system, and leads to faster recovery and rehabilitation. Music therapy can be used in conjunction with conventional therapeutic and medical interventions.

You can sing familiar songs to help elicit speech intelligibility and word recall such as:

You Are My Sunshine
 Happy Birthday to You
 America the Beautiful
 Take Me Out to the Ball Game
 If You're Happy and You Know It

Ask family members for a list of the individual's favorite songs or musical preferences. Pierce J. Howard, Ph.D., author of the *Owner's Manual for the Brain: Everyday Applications from Mind-Brain Research* (Second Edition, 2000), says that music seems to have a more powerful effect when it is music that the individual chooses.

Cranial Nerve and Associated Function

It is important to address localization of function. Documentation of nerve damage may be found in the physician's report, nursing notes, occupational or physical therapy documentation, and/or the radiology report. A thorough oral-facial evaluation will also give you information about cranial nerve (CN) damage. Document function, strength, range of motion, ease of repetition, and speed using the Stimulation Chart on page 62.

Cranial Nerve		Function
CN I	Olfactory	smell
CN II	Optic	vision
CN III	Oculomotor	muscle movement of the eyeball, pupil, and upper lid
CN IV	Trochlear	superior oblique muscle of the eye
CN V	Trigeminal	chewing and facial sensation
CN VI	Abducens	abduction of the eye
CN VII	Facial	movement of all the facial muscles, anterior neck muscles, taste, salivary glands, contraction of the stapedius muscle to protect the inner ear from loud noises
CN VIII	Acoustic (Vestibular)	equilibrium and hearing
CN IX	Glossopharyngeal	taste, swallowing, elevation of the pharynx and larynx, parotid salivary gland, upper pharynx sensation, pharyngeal constriction through innervation to the stylopharyngeous muscle
CN X	Vagus	taste, swallowing, elevation of palate, movement of the vocal folds for phonation, movement of the cricoid cartilage to change pitch, gag reflex
CN XI	Accessory	turning of the head and shrugging of shoulders
CN XII	Hypoglossal	movement of the tongue

Stimulation Chart – Response Summary

Client _____

Stimuli: 1. _____ 4. _____ 7. _____ 10. _____
 2. _____ 5. _____ 8. _____ 11. _____
 3. _____ 6. _____ 9. _____ 12. _____

Scope: D – direct stimulation in therapy setting with therapist assist

Q – quasinatural, role-playing real-life situation and/or occurrence

RO – random observation unrelated to stimuli

Stimuli	Observation/ Response	Efficiency (note time delay before response elicited)	Scope	Date/Time	Number of Presentations	Notes
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						

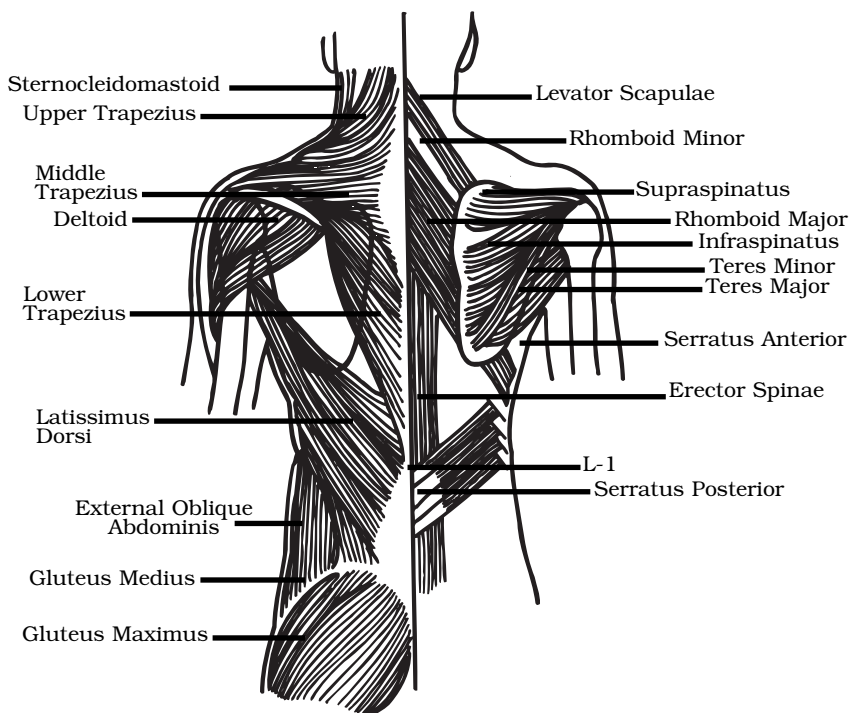
Chapter 6: Massage

Massage can effectively facilitate rehabilitation for many clients. It can give you more information than just visual observation. It can also help a client focus attention on his body so that later in rehabilitation, he knows how to offer information for treatment. In addition, it can help the client learn how to relax and balance himself as much as possible.

If massage is not included in the physician's written prescription, a phone call or a written report to the physician requesting the addition of oral-motor and/or body stretch/massage is often all that's needed. Many insurance programs will allow for therapeutic massage.

The benefits of massage:

- establishes eye contact and skin contact
- improves vocalization and voicing (reduces muscle tension to the larynx)
- heightens scent awareness (through relaxation of the nasal area)
- touch stimulation (can activate a lethargic or a hypertonic client)
- encourages movement
- relaxes and centers
- encourages body consciousness
- initiates a form of body language or communication
- speeds myelination of the brain and nervous system
- helps establish thresholds for stimulation



Massage integrates:

- intimacy
- communication
- play
- caregiving
- self-esteem
- body knowledge
- breathwork
- positive affirmations and visualization
- feelings of well-being
- the release of traumas and negatively-held memories stored in the soft tissue

Not only does massage aid in physical rehabilitation, it sends a strong message to the client that he is loved, worthwhile, seen, understood, and cared for. It also integrates both the therapist or caregiver and the client into the recovery process, thereby relieving the sense of helplessness that may be felt by the therapist and/or client. Massage and touch therapy enables the individual to communicate even when verbal communication is impaired. During massage, the client's muscles respond in certain ways which provides nonverbal information.

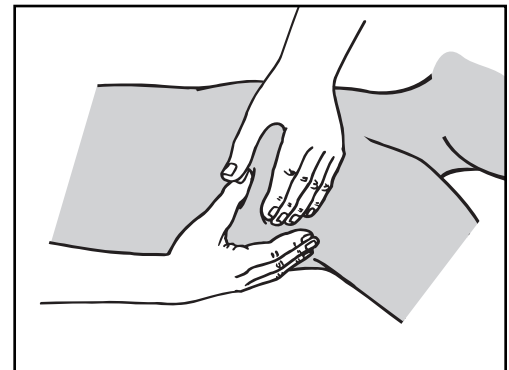
For more instruction on therapeutic touch that is becoming central to therapy and nursing care, you might reference the book *The Therapeutic Touch: How to Use Your Hands to Help or Heal* by Dolores Krieger (1992). Krieger is well-known for her study and development of the field of massage. She saw results in massages that were only five minutes long. She reported that with low-functioning individuals, more was not necessarily better. The quality of the interaction was what counted.

Individuals confined to a bed develop areas of physical discomfort from inactivity. Krieger felt that massage of normal tissues that were not involved with the individual's pathologic condition relaxed them. This was especially helpful with patients who were restless from long hours in bed. For example, if an individual has been lying on his back for a long period of time, a slow, rhythmical massage to the back is recommended.

Muscular tightness through the shoulder and neck muscles due to uncomfortable resting positions and increased tension in the patient can be relieved with petrissage (see below) to this area. Use deep to light strokes that go downward from the head toward the coccyx. A downward motion is more restful and relaxing than one that courses upward.

Petrissage and Effleurage

Petrissage is a natural muscle massage stroke that enables the giver to squeeze and release. It serves to "milk" the muscle of the waste product that collects due to a lengthy inactivity. Petrissage consists of kneading manipulations where you squeeze the tissue between the thumb and index finger. The strokes attempt to lift the muscle mass and wring or squeeze it gently. Take care not to work an area too long or to pinch or bruise the tissue. Start petrissage with circular rhythmic strokes on the client's back. The circular motions allow you to cover a broad area. Then use the index finger and thumb in the same fashion in the smaller areas such as the sides of the neck. Petrissage can be done with the clothing on and with the person seated or lying down. If the person is on a massage table or a bed with the back exposed, make sure to drape and cover them appropriately, giving them a sense of personal space and privacy. Little to no lubricant is needed with petrissage.



Individuals who have experienced paralysis or weakness will benefit from a good massage to pressure areas to avoid decubitus. *Decubitus* is abrasion to the skin and underlying tissue that usually comes from a bed sore. Once the client is turned over, the pressure area will appear red. (Tappen 1990)

Effleurage is long, even strokes that glide over the skin. Petrissage or effleurage can be applied to and around any affected area. If a decubitus ulcer is already present, massage alone will not be effective. Always contact the client's physician if any physical changes are observed.

Pain and restricted range of motion anywhere throughout the body can impair full function elsewhere. The connective tissue harnessing the lower back can cause severe pain, misalignment, and loss of appropriate function to the shoulder. This would translate to strain in the neck and possible speech, vocal, or swallowing dysfunction. The client should be evaluated and treated as a whole mind/body system for optimal performance.

Apply the massage interventions in this book to weakened or paralyzed areas on the face, head, neck, and shoulders. Deep strokes will bring blood and stimulation to the area. You don't need to use strong pressure, but should stroke slowly so the massage can absorb into the muscle.

Compassion can be expressed through kind words, reassuring positive statements, and massage even if the massage only lasts five minutes. Help the individual understand how his thoughts and attitudes may be related to his physical state of being. Positive affirmations read aloud or included as material for intelligibility drill work are beneficial in helping the individual focus and re-establish composure. (See the positive affirmations on page 35.)

Even if you feel that only a small area was touched in any given exercise or intervention, remember that muscles and meridians (which carry vital life force energy) are benefited all over the body. These benefits have been documented to include improved learning and attention span as well as decreasing allergic tendencies, constipation, night coughing, lung congestion, ear infections, nosebleeds, skin conditions, and problems related to weight gain.

Affirmation for Composure and Harmony

Composed and peaceful, I enter a meaningful and productive day. In the course of the day, I shall welcome difficulties with composure, remembering that hardships are there to challenge my fortitude and develop my strength. I will make everyone I meet today a better person; every act of mine will be a sign of peace and of the voice of nature.

Preparing Yourself to Do Massage

Touch therapy for basic tactile awareness or massage intervention challenges the therapist or caregiver to first question her own level of relaxation and centeredness before coming into the therapy setting. Anxiety, anger, hesitancy, and fear can be felt and translated to the individual with abrupt body movements, lack of sensitivity or compassion, and a lack of intuitive empathy. The therapist or caregiver should first ask herself:

Am I relaxed or tense?

What emotions am I exhibiting?

What am I projecting energetically (e.g., frenetic energy, apathy, anger, pain, peace, love, desire to heal)?

Think about your answers. Take a deep relaxing breath that allows you to let go. Let go of tension and anxiety through your breath. Let it all flow out. Don't worry, it will all be waiting for you after the session if you choose to pick it all up again. But for now, release all that you can with several deep breaths. To expedite the release of tension, you might say any of these messages to yourself:

“I release tension throughout my body.”

“I am relaxed, confident, and centered.”

“I release other thoughts and focus on my client.”

Once you are centered, touch and massage therapy asks you to use all of your senses to listen to and/or be aware of any signs being presented by the individual. Things you should look for are:

- muscle tone changes
- shifts in sensitivity or pain
- changes in respiration as blocked areas release (e.g., sigh)
- improved orientation to the environment and body awareness
- improved perception and/or cognition
- improved function for speech, swallowing, or voicing
- expression of emotion (e.g., relief, elation, sadness, apathy, hope, anger, grief, terror)

Getting Started

Make sure that the room is warm and you and the individual are as comfortable as possible.

Check in with the individual and ask, “How are you doing? Does my touch feel all right? Is something on your mind that you would like to share?” Encourage free exchange of information even if you are unable to understand the client's speech. It is the client's time to release, rebuild, and bring his body up to the highest level of performance possible. Be patient. Start with a few touches. Your massage will be based on the area of need (e.g., jaw) as well as your intuition as to what is causing the actual problem (e.g., tightened neck).

Document all interventions, findings, and outcomes (e.g., increased muscle tone). Use a scale to determine change in function. Refer to the Oral-Facial Function Evaluation on page 233 for a standardized system of reporting muscle placement and function.

If the client is able to help, teach him to perform the touch and massage interventions on himself. Show the client how to successfully perform the exercises and then give him one or two for practice. Challenging the client to perform the exercises asks him to not only be awake, but to be concerned and involved in the recovery process. Having the client perform the exercises by himself makes him accountable for his own success in therapy.

Become familiar with all of the intervention strategies in this book. Many times an exercise is listed as being for one part of the face, yet it is beneficial for other areas (e.g., cheek exercises can also help lip or tongue widening). Knowing many different intervention strategies can help you build an individualized treatment plan for each client.

Working the Hands and the Feet

For many clients, working the most distal part of the body (e.g., the hands and feet) is as intense as they can tolerate. Hypersensitivity to the face, head, neck, and shoulders may be so severe that it impedes direct therapeutic intervention. Slowly working toward direct intervention is vital in beginning to unwind the hypersensitivity.

The hands and feet have acupressure points to all organs in the body. They are the bridge to further work because they can help open up a client's system and balance the body. Massaging a client's hands and feet are also good for sensory stimulation and orientation (e.g., hot or cold; knowing which hand is being touched).

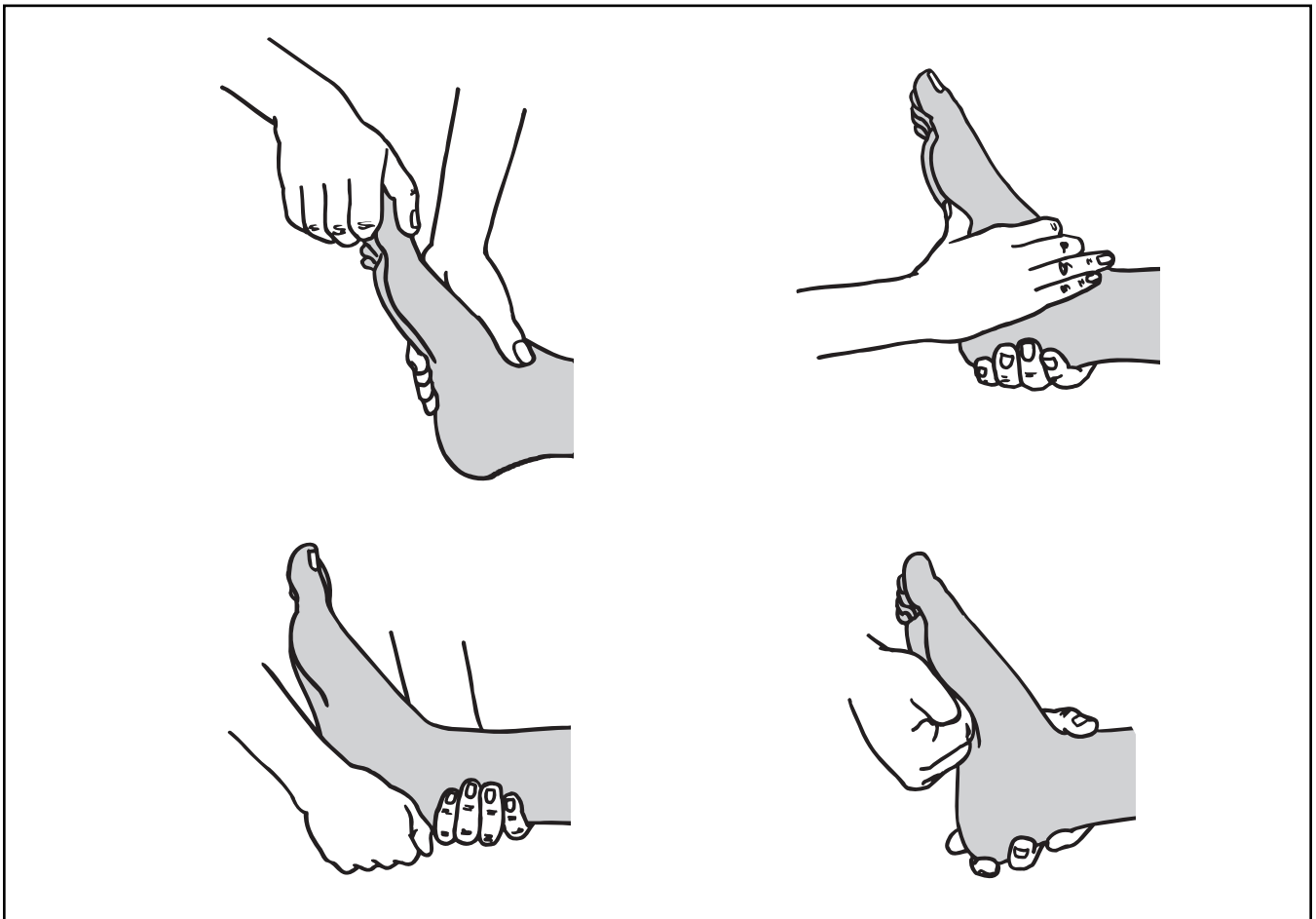
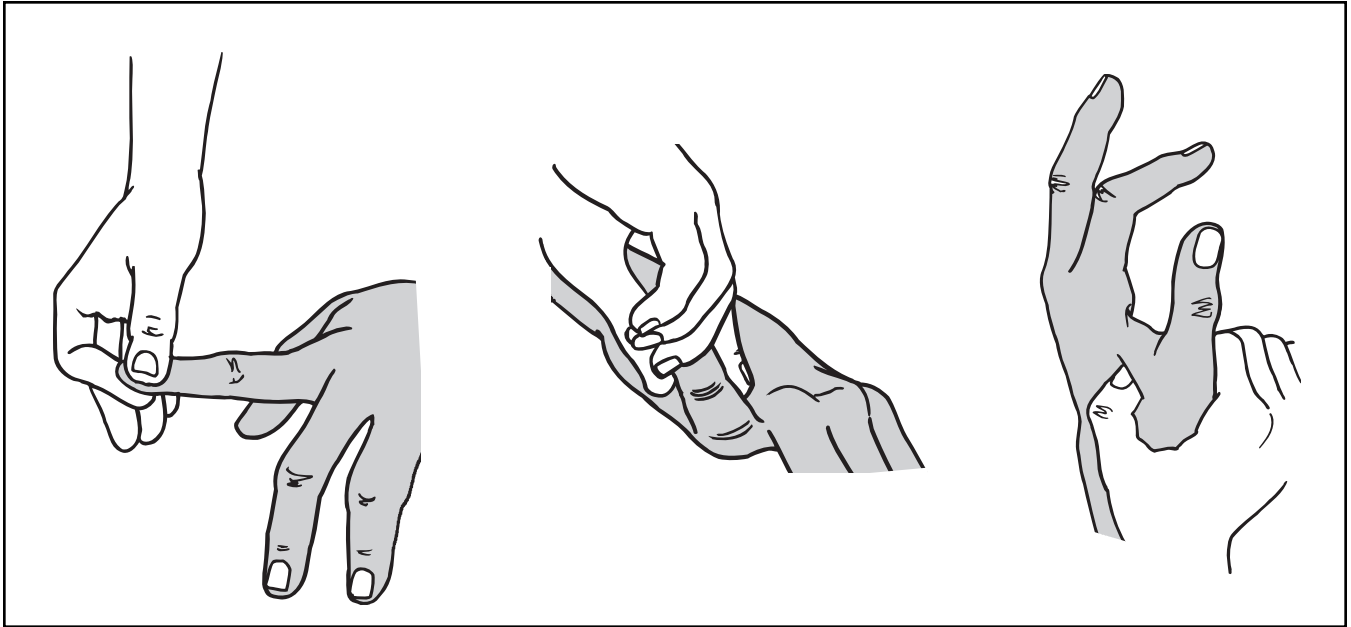
Remember to carefully monitor the individual's responses to touch and massage. If the client becomes stressed, disturbed, or shows moderate discomfort, change the amount of pressure you are applying, reduce the length of the intervention, and/or change the type of intervention.

Along with massage, some exercises for hands include:

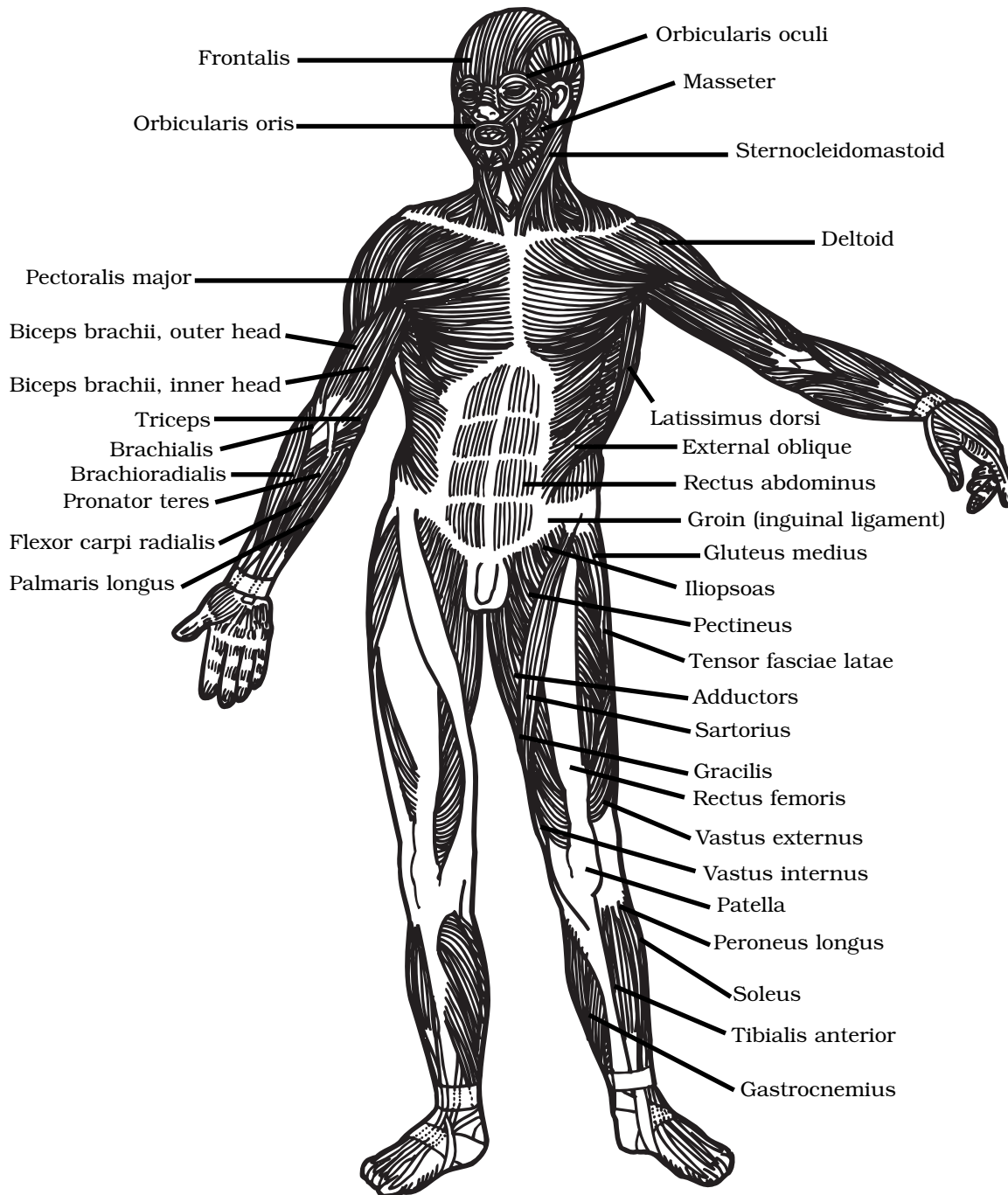
- squeezing a rubber ball
- wringing a washcloth
- stretching a rubber band (place the rubber band around the outside of the fingers and thumb and then flex the fingers outward)

Hand and Foot Massage

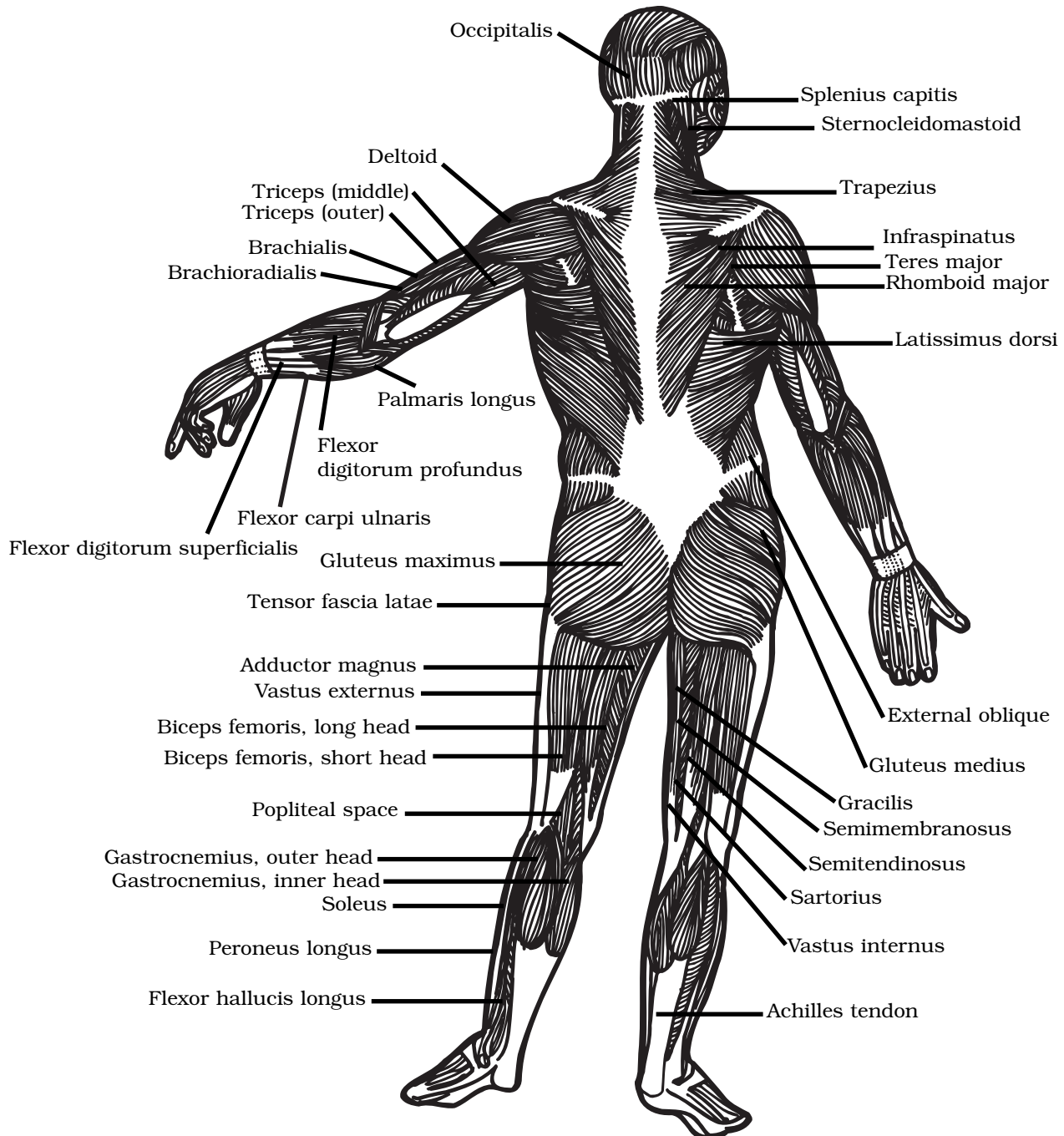
Apply gentle to moderate pressure as is tolerated.



Front View of Muscles



Back View of Muscles



Chapter 7:

Acupressure Techniques

Traditional Chinese medicine is founded on the belief that the individual is a connected whole. Acupressure, a needleless means of facilitating acupuncture-like treatments, incorporates massage to sensitive pain points. Acupressure is best used when performed by another person to allow the individual to relax and to concentrate on her body's responses, although it can also be taught to the individual so she can work on her own.

Acupressure is beneficial in:

- relieving discomfort
- improving range of motion
- strengthening, balancing, and toning musculature
- reducing edema (swelling)
- reducing the sensation of isolation or loneliness through healing touch
- increasing sensory and intuitive awareness of body signs and signals
- orienting to self and to the environment
- reducing anxiety, stress, and tension
- releasing emotion and trauma
- releasing blocked meridians (energy) to vital organs
- easing a body posturing that still feels like it needs to protect itself from further assault, further injury, or pain

Touch therapy, massage, and acupressure are integral parts of the healing and strengthening process. The person performing acupressure needs to ask questions and to be responsive to all areas of the client's life that may be reducing her ability to perform or progress in therapy.

Do you have pain? Where?
Are you sleeping well?
Is something concerning you today?

By reducing emotional, physical, and mental blocks in the client, a pathway to healing can be created. The client learns to adapt to a higher level of receptivity. This then opens the door for the oral-motor, head, and neck exercises that are to come and to allow them to be performed with greater efficacy.

Meridians, or energy pathways, circulate energy throughout the body. These channels provide a continuous flow of vital energy and nutrients to all parts of the body. The meridian system delivering Chi (i.e., the energy) has no anatomical structure. Rather, it refers to the pathway of life force energy.

Acupressure works through two systems (theories).

1. Gate Control Theory: Thin fibers transmit the sensation of pain and thick fibers carry the sensation of touch. When the impulse to the thick fibers is increased with the acupressure, it blocks the conduction in the thin fibers by closing the gate of specific nerve cells that send the feeling of pain to the spinal cord. It is like putting deep pressure on a hurt knee to help lessen the pain.
2. Neo-endocrine Theory: This relates to the endocrine or glandular system. Deep pressure to the acupressure points (energy points) causes the body to release endorphins. Endorphin, a protein molecule, has powerful pain-relieving capabilities. The endorphin release is responsible for the continued pain relief and subsequent treatment gains following acupressure.

Acupressure and massage treatments can be included in the progress notes as pertaining to the charted goal (e.g., to increase range of motion of the jaw for improved oral phase transit time) for oral-motor, head, and neck intervention. Goals include:

- improving range of motion
- strengthening balance and tone musculature
- improving facial symmetry
- reducing eye strain
- reducing laryngeal strain
- improving vocal quality
- reducing pain associated with swallowing, voicing, etc.

Acupressure Application¹

Treat the energy point (shown as a combination of letters and numbers), called the “ah shi” or “ouch” spot, with moderate pressure and massage using a small, circular pattern over the knot or sore point to break up the blockage. The degree of pressure must take into consideration the tolerance of the individual. The greater degree of pressure the individual can tolerate the better. Check in frequently. Acupressure, massage, or even oral-motor exercise interventions are best introduced when the individual is stable and able to tolerate deep touch. Light touch strategies such as the Facial Sensory Stimulation Exercises on pages 56 and 57 may be more effective at first to alert or waken the nervous system, to orient the individual, and to calm and prepare the body for deeper work.

Once the individual is ready for treatment, treat the point for at least one to two minutes. Press hard enough to elicit some initial tenderness. For extremely sensitive individuals, gently build up the pressure as the person increases tolerance. Remember, a little often goes a long way. Ask questions like, “How is the pressure? Do you think you can comfortably tolerate a bit more?” Holding the spot will decrease the pain and work toward freeing the blockage. Ease into the spot as you count to 5, then firmly massage with consistent pressure. Ease out slowly as you count to 5 again.

¹ Gangale, D. On-line acupressure course © 1999 reprinted by permission of Speech Paths.com, Professional Marketing Seminars, 250 Newport Center Dr., Suite 202, Newport Beach, CA.

The acupressure points (energy spots) are specific, but do not become overly obsessed with trying to ascertain if you are exactly on the right spot. Check in with the individual. Usually you will be in the right spot especially if there is reported sensitivity. If there is no dull ache or tenderness, continue by working the energy spot related to the problem. Note any changes in pain release, increased range of motion, and/or strength that are observed.

Be sure to contact and educate the primary care physician to describe your therapy strategies and treatment progress. Remember that there are many means of therapeutic intervention. Acupressure is one non-evasive means. Referrals can also be made for any of the following. It is necessary to obtain all orders for referrals through the client's primary physician.

- acupuncture
- physical therapy
- psychological counseling
- occupational therapy
- biofeedback
- neuromuscular massage therapy
- Reiki (method of natural healing based on the application of Universal Life Force Energy) (For more information, see the Resources list, page 254.)
- hypnotherapy
- nutritional or dietary intervention
- pharmaceutical pain management

Energy Points as They Correspond to Specific Conditions

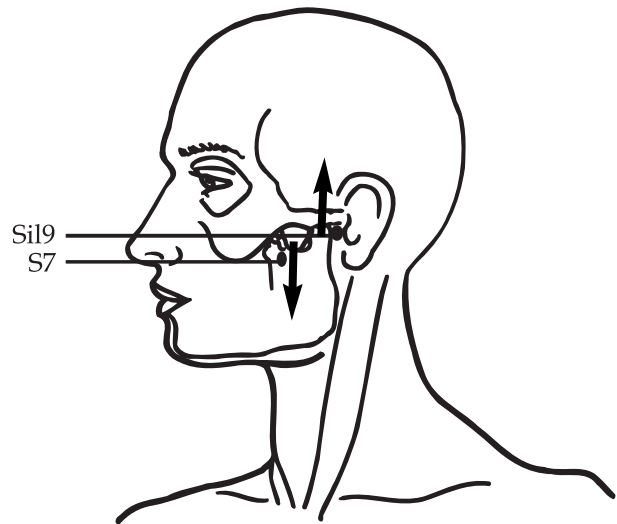
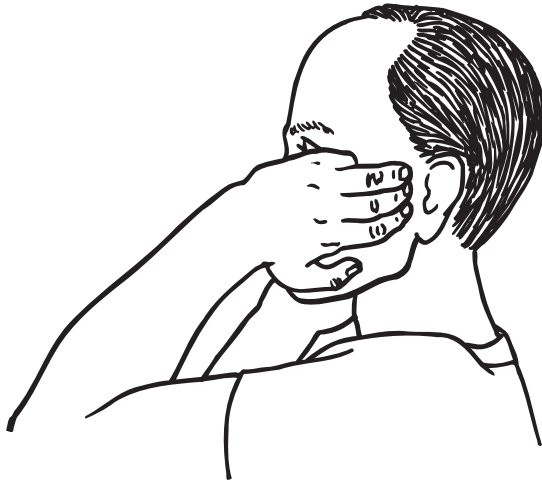
Specific energy or “ah shi” points are described on pages 74 – 82. The pictures show basic energy points for the following:

- jaw pain
- laryngeal area
- neck
- sterno-clavicular area
- tinnitus
- asthma
- bronchial area
- sinusitis
- lungs

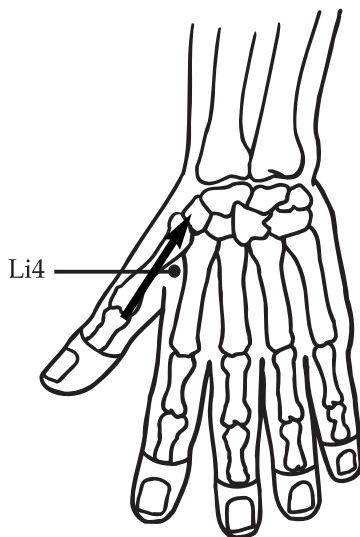
Jaw Pain

Pressure to these points helps reduce pain and improves range of motion of the jaw. It is also especially useful in treating temporo-mandibular joint ailments, childhood articulation disorders, dysphagia, and dysarthria where pain and restricted jaw movement are evidenced.

→ indicates direction of acupressure massage



LEFT SIDE



BACK

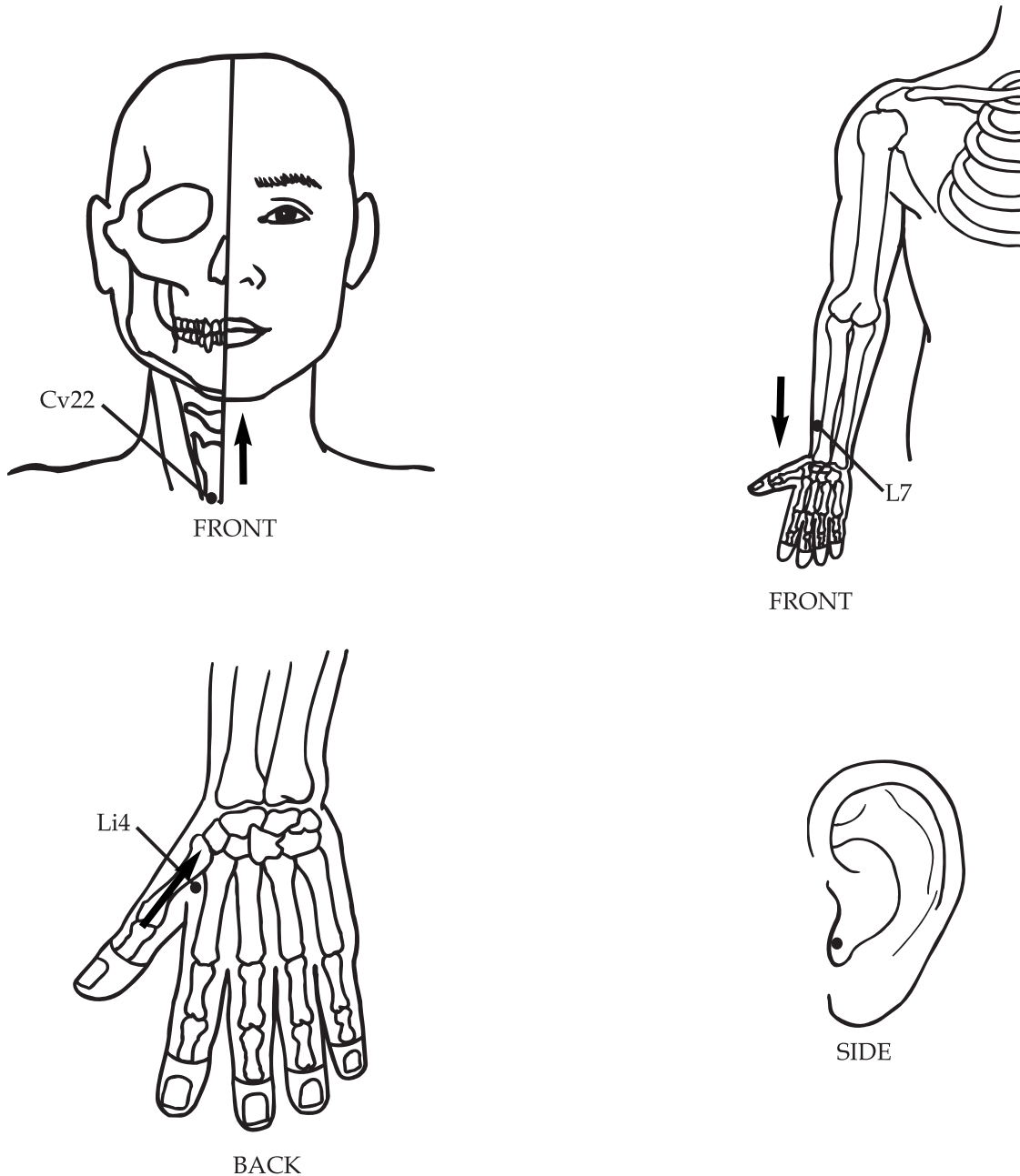


SIDE

Laryngeal Area

Pressure to these points is effective in helping vocal dysfunction associated with vocal strain. It may also benefit the swallowing function by providing stimulation to energy pathway points.

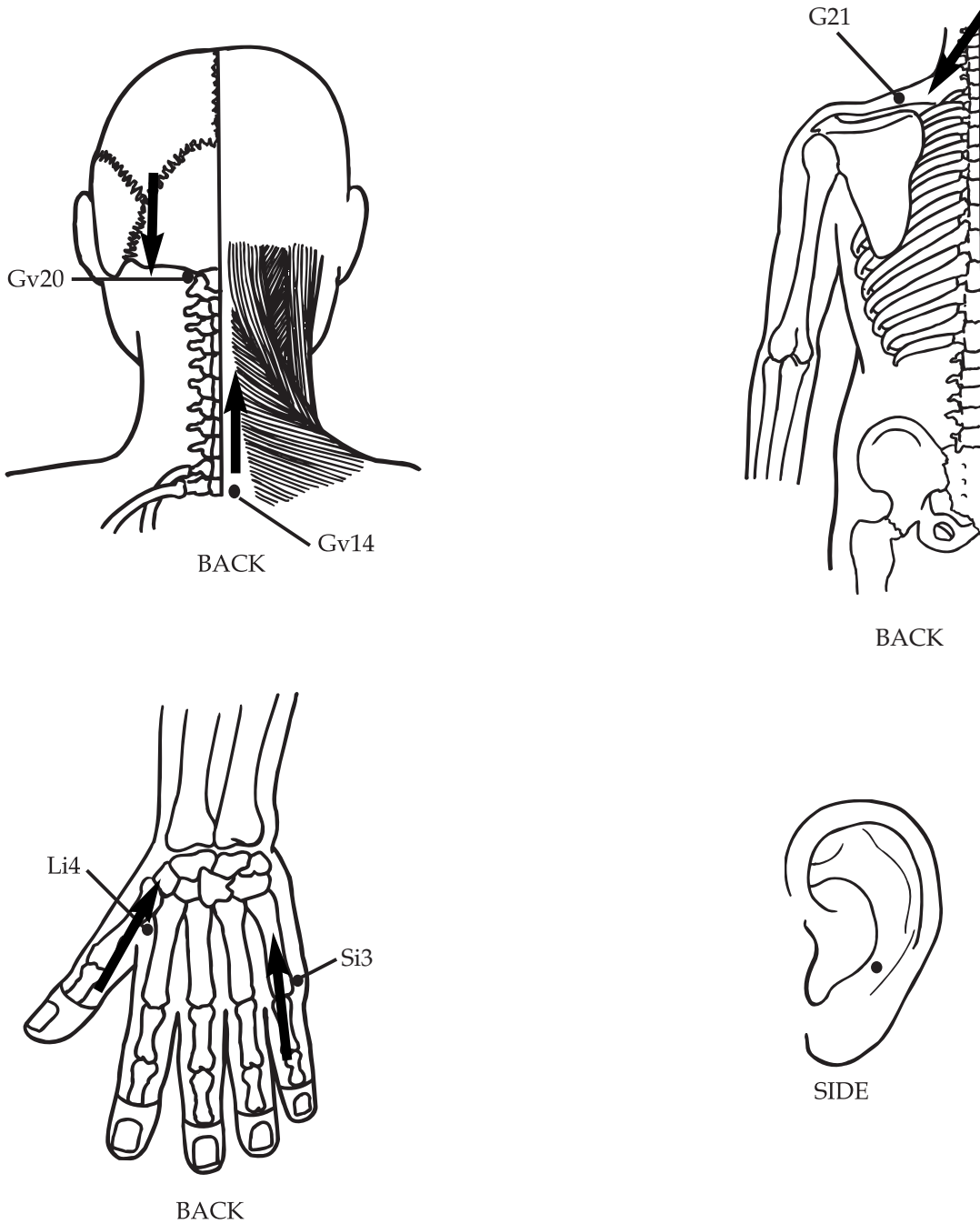
→ indicates direction of acupressure massage



Neck

Pressure to these points is effective for decreasing pain and improving range of motion of the neck and head as found in clients who have had strokes or head traumas, clients with vocal dysfunction, and clients with laryngectomies.

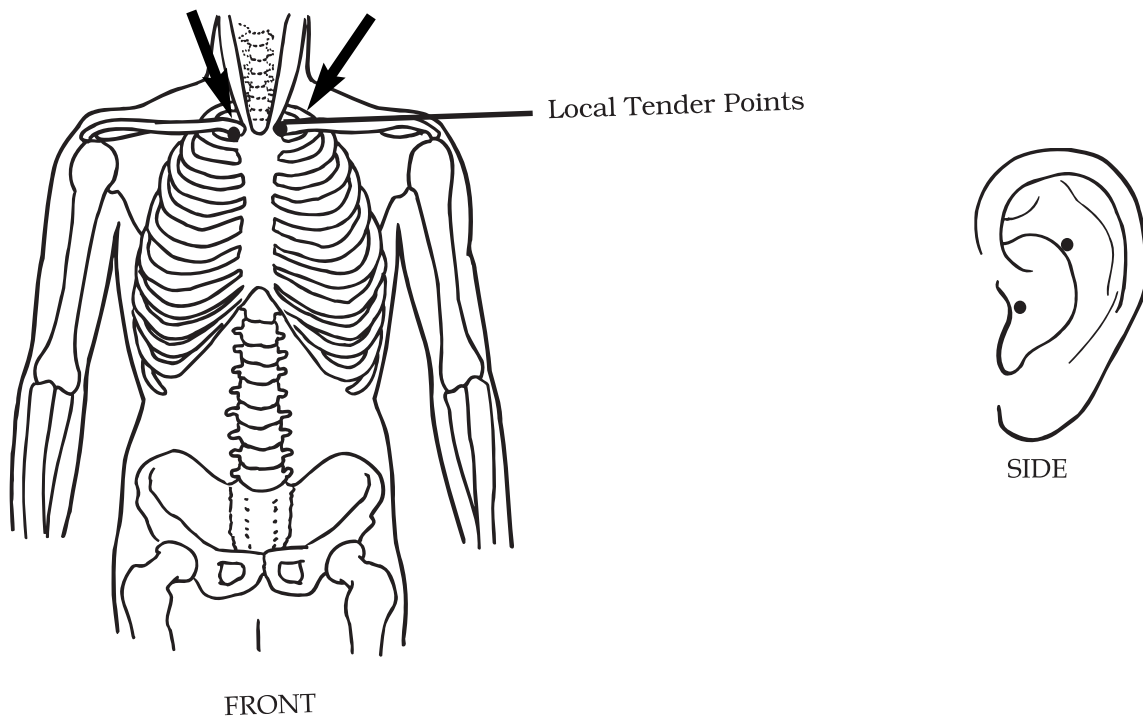
➔ indicates direction of acupressure massage



Sterno-Clavicular Area

Pressure to these points will release pain or tension as found in clients with laryngectomies and spastic dysphonia. It may also aid in additional release to the jaw, head, and neck areas.

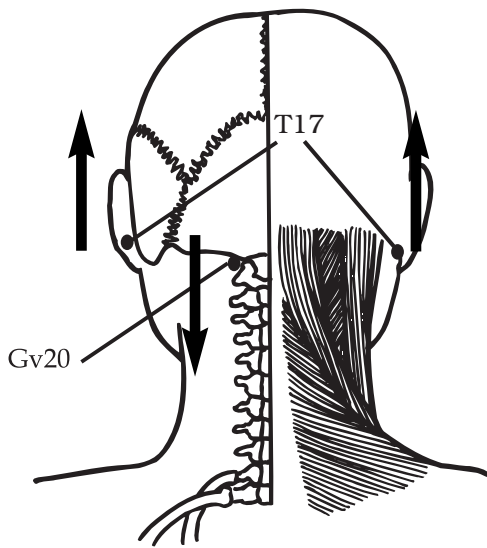
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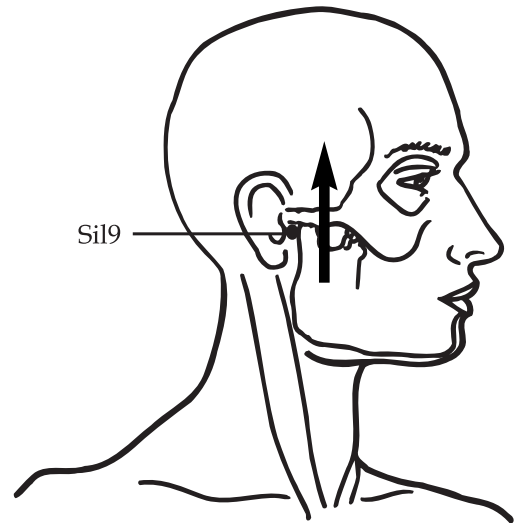
Tinnitus

Pressure to these points can be very effective for individuals with tinnitus. Tinnitus is associated with the liver meridians and can be related to facial, jaw, and/or neck tension. Complementary interventions include Breathwork (page 16); Visualization (page 22); and facial, head, and neck massage as shown in Chapters 6, 8, 10, 11, and 15. You might want to consult a certified acupressurist for more information regarding herbs and treatments to reduce tinnitus.

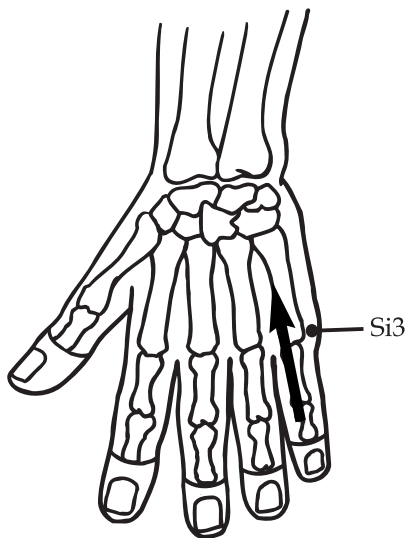
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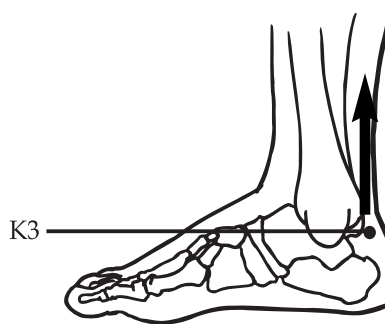
BACK



RIGHT SIDE



BACK



INSIDE

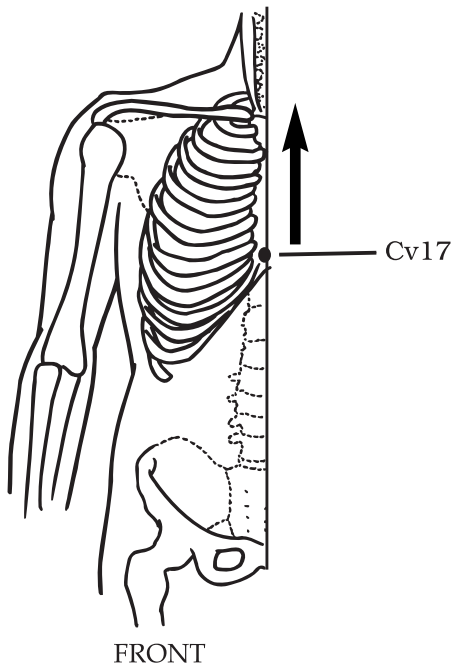


SIDE

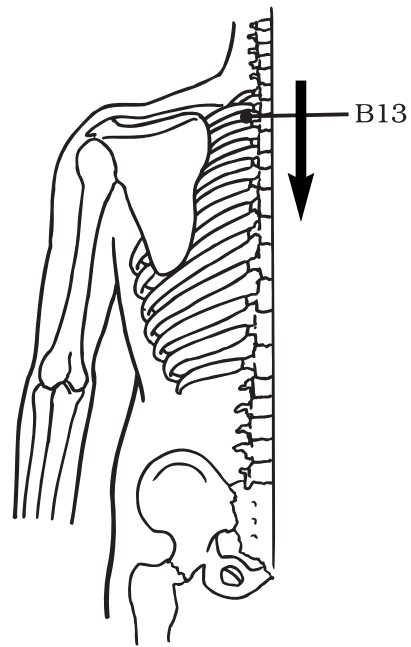
Asthma

Pressure to these points is preventative only. It is not a substitute for prescribed medication, but rather a holistic intervention strategy to lessen the onsets and severity of asthma.

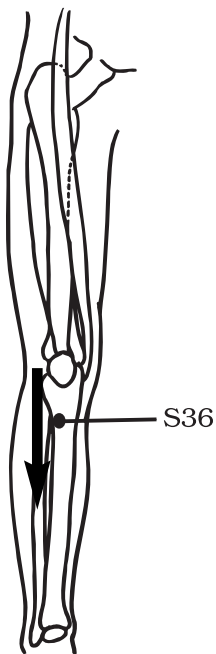
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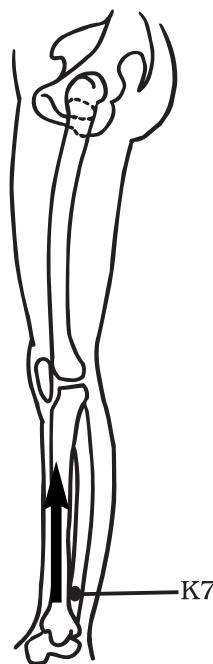
FRONT



BACK



FRONT



INSIDE

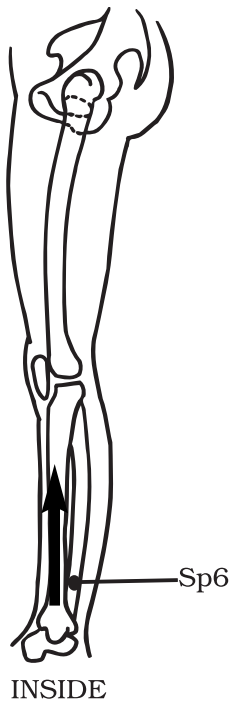
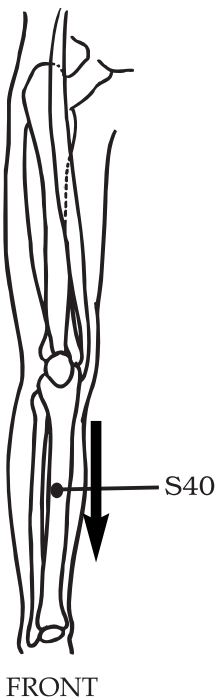
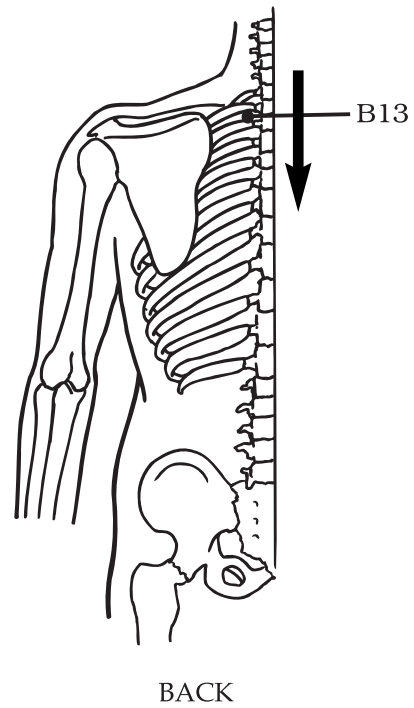
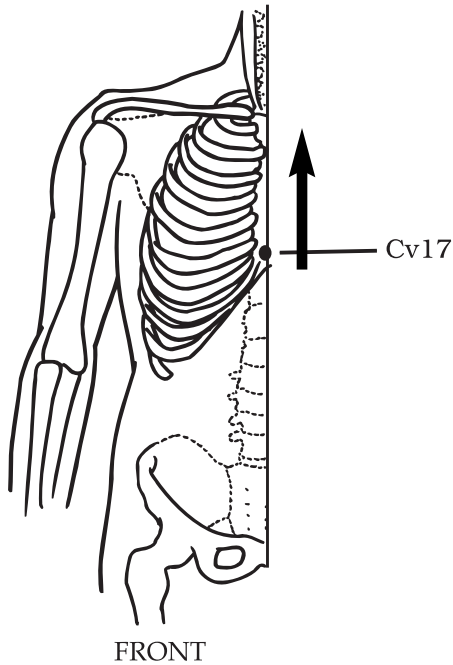


SIDE

Bronchial Area

Pressure to these points will ease bronchitis and can open bronchial energy pathways, allowing a reduction in associated congestion.

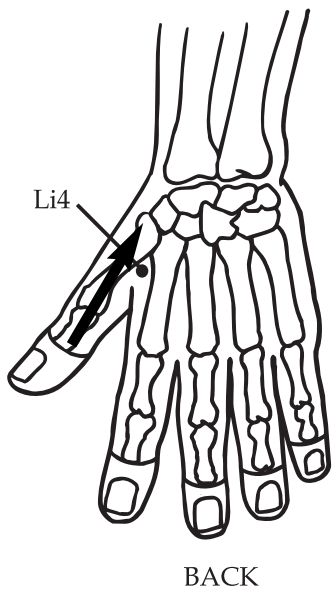
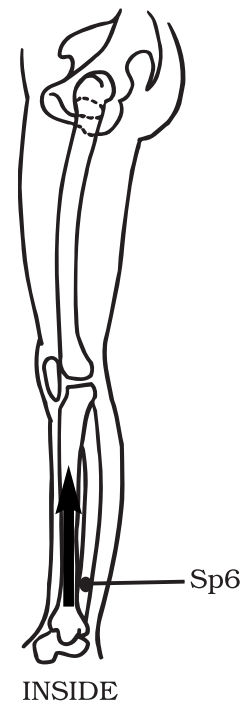
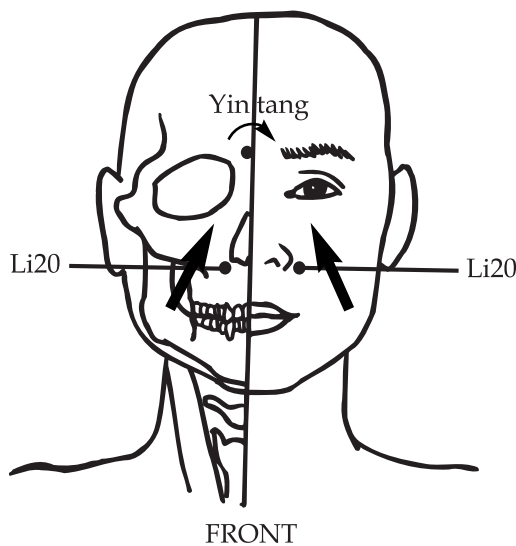
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Sinusitis

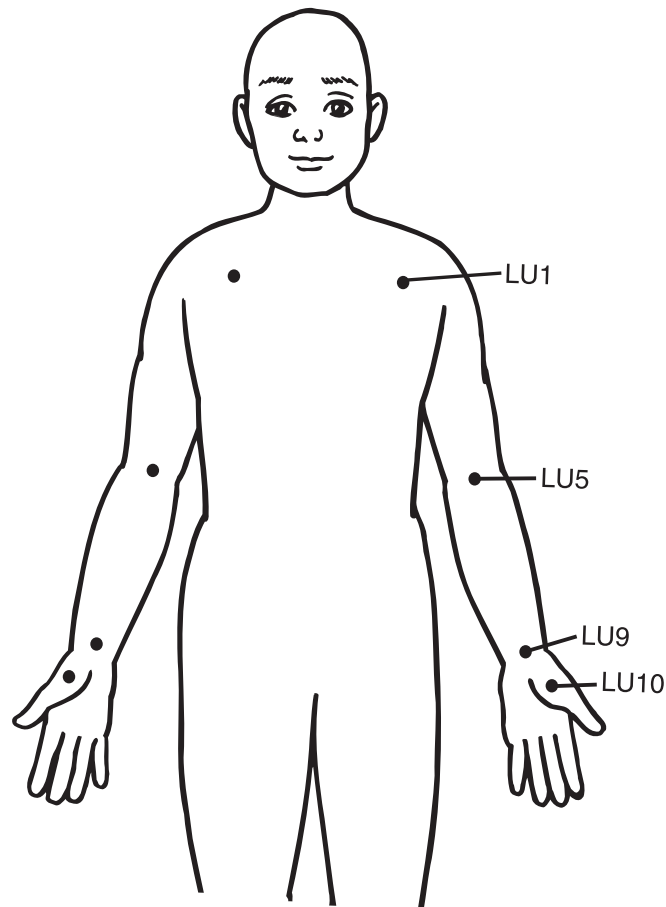
Acupressure to these points is beneficial in reducing sinus pressure related to muscle tension. Muscle tension to the sinus area may be a result of allergies and/or restricted facial musculature. Those suffering with sinusitis may wish to consider dietary changes such as reduction of dairy products, citrus, chocolate, and/or wheat. These products can increase symptoms and discomfort. A rotation diet is effective in reducing daily over-consumption of one food type. Rotate foods every 3 – 7 days and check for re-occurrence or worsening of symptoms with re-entry of food type into the diet. Care should be taken to keep the colon healthy and clear with anti-oxidants and fiber as well as a reduction in excessive sweets and caffeine. Sinusitis is associated with the large intestine (colon) meridian.

➔ indicates direction of acupressure massage



Lungs

These points are effective in restoring regular breathing. They are also helpful in increasing lung capacity and relaxing the large muscle groups connected to the respiratory system.

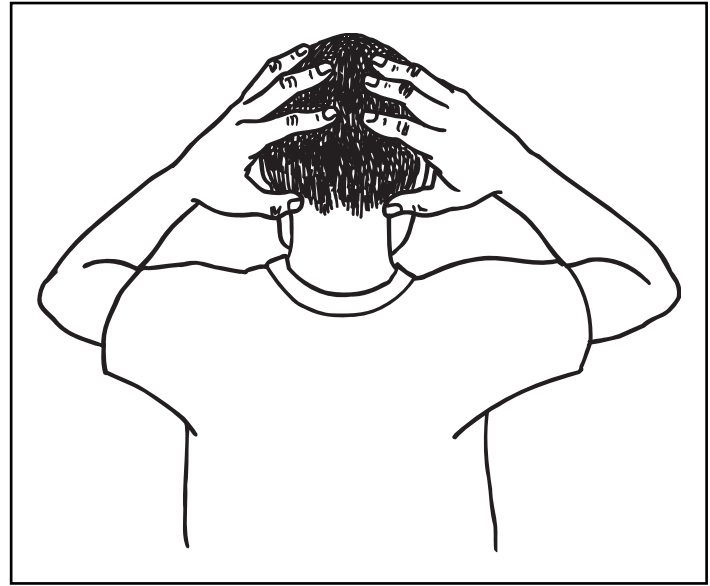


After receiving acupressure to these points, close your eyes, let your arms rest at your sides with your palms facing up, and just relax. As you breathe freely, visualize healing energy circulating throughout your body.

Head Massage

As an extension to the laryngeal, neck, and tinnitus acupressure points, it is effective to massage the head for an overall release of head, neck, and facial musculature.

Embrace the back of your head with both hands, using stretched open palms and fingers. With mild to moderate pressure, grab your head with your fingers and pull them inward towards your palms. Massage your scalp and underlying musculature. Continue for 3 to 5 massage cycles (one cycle equals the time it takes you to pull your hands slowly inward).



Then continue the massage by moving your hands so one is on each side of your head. Perform for 3 to 5 massage cycles.

As you massage, ask:

- Is the area sensitive to the touch?
- Is the underlying musculature stiff and cord-like?
- Does it hurt when pressure is applied?
- Is it a relief to provide touch to the area?

If the answer is *yes* to any of these questions, it is an indication of muscle irritation and/or tense musculature. Slowly work into the stiffness and apply pressure that is tolerable. Avoid any area that appears bruised.

Note: Therapist or caregiver may also perform these massages to the seated individual by standing in back and following the same instructions.

Gauge the strength of pressure by asking the individual, “Is the pressure okay? Would you like me to massage your head with more pressure or less?” If the individual is unable to respond verbally, have him motion with his hand.

Do not continue any massage intervention if the individual is showing moderate to severe dislike or moderate to severe pain response. Start lightly and increase pressure as is tolerable, explaining to the individual that it is appropriate to feel some discomfort. The muscle is “being worked” and it is common to “feel something.” You can work the knots out through acupressure, massage, myofascial release, stretches, and/or make a referral for further intervention by an acupressurist, massage therapist, physical therapist, or occupational therapist.

Occipital Massage



To work the occipital ridge, place your outstretched palms across the back of your head. Use your fingers to hold your head in place. Dig your thumbs into the base of the skull, right below the bone. You should feel a ridge.

If you are not sure exactly where to apply pressure, move your thumbs along the entire base of your skull around to your ears. Then dig in gently but firmly and move your fingers back along the ridge to the base of the skull.

Apply pressure with your thumbs until the pain subsides. Note any tender areas.

Benefits

- decrease head, neck, and face pain
- increase range of motion of neck

Myofascial Release

Myofascial Release is intended for the relief of pain and the restoration of function. Myofascial Release takes into consideration that we are connected as a whole body unit, brought together through the fascia or connective tissue that covers the bones, muscles, and ligaments. It is important to keep this whole body inter-relationship in mind. When treating the oral, head, and neck area, there is a good probability that there is lower back involvement. Therefore it is best to not only treat the symptoms, but to investigate other problematic areas throughout the body.

Myofascial Release stretches the fascia, giving the individual greater freedom of movement; better overall body alignment; and ultimately efficient, proper functioning. Myofascial Release is performed to help the individual improve placement of the head over the shoulders, improve posture, reduce pain, and correct body misalignments.

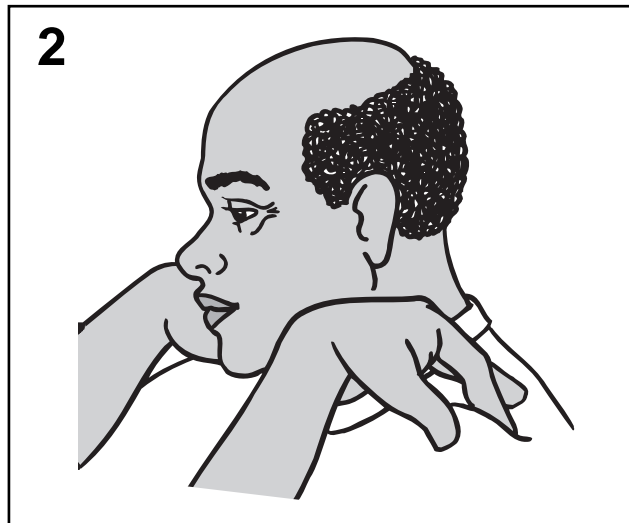
To better describe the fascia's effect on the head and neck area, do this simple exercise. Take hold of your shirt or sweater at the bottom back and give a hard pull downward. Even though your hand is originating pressure at your waist, the downward pull can cause tension in your neck. This misalignment frequently causes problems for oral-facial function.

Note: Myofascial Release is taught through seminars. Training is advised. One resource is Dr. John F. Barnes who works closely with SLPs. Contact him at 1(800) FASCIAL or online at www.myofascialrelease.com.

Chapter 8:

Neck and Shoulder Exercises

Neck Release (Scalene Massage)



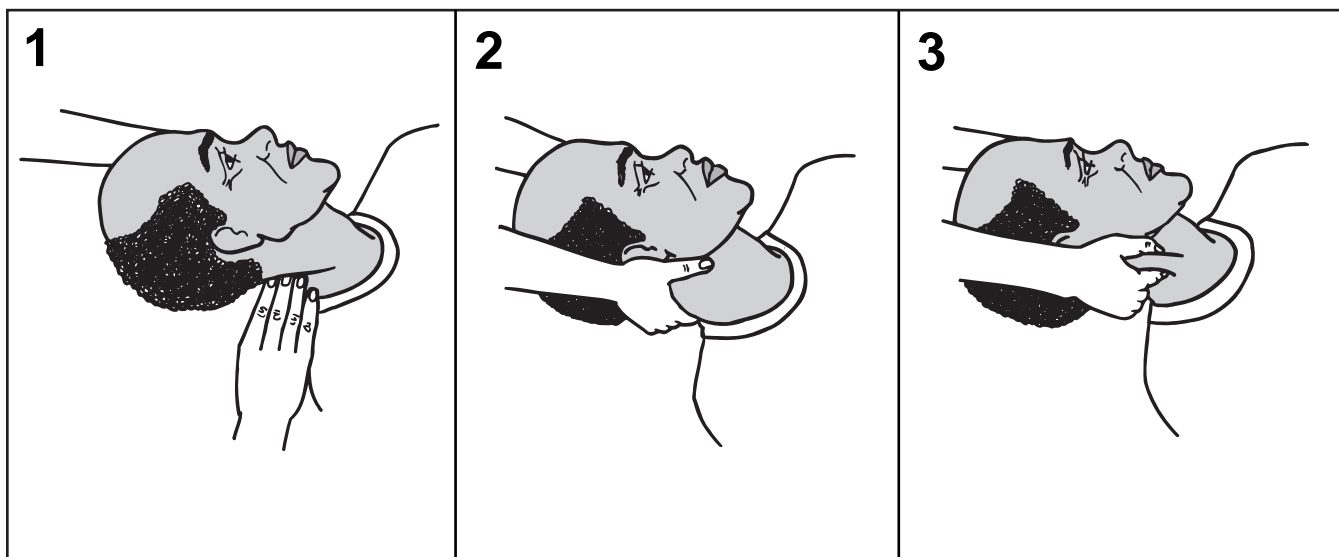
The scalene muscles are found by pressing the thumb into the triangular space in the back of the clavicle (collarbone) as shown in picture 1.

Apply pressure to the sore spots or tight musculatures as shown in picture 2. Hold and press into this area for a few seconds. (If tension is experienced, you are applying too much pressure.) Then gently massage the spot before moving to another spot. Be sure to enter into the muscle slowly and gently and to exit the muscle slowly and gently.

Benefits

- increases range of motion of the neck
- releases pain causing head, neck, and upper backache
- helps to release musculature to the jaw

Strap Muscle Massage (Sternocleidomastoid)



The sternocleidomastoid attaches at the mastoid process in the skull (below the earlobe) and descends down over the front of the neck to attach to both the sternum (breastbone) and the clavicle (collarbone). This massage relieves muscle tension related to dizziness, jaw clenching, headaches, shoulder pain, and tinnitus. It also creates muscle and soft tissue health and balance.

Have the individual lie on his back with his head turned slightly to the side to bring the muscle into view. Support the head with one hand. Press against the back edge of the muscle with three fingers (picture 1). If the individual has had whiplash, this area will be sensitive. Proceed by pushing your thumb on the front of the muscle, below the earlobe (picture 2).

Once you have cleared those two points with steady pressure, squeeze the body of the muscle from front to back (picture 3). First squeeze gently up and down the length of the muscle from mastoid process to clavicle. Increase the squeeze as tolerated as you continue moving slowly up and down at least twice.

Then turn the client's head so he faces the ceiling. This will allow you to work the lower portion of the muscle. Continue squeezing the muscle and rub any knotted areas with a slight circular motion. The muscle may feel tight or cord-like. The goal is to get the muscle feeling soft and pliable over a period of interventions.

Repeat all massages on the other side of the client's neck.

Note: An Epsom salt bath is helpful in pulling lactic acid out of muscles recently massaged. This will help reduce any possible discomfort felt after a pressure point session. Remember to get a physician's recommendation for an Epsom salt bath.

Strap Muscle Stretch (Sternocleidomastoid)



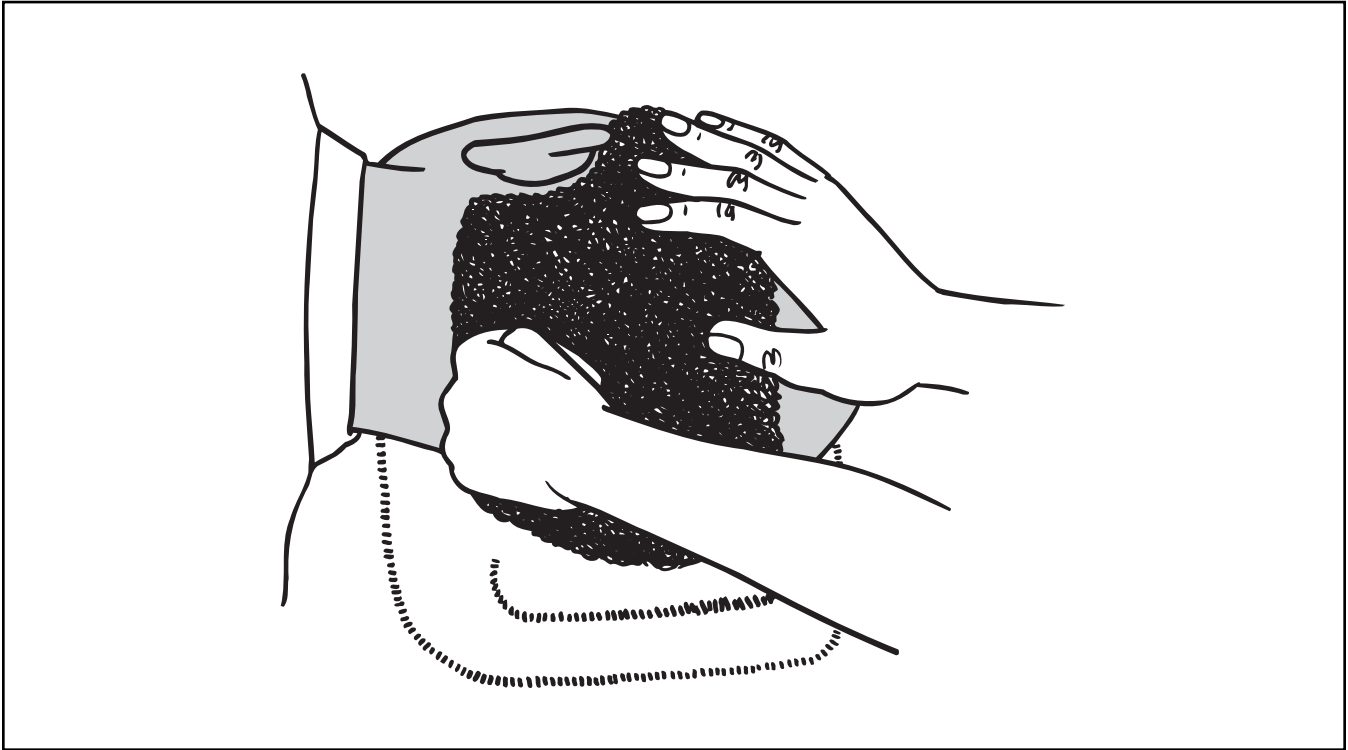
Note: The strap muscle stretch is performed after it is massaged (See *Strap Muscle Massage* exercise, page 87).

To stretch the muscle, turn the client's head to the side, stabilizing it with your hand. Anchor the opposite shoulder against the table. Hold the stretch for a few seconds. Slowly and gently release. Wait a moment and repeat. Then gently turn the head and stretch the other side in the same manner.

Benefit

- stretches the side of the neck

Releasing the Occipital (Head-down Positioning)



The occipital muscles cover an area that attaches the musculature to the back of the head. It is good practice to release the occipitals as a part of every massage and oral-motor intervention.

Have the client lie on his stomach (prone). This massage can also be done through self-massage (See pages 83 and 84.).

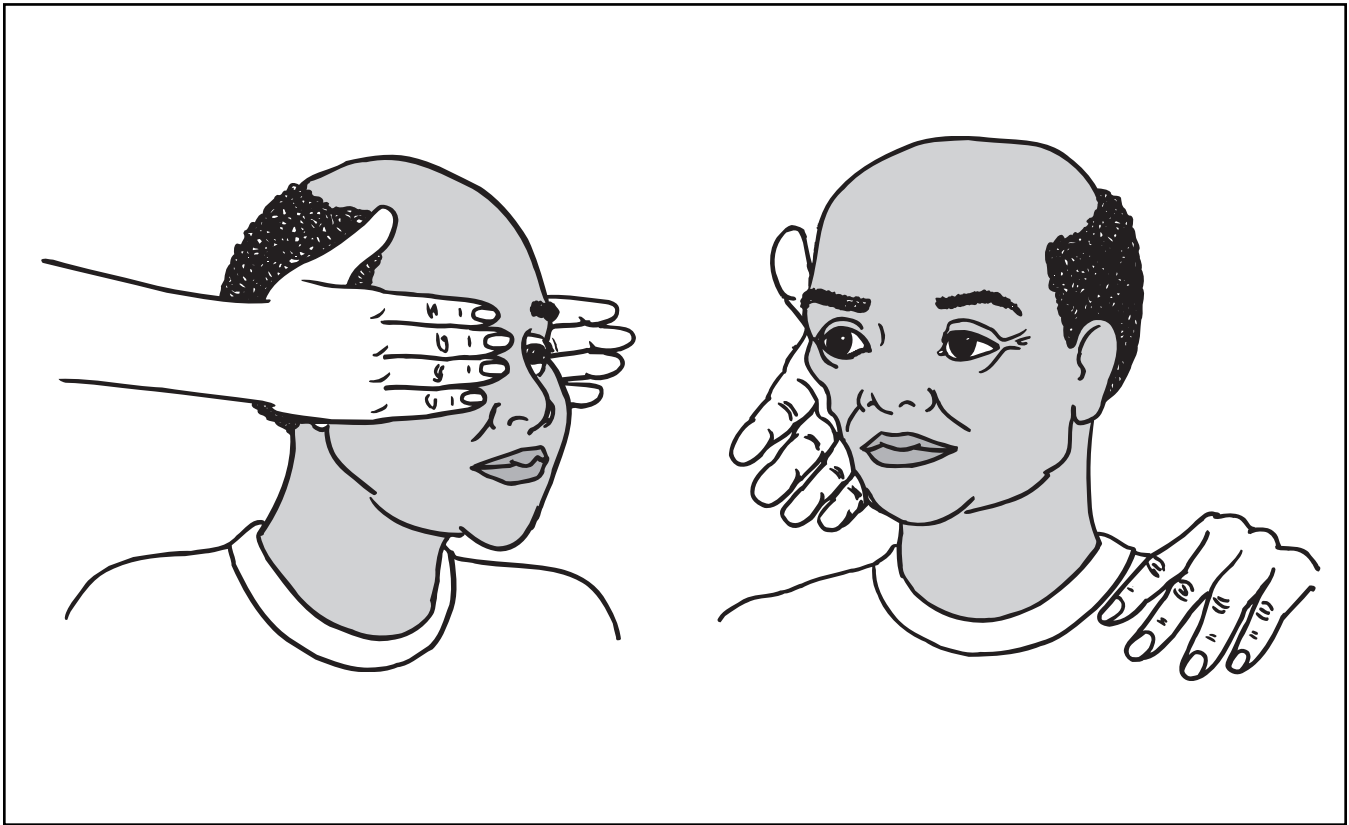
Use your knuckles or fingers to knead into the back of the skull where it makes its first connection with the neck. Use a folded towel like a U around the face to support the cheeks to free the face and leave the nose open for adequate comfort and breathing.

If the client cannot lie on his stomach, have him lie on his back. You can massage the muscles by resting your hands on the back of his head while kneading the occipitals with your fingertips.

Benefit

- releases muscle tension to the neck, spine, head, and jaw

Left and Right Resistance Exercise for the Neck



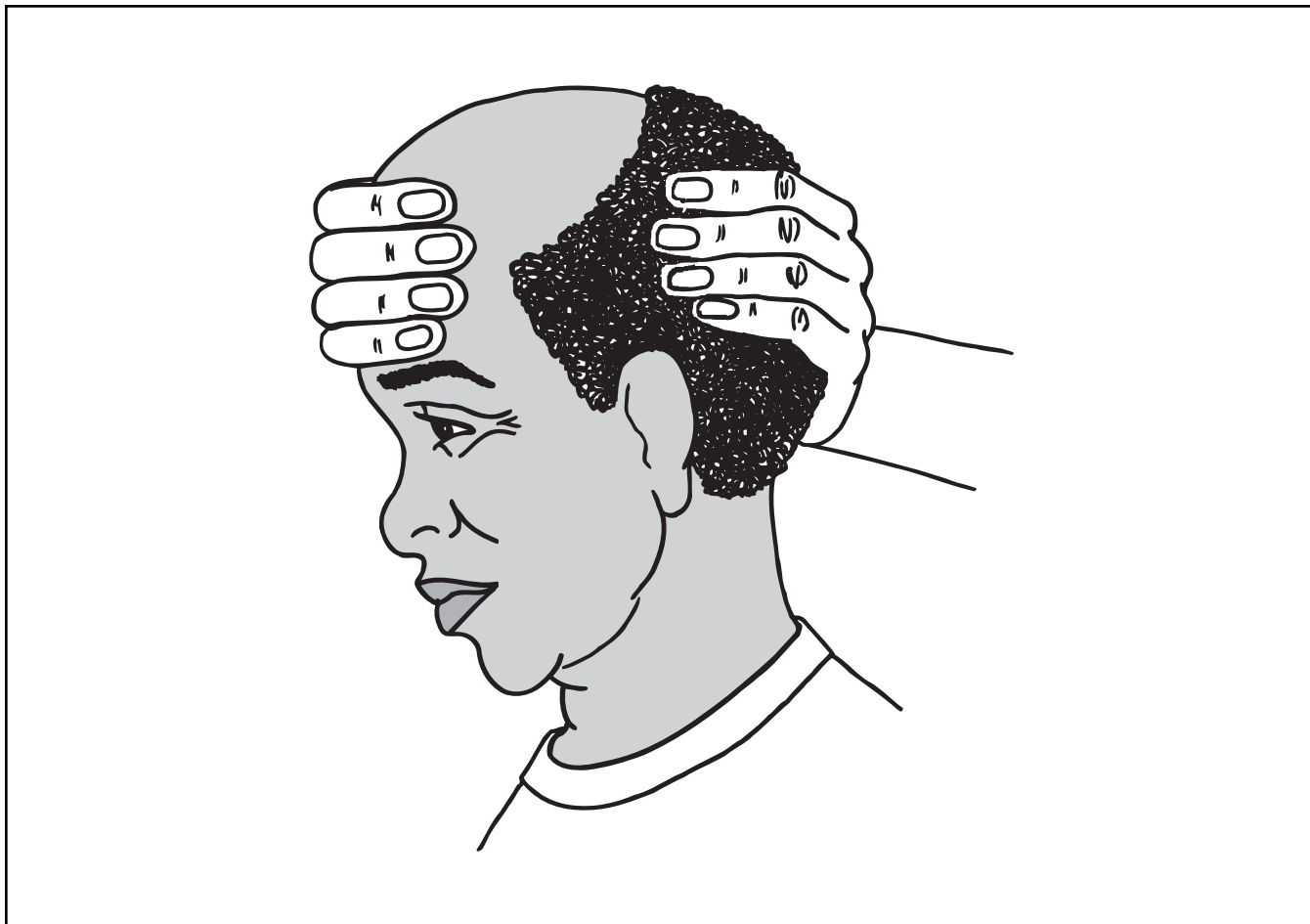
Have the individual sit in a chair. Stand behind him. Have him look to the right and then to the left. Ask him to describe what he can see in his extreme view on each side. Next place the palms of your hands on both sides of his temples and/or upper cheeks. Have him move his head to the right as you offer a small amount of resistance. Then have him move his head to the left as you offer light resistance again. Repeat once slowly and gently.

Repeat the exercise, but this time place your right hand across the client's lower cheek. Repeat with your left hand. Go slowly and transition smoothly. Offer light resistance. Repeat twice on each side.

Benefit

- strengthens the back, sides, and front of the neck

Forward and Backward Resistance for the Neck



Have the individual sit in a chair. Stand behind him. Place one of your palms against the client's forehead and the other palm at the top back of his head. Offer moderate resistance as you ask the individual to push forward against your hand for about four seconds. Then ask the individual to push backward against your hand for about four seconds. The client's head is to remain relatively upright. Do not let his head tilt or overextend backward. Repeat once slowly and gently.

Benefit

- stretches and strengthens the back and front of the neck

Self-Stretching of the Straps (Sternocleidomastoid)



Lean the neck forward, stretching the jaw out ahead of the body. Place the index finger and thumb so they cup the neck on the left and right, directly under the jaw. Apply pressure, kneading the neck as you let the fingers slide down the neck to the collarbone. Squeeze at the end point and release immediately. Repeat once.

This exercise may cause some coughing. Do not repress it. Stimulating and strengthening the cough is good for airway protection during swallowing.

Benefit

- releases the neck musculature for improved voicing

Note: Balances, tones, and strengthens neck musculature for patients who have had a post-partial glossectomy or a laryngectomy with radical neck resection

Fanning the Back of the Neck



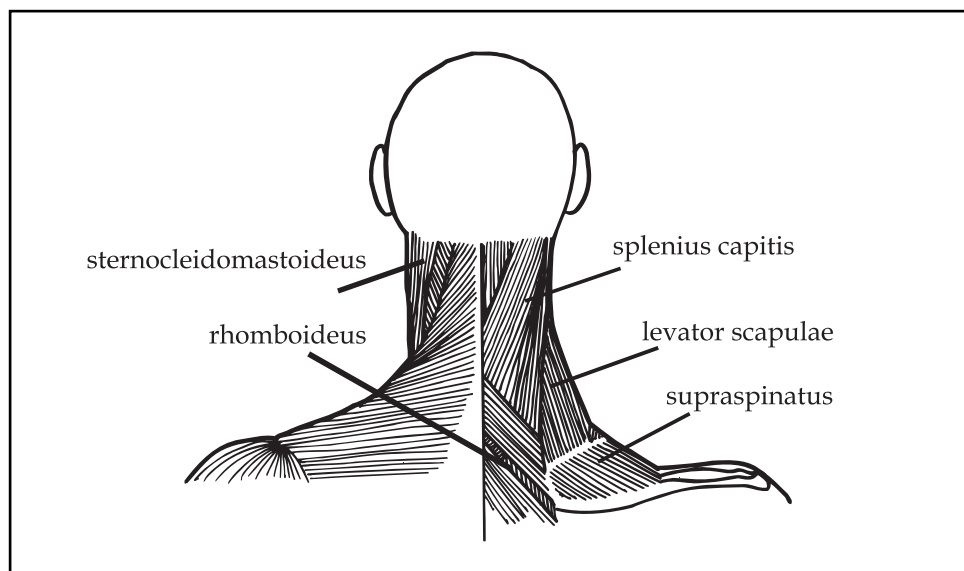
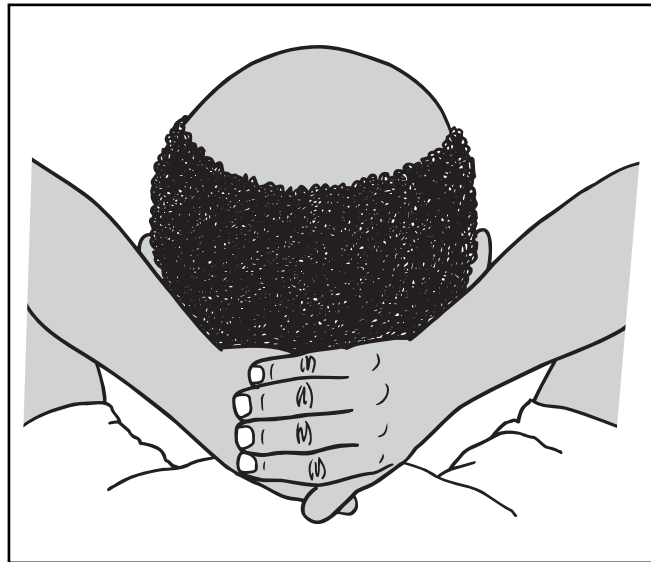
Spread your fingers apart and glide them in a relaxed, upward motion on the back of the client's neck from the shoulder blades up through the base of the skull. Your fingers will be brushing the client's neck lightly. This motion creates a release of energy from the lower spine to the upper neck.

Benefits

- releases and opens the shoulder blades
- relieves nervous tension

Note: If a caretaker or therapist is performing the exercise on the individual, it is highly recommended that the caregiver/therapist perform the exercise on herself to experience the positive effects. This will increase awareness of desired outcomes, increase empathy to the release desired, and aid in guiding the individual to respond openly.

Back of Neck Release



Place the open palm of one hand around the back of the neck as low as possible (where the neck meets the shoulders) and squeeze. Alternate with the other hand. To strengthen the squeeze, use both hands, covering one with the other. Work your hands up the neck. Repeat once.

Benefits

- releases the neck at the upper back to reduce restricted range of motion and pain
- increases range of motion of the head

Head Down Lateral Neck Stretch

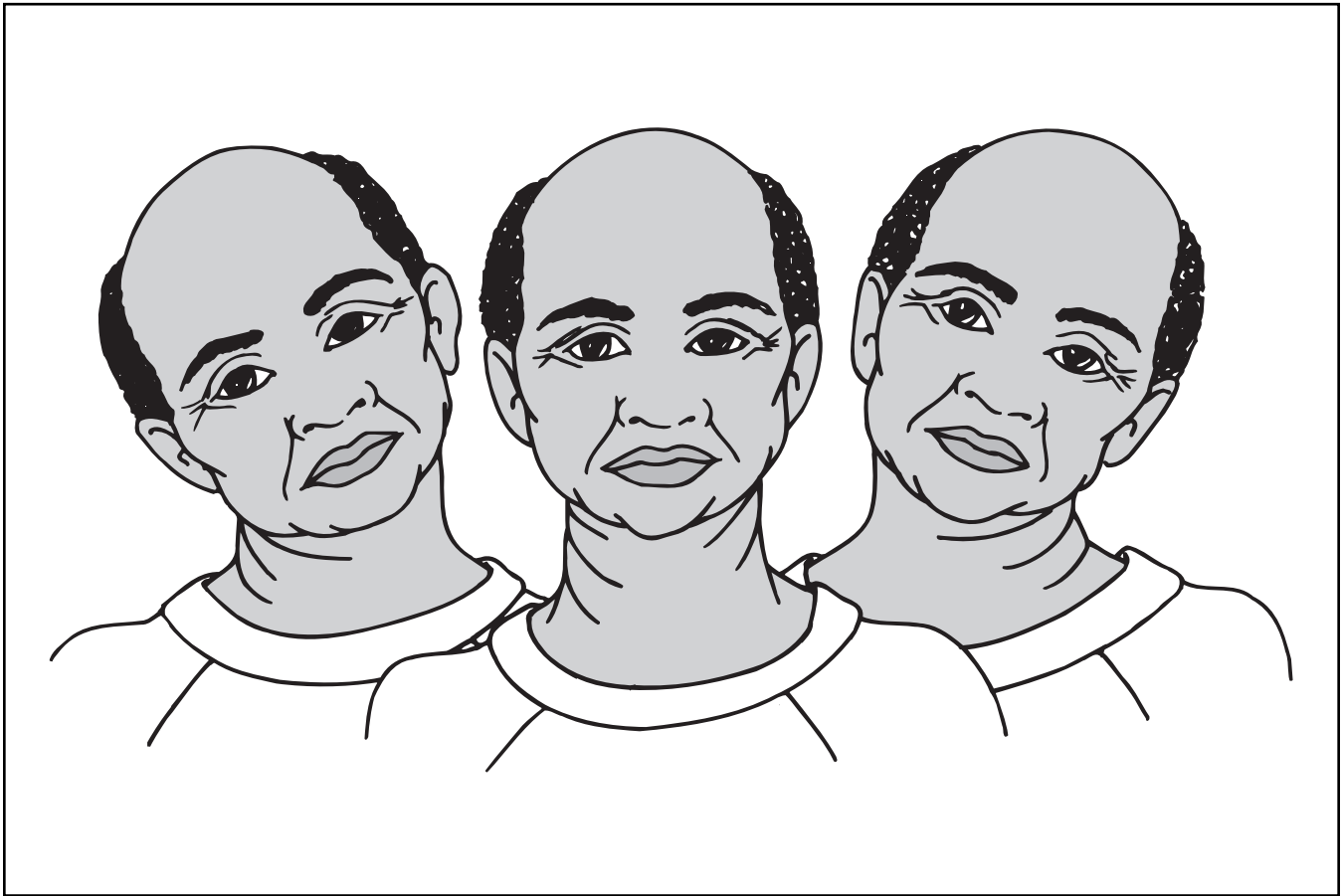


Close jaw gently and drop chin. Keep chin on chest and course along chest to right shoulder bone (clavicle). Hold for 10 seconds. Slowly release and course back toward left shoulder bone. Hold for 10 seconds. Keep the back straight and shoulders relaxed. Do not move shoulders to chin or strain the neck. To avoid neck tension, imagine moving the forehead down to the right and then to the left.

Benefit

- stretches, tones, and improves range of motion of rear neck

Lateral Neck Stretch

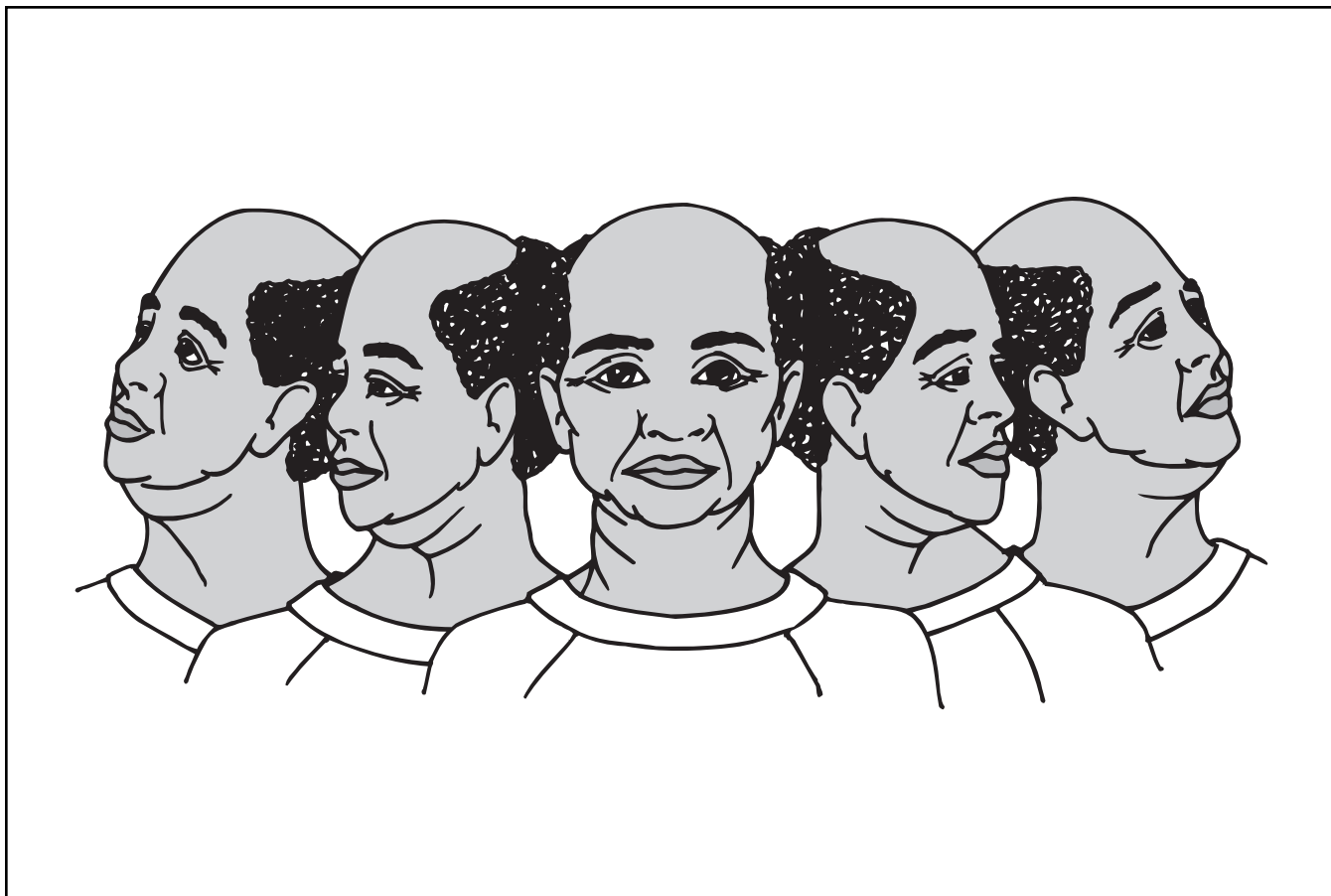


Look straight ahead throughout exercise. Bend neck so that right ear goes toward right shoulder. Go as far as you can without discomfort and/or raising the right shoulder. Hold for 10 seconds. The goal is for a gentle stretch of the neck, not the shoulder. Keep back upright and shoulders down. Gently move back over to the left side. Hold for 10 seconds, bending neck so that left ear goes toward left shoulder. Keep neck muscles relaxed during exercise.

Benefit

- stretches, tones, and improves range of motion of lateral neck

Extended Lateral Neck Stretch



Sit upright in a chair with the shoulders back and the back straight. **No muscles should be strained or tensed.**

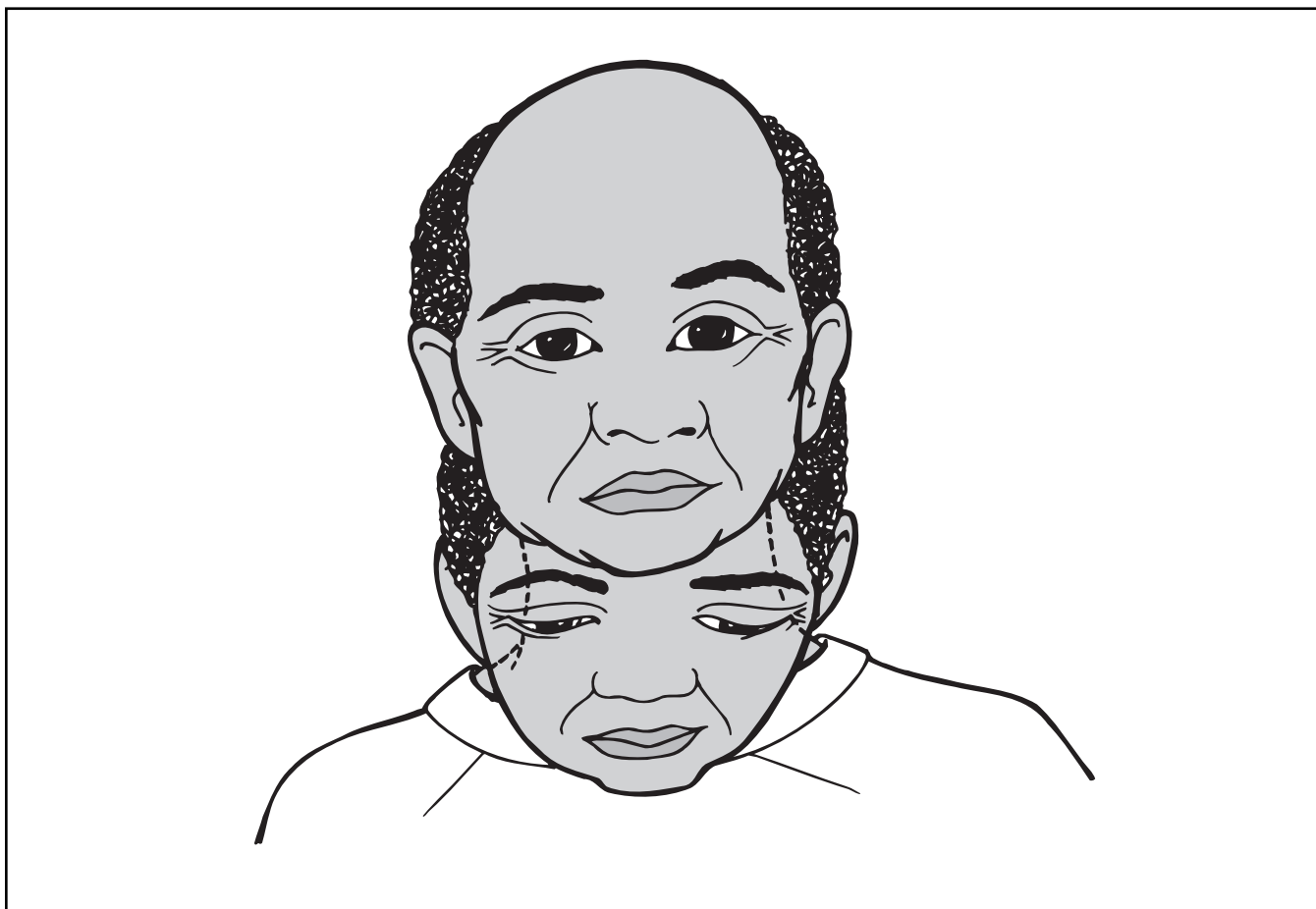
Rest arms at your side and look straight ahead. Slowly turn head to right. Continue turning your head only to the right. Stretch to full extension, but not to pain point. Hold for 10 seconds. Slowly move head around to full left. Hold.

Incorrect form can result in shoulders and waist twisting which gives minimal stretch to the neck. To increase range of motion, tilt head up to the ceiling when at far right and then when at far left.

Benefit

- stretches, tones, and improves range of motion of lateral neck

Neck and Back Stretch



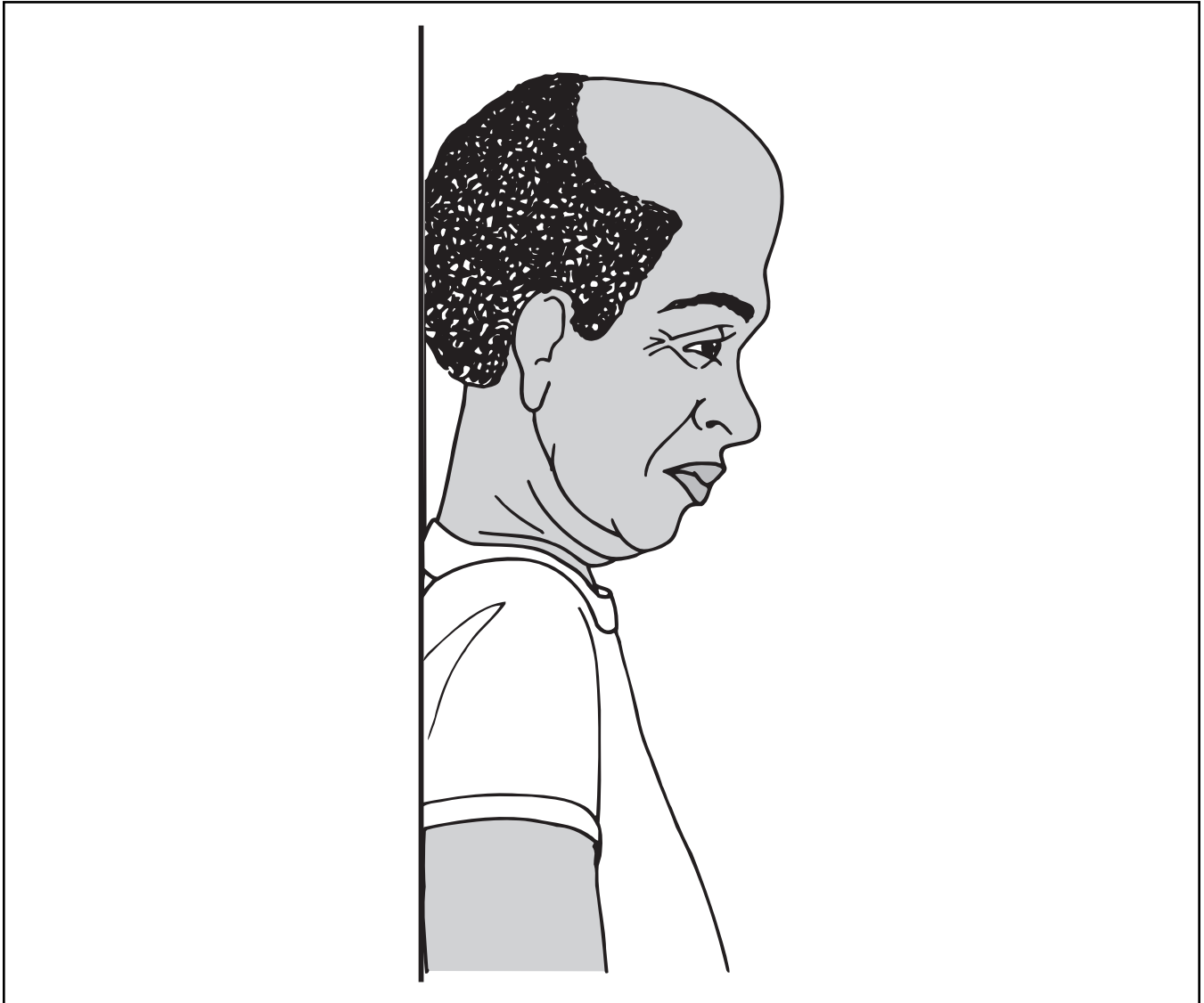
Look straight ahead. Bend head and neck down toward knees. Keep back straight and shoulders back. Hold for 10 seconds.

To increase complexity, hold neck and head down and slowly bend from the waist to full extension. Go as far as possible without pain. Hold for 5 to 10 seconds as tolerated.

Benefit

- stretches, tones, and improves range of motion of posterior musculature of neck and back

Rear Neck Stretch



Remove any items (e.g., hair clasps) which could interfere with the full extension of the neck. Stand with back, head, and shoulders (if possible) touching a wall. (This exercise may also be performed while sitting with the back to a wall or lying in bed with no pillow.)

Push the back of the neck into the wall as close to the wall as possible with head and back touching the wall. Begin by holding for 10 seconds, eventually building up to 30 seconds. Hold.

Benefit

- stretches rear neck musculature

Chapter 9:

Voice and Soft Palate Exercises

Vocal Quality

Note: Schedule an evaluation with an otolaryngologist before beginning any voice therapy. Vocal dysfunction has many etiologies and it's important to rule out any medical involvement.

Breathy vocal quality can result from weakened vocal fold closure. Strong closure is necessary for the vibration which produces sound. Whispered speech, which doesn't involve vibration of the vocal folds, can arise out of habit or fatigue. Whispering is an inappropriate means of voicing because the vocal folds are held apart. To improve vocal quality, adduction exercises for the vocal folds are beneficial. These exercises will encourage the closure and strengthening of the vocal folds and surrounding arytenoid cartilage. The vocal folds work like a hand-held fan. They are connected on one end and open on the other. Voicing takes place as air passes through the vocal folds. The vocal folds then adduct, or come closely together. Vibrations on the edge of the vocal folds occur when air passes through. Sound is then produced. Without this sound source, there is no voicing.



open vocal cords



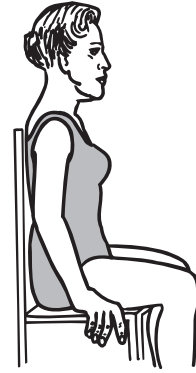
closed vocal cords

The vocal cord adduction exercises on the next page can be performed in three ways. Each will provide resistance to adduct the vocal folds as well as to strengthen the vocal mechanism. Strengthened vocal fold adduction will aid in protection of the air passageway, thereby preventing aspiration. These exercises will help the client increase loudness and vocal quality. It's important to practice at least three times daily to achieve the maximum benefits from the exercises.

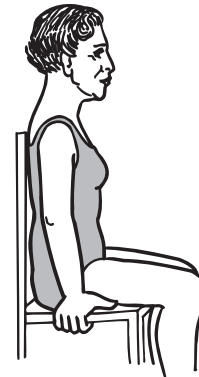
Note: A Phonation Chart has been provided on page 121 to track client performance and improvement over time. It is also beneficial in establishing a baseline for insurance and Medicare coverage to show ongoing progress. A sample chart has been provided on page 120 as an example.

Vocal Fold Adduction Exercises

1. Sit in a free-standing chair. Grab onto the sides and take a deep breath. Lift up on the seat while pushing your body onto the chair. Try to make a loud vocal grunting or straining noise while exerting pressure. The pressure will cause your vocal folds to close, and therefore, give you more strength to push yourself down into the chair.



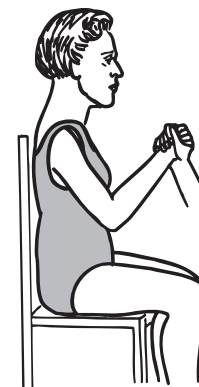
Sustain the vocal grunt as long as your air supply lasts. Rest for approximately 15 seconds and repeat. Do the exercise 10 times, holding each one as long as possible. Each time, work toward a more physical effort and a louder grunt.



2. Sit, stand, or lie down. Positioning isn't important. Put both palms together. Take a deep breath and exert pressure into your palms. Try to exert the same strain and pressure into a vocal grunt. Sustain the grunt until the air supply is gone. Rest for 15 seconds and repeat. Do the exercise 10 times.

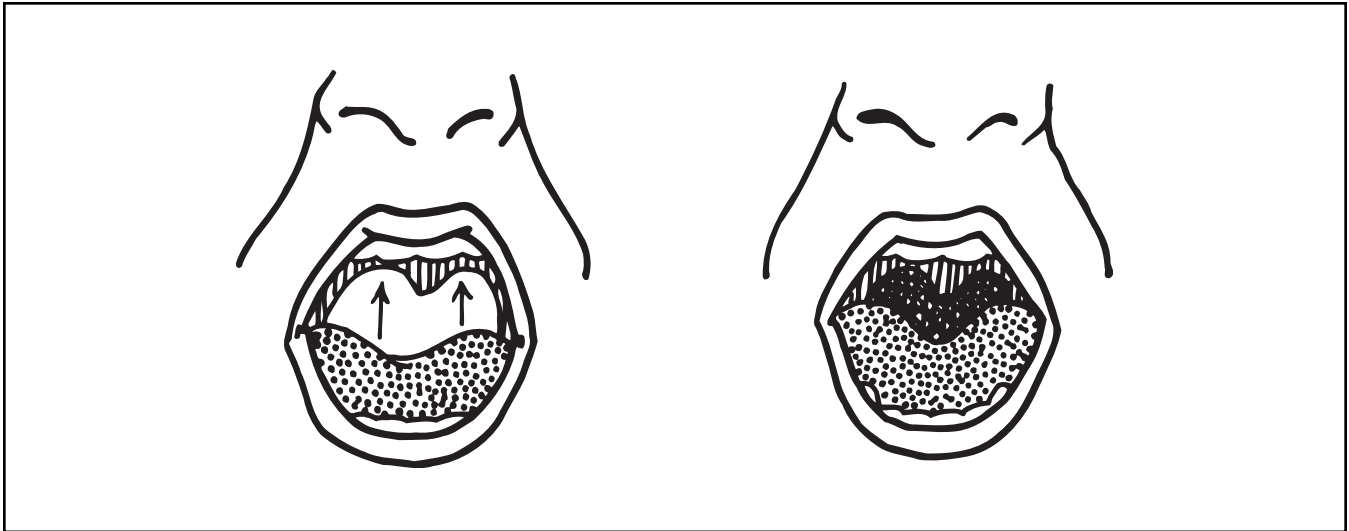


3. Sit across from an assistant. Have the assistant grasp your right palm (or whichever is your strongest hand and arm) with her right palm. Have the assistant press against your palm. Match the pressure with your palm. This will create the pressure necessary to cause the vocal folds to come together (adduct). Produce loud, strained vocal grunting. Rest for 15 seconds and repeat. Do the exercise 10 times, sustaining pressure with maximum force as long as your air supply lasts.



Palatal Stretch

Clients exhibiting vocal strain or hard glottal onset are good candidates for laryngeal relaxation. Both vocal strain and hard glottal onset can cause hyperadduction of the vocal folds. The rule of thumb for laryngeal relaxation is LESS AIR, LESS PRESSURE, and LESS VOLUME. This means there is less expiratory effect with less laryngeal involvement at a low vocal intensity.



Have the client open her jaw wide and begin a large, forced inhalation-phase yawn. Encourage her to hold the yawn, stretching the soft palate up. Have her push down the back of her tongue as if to make room for a large ball. The client should stretch the left side of the back of her tongue, then the right side. Before the client releases the full-yawn position, she should stretch both sides in an attempt to enlarge the opening in the back of the mouth and pharynx. Complete the exercise with a hard, dry swallow.

The goal of this exercise is to encourage the client to tolerate more and more stimulation to the area so food can be safely transmitted through the hypopharynx comfortably and safely. Many individuals have a very sensitive gag reflex that diminishes their ability to handle certain foods (e.g., hard foods, dry foods, large boluses). The gag reflex will diminish with stretching as it makes the area less sensitive. If a client gags, reassure her that she is all right. Remind her to breathe through her nose.

Benefits

- improves vocal quality by stretching and toning the palate for improved resonance in the oral/pharyngeal/nasal cavity
- relaxes palate and throat musculature to reduce discomfort during swallowing

Tactile Voicing



Place the palm of your hand on your therapist's throat to feel the vibration of sound during voicing. Then move your palm to your own throat. Inhale deeply. Say, "ah" as you exhale to feel the vibration. Go back and forth from your own throat to the therapist's throat.

Note: Increase loudness as needed to help the client feel the vibration.

Benefits

- teaches individual voice onset
- improves adduction of vocal folds for voicing

Oral Resonance



Pinch your nostrils securely so you breathe through your mouth (orally). Say, “ah” as you exhale. Repeat. As pressure on your nostrils is gradually lessened, try to maintain the “ah” as you exhale. Repeat with other vowels (“ee,” “I,” “o,” “oo,” “u”).

Note: A nose clip may be used to free hand from face during this exercise.

Benefit

- improves oral resonance and oral voicing

Yawn – Sigh Technique



Have the client open her mouth wide and let out a big yawn or sigh. This will stretch and relax the back of the throat and upper pharynx.

To reduce hard onset of voicing, have the client yawn, produce a soft sigh, and continue with:

“How are you?”

“Nice to see you.”

“Helen needs a napkin.”

“Hi, I’m lost and need help.”

“My name is ____.”

“I’m new. My name is ____.”

Increase the complexity with vowel-initiated sentences.

Add the chewing technique (i.e., move jaw during word production). This will release the jaw and soften the initial tension produced on phonation.

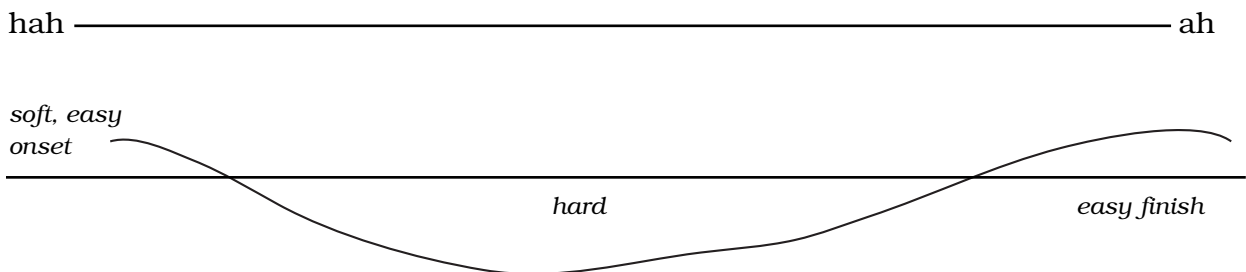
Exercises for Sustaining Voice

These exercises are provided to help initiate and sustain voicing. Begin with Exercise 1 and proceed through Exercise 4.

Exercise 1

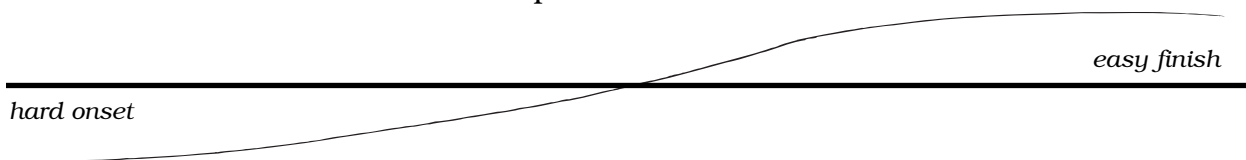
Have the client start with easy onset, make a glottal fry or hard onset, and then finish with easy onset again. Use /h/-initiated vowel productions followed by vowel-only productions.

hah → ah	ho → o	hih → ih
hee → ee	hoo → oo	heh → eh
hi → i		



Exercise 2

Model glottal attack or hard onset of voicing so the client sees the opposite of easy onset. Show the increased strain to the neck. Draw a line showing the high degree of tension which characterizes a hard onset of phonation.



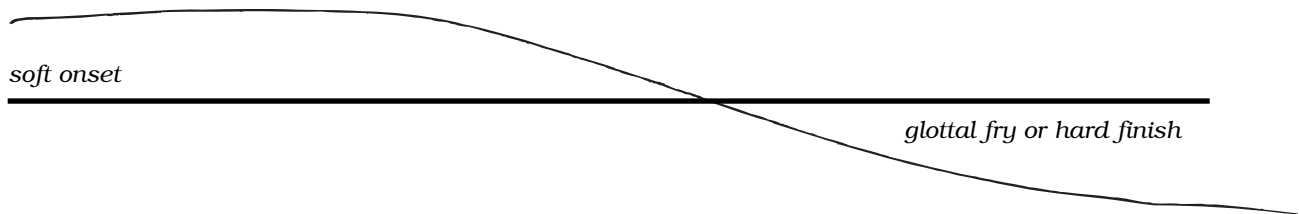
Have the individual practice reducing muscle tightness, reducing the amount of air used, and reducing loudness. Encourage the client to follow the line up, lowering her voice as well as decreasing the effort it takes to make herself heard. Remind her not to whisper, but to just talk slowly and effortlessly. Use analogies like the ones described below to make the transition from hard onset to soft onset voicing.

- Start out talking like you are talking to someone across the room. Now gradually soften your voice so as not to wake a baby sleeping next to you.
- Turn the volume of the loud speaker down till you can barely hear the message being broadcast.
- Speak as if very excited and nervous. Soothe into a voice of someone who is very reassuring, calming, and peaceful.

Exercises for Sustaining Voice, *continued*

Exercise 3

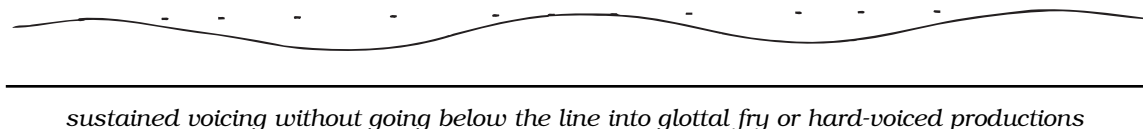
Then have the client begin with easy onset using yawn/sigh or words beginning with /h/. Have her go below the line to glottal fry or hard, tense speech production to see and feel the opposite.



Exercise 4

Lastly, remind the individual not to go below the line. Below the line is tense speech or glottal fry productions. Sustain flow of production through a decrease in neck and laryngeal tension, a reduction in the force or amount of airflow, and a decrease in loudness.

Increase complexity of productions with words and sentences. Start easy, continue easy, and end with easy flow of voicing.



Phrasing

Clear articulation involves precise movement of the tongue, lips, jaw, and vocal folds with respiratory support for voicing. Any impairment or atrophy of these articulators can cause:

- slurred speech
- omission of sounds in words
- mumbling
- jumbling

Clients having difficulty articulating (e.g., those who have had a stroke, neurological involvement, Parkinson's disease) will begin to blend words together, making one long unintelligible stream of sounds or simplifying words. For example, a client might say, "tawber milkake" instead of "strawberry milk shake." The simplification occurs because the client is unable to make the quick changes in tongue, lip, and jaw placement necessary in rapid conversation. In addition, she will often try to speak even faster because of poor respiratory support. The client will probably run out of air due to shallow inspiration, improper phrasing, or weakened vocal folds.

Training to improve articulation in words, phrases, and sentences, along with instruction in proper breath support will produce clearer speech. A stronger vocal quality can also be achieved with the vocal fold adduction exercises as described on page 101.

Box Speech

Box Speech is a technique that teaches the client to say each word without jumbling. Jumbling occurs when a client speaks unintelligibly due to poor air support. By putting each word in a box, the client learns to finish one word before beginning the next. This technique will produce louder, clearer speech.

Ask the client to say one word only, starting with the first box on page 109. Have her inhale and say the word as she exhales. (Refer to Circular Breathing technique on page 16.) Then have the client repeat this step for each word in the sentence. Initially speech is slow because of the new air supply for each word.

I would like a drink.

The next stage involves bisyllabic words. Use a full inhalation before each word and exhale as the word is spoken. If the client has extra air remaining after producing the word, tell her to exhale the rest and start each word with a fresh inhalation.

baseball listen hungry cellar paper

The goal of Box Speech is to expand the number of syllables and words per box while maintaining individual sound production and replenishing air supply between boxes.

And so it goes.

Continue to increase the complexity of the words in Box Speech. Remind the client to produce all the sounds and to replenish air between the boxes. Give the client time to speak clearly.

Take the time to speak clearly.

Have the client look at the height of the box for each word as she is reading to reflect changes in intonation and pitch. (Note: Higher line indicates a raise in pitch. The slashes indicate a place to take a breath.)

Can we go / to the store now?

She just left / five minutes ago.

I would like to watch / television after dinner.

As the client phrases properly, stopping to replenish air supply and using intonation as a means of segmenting speech, introduce more complex sentences at the paragraph level. The paragraph below will provide practice for the client. The slashes indicate breathing points. Once the client can read the passage below, use new paragraphs such as those from the large print version of Reader's Digest. Have the client mark her own breathing points before reading the story aloud. Then encourage the client to go through another story without the written cues.

The other day/ I decided to take my dog, Sadie,/ for a walk./ She was reluctant to go outside/ because it was cold and dreary./ I tried all the usual ploys./ What else could I do/ but pick up her little 12-pound/ furry body/ and start walking?/ I set her down a couple of houses from mine,/ hoping she had changed her mind/ and decided it wasn't such a bad idea/ to take a walk on a brisk afternoon./ Sadie looked at me with the sorriest brown eyes/ and refused to budge./ I promised to walk straight back home,/ but she wouldn't move./ I ended up carrying her back./ While carrying her, I wondered/ who was the doggone master of whom!

Shoulder Shrug

If the individual is experiencing relatively high clavicular (collarbone), shoulder, or chest rise during breathing, perform this exercise to bring the breath down. It will free the voice by reducing the tension created during inhalation and voiced exhalation. The exercise releases the neck, jaw, collarbone, and ribs to allow the breath to expand. It opens the voice and produces a relaxing and centering effect. The shoulder shrug starts with exaggerated tension and shows the individual the opposite, the release of tension. The goal is to have the client focus on lower intake of each breath, away from the shoulders and clavicle.



If possible, have the individual sit upright in a chair with good support (e.g., pillows in the back and/or on the sides). The client should be comfortable and not holding herself up by balancing her upper body. If the individual is lying down, have her sit up as much as possible. Do not use excessive pillows to raise her head as this can bend the neck and force the head forward. Use one pillow which allows the head to tilt slightly. If the bed is adjustable, tilt the head portion of the bed up too. If the bed doesn't adjust, support the individual from the waist up with a wedge or pillows so that the head and neck are not overly bent.

Once the client is comfortable, have her raise her shoulders up to her ears and take a deep breath. Have the client count aloud to 5 as she drops her shoulders and releases air with each number. When the shoulders have come to the optimal resting point (down and relaxed), have the individual take a deep breath. Watch that the client does not raise her shoulders. This deep breath is taken in from where the shoulders left off in the lower position. Then have the client count from 6 to 10, releasing air with each number as the shoulders continue to drop. This will show the client quite naturally how to take in the breath from the lower chest or diaphragm without bringing attention to it. Repeat once.

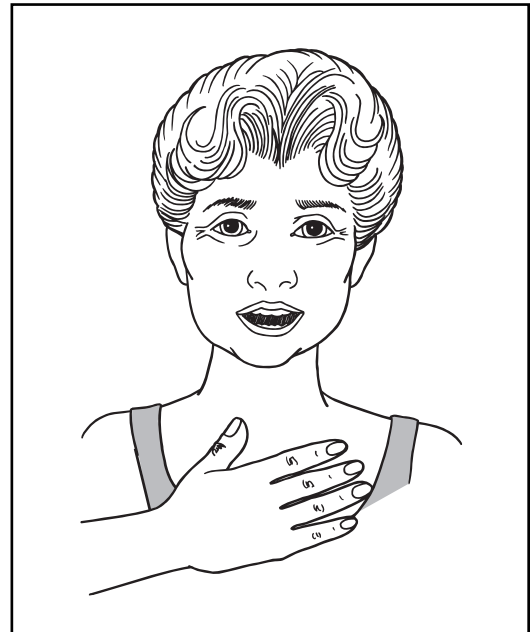
Then have the client breathe in more deeply (i.e., to the pelvis) without raising her shoulders. Tell her to keep her shoulders down and to exhale on the count of 11 to 15. Repeat, having the client take another deep breath (i.e., to the knees) and count aloud from 16 to 20. The voice will free up and may crack intermittently. The client may try to hold on to the tension or inappropriate voicing. Let her know that the new voice which is more resonant and velvety is appropriate. Do not encourage deepening of the pitch or a forced exhalation. The breath will merely fall out. The individual's attention is focused lower in the body as she breathes down farther and farther.

Lowering the Resonance and Carriage of the Voice

This exercise is beneficial to clients who have a nasal, throaty, crackling, pubescent, and/or falsetto voice. It allows the person to begin voicing in the chest.

Have the individual put her hand on her chest and after taking a deep breath of air, vocalize /ah/. Allow the hand to absorb the vibration. Then have her move her hand to her throat to feel the vibration of the /ah/ at the point of the vocal folds. Have her move her hand back down to the chest and repeat. The airflow or physical effort may be too excessive. If so, have the client place her hand on her chest and try:

- a quieter, softer voice
- a high note that goes to a low note
- bending over at the waist and releasing the /ah/ without shoulder and neck tension restriction.



The vibration felt in the hand will slowly increase as it is generated by the open resonating chamber of the chest. This will decrease head or nasal resonance that is excessive and will give the individual a voice that sounds more from the body. A natural, relaxed type of sound will emerge.

- increasing from /ah/ to /nah/ to /gah/ and then to /sah/. The client can then move to any words and sentences, maintaining the vowel vibration in the chest. This sound is to be naturally produced and not created through pressure or a lowering of the pitch.

Note: Natural pitch tone can be assessed in most normal speakers by asking them to hum. Say, “Hum a note for me, anything that feels natural for you.” It is best not to model a hum because the average speaker will just repeat the pitch of your hum.

Vocal Exercises

Exercises 1-6 are step-by-step exercises that are beneficial to improve intonation in clients who speak in a monotone or who have a limited pitch range. Exercise 7 is beneficial for clients who need to increase intensity. Exercise 8 is beneficial for anyone interested in proper vowel placement (e.g., accent reduction, neurological decline, head trauma).

1. Downward Pitch

Vocalize the following words using a downward intonation.



thanks	sod	mute	bite
guess	chime	yet	feed
jig	code	sigh	judge
hatch	gown	palm	blob
book	shun	crown	sick
spoon	much	range	eight
chuck	wheeze	length	neat

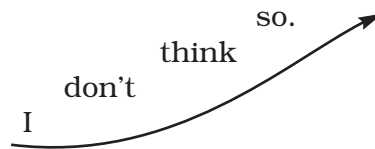
2. Upward Pitch

Repeat the word list in number 1, moving pitch upward as in a question.



3. Sentence Intonation Practice: Downward Pitch to Upward Pitch

Vary pitch starting with a downward intonation and ending with an upward intonation.



I don't think so.

Pop goes the weasel.

She dropped the jug.

Do you like vanilla pudding?

He is as thin as a rail.

No telling what she'll do next.

You can have it; I don't need it.

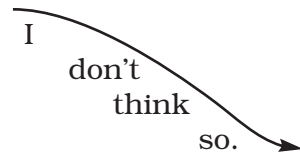
She called in sick today.

Are the dogs in the house?

Mary makes a good loaf of bread.

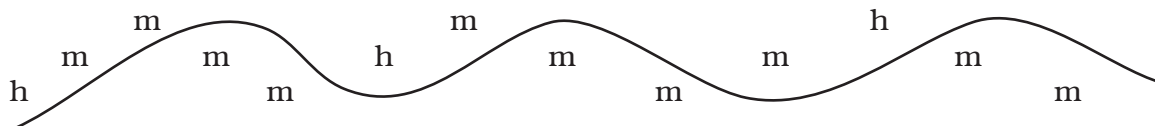
4. Sentence Intonation Practice: Upward Pitch to Downward Pitch

Repeat the list in number 3, but start with an upward intonation and finish with a downward intonation. Keep the voice on, using an appropriate amount of air exhaled continuously on voicing.



5. Roller Coaster Ride of Intonation

Say the following sounds, allowing the intonation to travel freely up and down the average speaking range. You may wish to try this by humming first.



6. Sticking to my Answer Passage

Repeat the passage several times using a different emotional overlay each time.

- | | | | |
|--------------|-------------|------------|------------|
| anger | apathy | immaturity | deceit |
| hopelessness | frustration | disgust | pain |
| exhaustion | flat affect | exuberance | sadness |
| humor | grief | wisdom | insecurity |
| fear | craziness | worry | sympathy |

Sticking to My Answer

I have no other answer to that question. It will always be the same answer even if you ask me a million times. My reply will always be the same no matter what, no matter when you ask, unless of course you ask me a different question in a different tone of voice and under different circumstances. Then I may have a different answer, maybe many different answers, and totally fool you and myself. So there.

7. Increasing Intensity (loudness)

Say the first sentence in each pair with average effort. Then say the second sentence with a strong effort (e.g., a loud voice). Take a good breath before each sentence and let yourself really feel the force moving through you on the second sentence. The vocal fold adduction exercises on page 101 can also be of assistance to help increase vocal power and strength.

I didn't hear you. What did you say?
 I am tired. I am really exhausted.
 You've got it. You've really got it.
 Take one. Go ahead, take one.
 I'm resting. Can I get some rest for a minute?

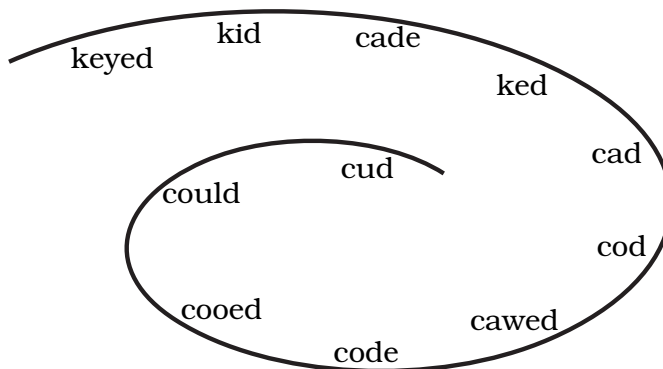
The following exercises will improve vocal intensity, especially if other factors like apraxia, aphasia, head trauma, or Parkinson's disease are present:

- A. Cough and then attempt to say "ah" with a wide open jaw.
- B. Clear throat loudly. Then attempt to say "ah" with a wide open jaw.
- C. Take a deep breath. Then sigh loudly as if exhausted during exhalation.
- D. Practice saying "hello" loudly with a disconnected telephone. Then practice with a real caller. This works well with clients who are disoriented.
- E. Sing familiar songs. Singing is an effective technique to elicit phonation and expressive speech production in the apraxic patient. You might try:

You Are My Sunshine
 Happy Birthday to You
 America the Beautiful
 Take Me Out to the Ball Game

8. Knowing Proper Vowel Placement (Standard American English)

The progression of vowel placement moves from the front to the wide middle, open middle, back, and far back.



Cantona Voice Strengthenener

This technique can be used with anyone who needs to gain vocal depth, strength, and resonance of the voice. It is excellent for clients with spastic dysphonia as well as unilateral paralysis, weakness, or bowing of the vocal cords. However, this technique can seem extreme and it is not for everyone. To achieve optimal results, perform the directions exactly. The Cantona Voice Strengthenener is used to exhaust the arytenoids in the case of spastic dysphonia, thereby creating a smooth vocal quality that can last for a few hours up to a few days. It must be performed every day, throughout the day.

This exercise is beneficial in creating strength in the remaining active vocal cord in the case of unilateral vocal fold paralysis or a cordectomy (removal of some of or all of a cord due to cancer). It also has been effective in severe bowing of the folds in that it will help to afford approximation for vibration to occur and to make a stronger, more audible voice.

Have the individual push the vocal folds or voice box down as much as possible with the neck musculature. Tell the client, "Imagine that your Adam's apple is very heavy. It weighs so much that it feels as if it could touch the ground. Hold it down, and then with all of your might, produce the loudest, deepest blast of sound that you can."

It will sound horrific, like an /ah/ very deep in the throat. This is exactly what you want. Have the client repeat the exercise several times, but only up to 5 minutes total on the first day, increasing to 15 minutes over time as tolerated.

Encourage the client to extend the duration of the deep gravel-like sound for as long as possible. The client's eyes may water and/or her throat may feel like a bite or tickle. Her nose may run and she may feel the need to gag. Remember, this is not the Yawn-Sigh Approach. This is a big blast to the mechanism to get back into shape. It is difficult and not pretty. It works when all else has not. Ask Jack Klugman. He has a voice again because of this technique.

The jaw does not have to be open especially wide. You can have the client alternate with the /ee/ sound. Keep checking to make absolutely certain that the client's larynx remains in the lower position. This is the place it naturally goes when you produce the lowest pitch. Frequently remind the individual to relax her neck during the forced vocalization.

Portable Voice Amplification System

For clients with Parkinson's disease, Seimans has a portable voice amplification system that is useful to increase vocal loudness. It is a microphone that is worn on the head, attached to a speaker that can be worn like a belt. It can be used in addition to voice strengthening exercises, breathwork exercises, and improved posture. (See the Resources list, page 258, for ordering information.)

Reflux Voice Disorders

Gastroesophageal reflux disease (GERD) extending to the larynx is called *reflux laryngitis*. This problem can frequently be prevented by changes in the timing, type, and amount of food that is eaten. It is best not to recline or go to sleep at least one hour after a meal. Overeating increases the likelihood of recurrent reflux. Food that combines proteins with carbohydrates can often be the culprit for reflux (e.g., meat with potatoes; a sandwich with meat and bread). Also, it is helpful to avoid alcohol, mint, and caffeine. A nutritionist can further recommend a balanced dietary plan.

Treatment for GERD (e.g., dietary changes, lifestyle changes, use of antacids) works for only about 35% of patients because many of them do not follow the regime. Therapy at its best is a cooperative agreement. The individual needs education and follow-up support for optimal intervention success and reassurance that change over time is possible.

Symptoms and laryngeal conditions associated with GERD:

- intermittent or chronic dysphonia
- vocal fatigue
- voice breaks
- chronic throat clearing
- excessive throat mucus
- post-nasal drip
- chronic cough
- dysphagia

At its worst, GERD can be debilitating and life-threatening, causing subglottic stenosis, posterior laryngeal stenosis, arytenoid fixation, carcinoma in a non-smoker, and laryngospasms.

Begin by getting a voice/larynx and reflux history on the client. Note reoccurrence of nodules, misuse, abuse, congestion, and any symptomology listed above. Report all findings to the referring physician. If the individual has not seen an otolaryngologist, recommend it to the person and/or the primary physician. Follow up with the physician to obtain the results of the diagnostic evaluation.

Dual pH esophageal monitoring measures the amount and frequency of the flow of gastric content flow into the esophagus and larynx over a 24-hour period. This allows for the diagnosis of and proper treatment for reflux laryngitis. Contact a gastrointestinal physician for more information regarding esophageal monitoring.

Soft Palate Closure



Blow into a whistle or the long end of a Chewy Tube. Close off the nares to direct the airflow through the oral cavity. Release the nose a little bit at a time to encourage the soft palate to raise. Keep closing and slightly opening the nares and continue to blow hard. Repeat 5 – 10 times.

Note: To adjust the amount of airflow through the Chewy Tube, close off the sides of the T portion of the tube with index finger and thumb. A whistle will be created.

Benefits

- strengthens soft palate closure for oral voicing
- reduces nasal reflux

Soft Palate Massage



This exercise is not for everyone. It may cause gagging, vomiting, increased saliva production, or draining of the sinus. It is effective in helping to release the jaw stiffness and tension in the hypopharynx. Enter slowly and press gently on the soft palate (close to the hard palate attachment). Apply pressure as tolerated. When you are able to continue, move the finger along the ridge attachment of the hard palate to the soft palate, applying very light pressure.

Then extend the index finger over to the faucial pillars. Push gently against this area on each side. This area may be massaged without doing the soft palate.

Note: Try this exercise another day if gagging or vomiting occurs.

Benefits

- stretches the soft palate
- reduces gagging
- opens the throat for improved chewing and voicing
- indirectly releases tension in the abdomen

Sample Phonation Chart

Name _____

Start of Care _____

Diagnosis vocal strain

Physician _____

Clinician _____

Exercise Yawn-Sigh

Goal client will produce /ʌ/ after Yawn-Sigh to reduce hard onset

Date	4/22	4/24	4/26							
No. Trials	10	10	10							
Target	VQ	VQ	VQ							
Assistance	C	C	C							
Placement	V	V	V							
Setting	T	T	T							

Hyperadduction
Vocal Strain
Strong



Optimal Voice



Hypoadduction
Aphonia
Weak

+7	—	—	—	—	—	—	—	—	—	—
+6	—	—	—	—	—	—	—	—	—	—
+5	—	—	—	—	—	—	—	—	—	—
+4	<u>+4</u>	—	—	—	—	—	—	—	—	—
+3	—	<u>+3</u>	—	—	—	—	—	—	—	—
+2	—	—	—	—	—	—	—	—	—	—
+1	—	—	<u>+1</u>	—	—	—	—	—	—	—
0	—	—	—	—	—	—	—	—	—	—
-1	—	—	—	—	—	—	—	—	—	—
-2	—	—	—	—	—	—	—	—	—	—
-3	—	—	—	—	—	—	—	—	—	—
-4	—	—	—	—	—	—	—	—	—	—
-5	—	—	—	—	—	—	—	—	—	—
-6	—	—	—	—	—	—	—	—	—	—
-7	—	—	—	—	—	—	—	—	—	—

Target

VQ – vocal quality
VI – vocal intensity
LM – laryngeal musculature
FM – facial musculature

Assistance

M – modeled
C – cued
MT – monitored
I – independent

Placement

V – vowel
W – word
P – phrase
S – sentence

Setting

T – therapy
H – home

Phonation Chart

Name _____

Start of Care _____

Diagnosis _____

Physician _____

Clinician _____

Exercise _____

Goal _____

Date										
No. Trials										
Target										
Assistance										
Placement										
Setting										

Hyperadduction
Vocal Strain
Strong



Optimal Voice



Hypoadduction
Aphonia
Weak

+7	—	—	—	—	—	—	—	—	—	—
+6	—	—	—	—	—	—	—	—	—	—
+5	—	—	—	—	—	—	—	—	—	—
+4	—	—	—	—	—	—	—	—	—	—
+3	—	—	—	—	—	—	—	—	—	—
+2	—	—	—	—	—	—	—	—	—	—
+1	—	—	—	—	—	—	—	—	—	—
0	—	—	—	—	—	—	—	—	—	—
-1	—	—	—	—	—	—	—	—	—	—
-2	—	—	—	—	—	—	—	—	—	—
-3	—	—	—	—	—	—	—	—	—	—
-4	—	—	—	—	—	—	—	—	—	—
-5	—	—	—	—	—	—	—	—	—	—
-6	—	—	—	—	—	—	—	—	—	—
-7	—	—	—	—	—	—	—	—	—	—

Target

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Placement

V – vowel
W – word
P – phrase
S – sentence

Setting

T – therapy
H – home

Chapter 10: Cheek Exercises

Cheek and Lip Assist



Press fingers upward against the ridge of the cheekbone. These muscles, the zygomaticus major and zygomaticus minor, draw the mouth backward and upward. They are responsible for the expression of pleasure or a good laugh. Work both sides, either one at a time or at the same time. Move in several directions, even if one side is severely weakened or paralyzed.

Benefits

- stretches and tones cheek musculature
- assists in upward motion of cheeks and lips

Top of the Cheekbone



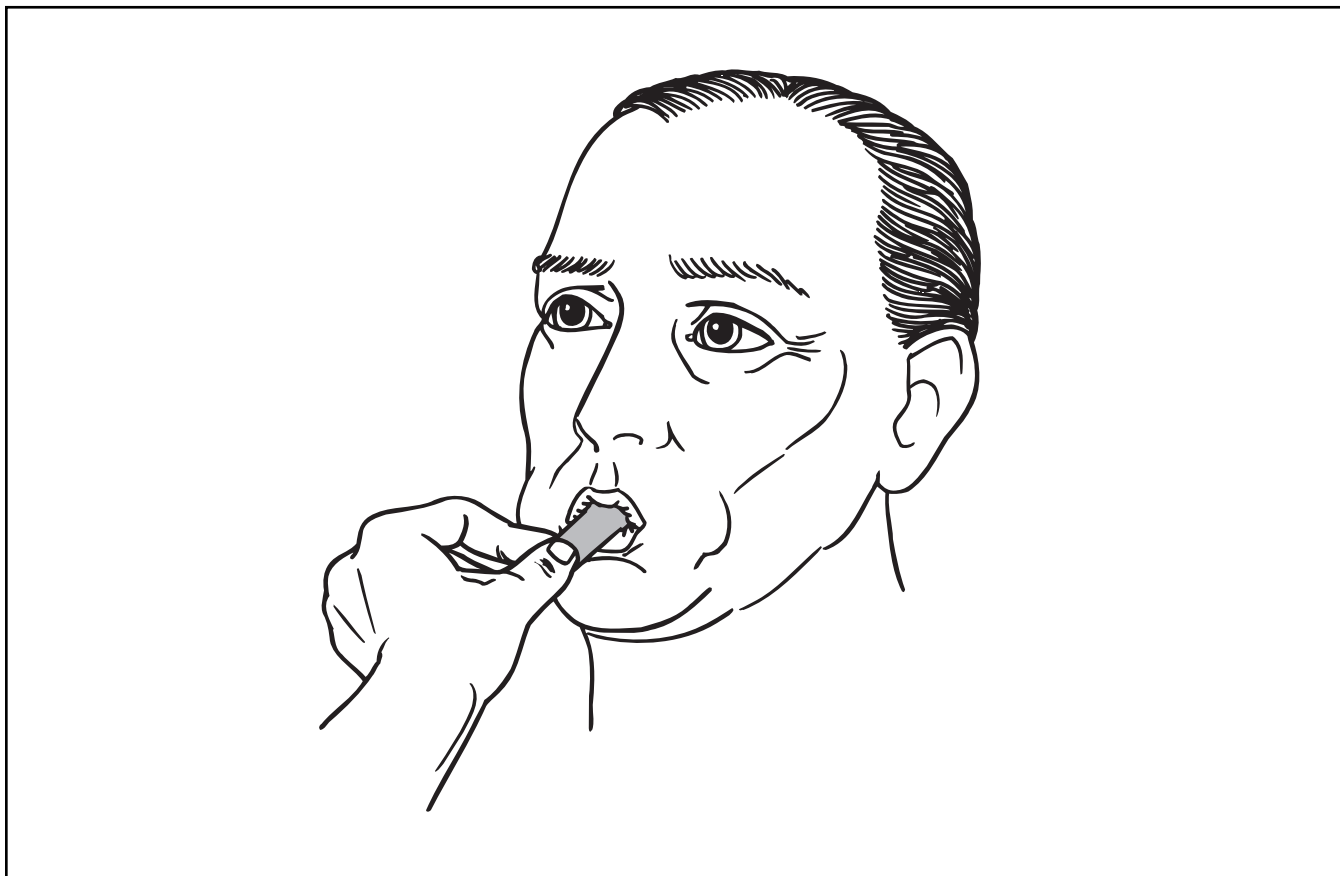
Press the length of the thumb down on the top ridge of the cheekbone. Hold for about 5 to 10 seconds, rocking the thumb slowly along this line maintaining steady pressure. Repeat on the other side.

Stretch by moving the cheek in several directions. This intervention leaves a warm, alert feeling to the muscle. Make sure to do both sides, even in the case of severe weakness or paralysis.

Benefits

- stretches and tones cheek musculature
- helps to reduce stress and muscle tension

Inner Cheek Strengthenener



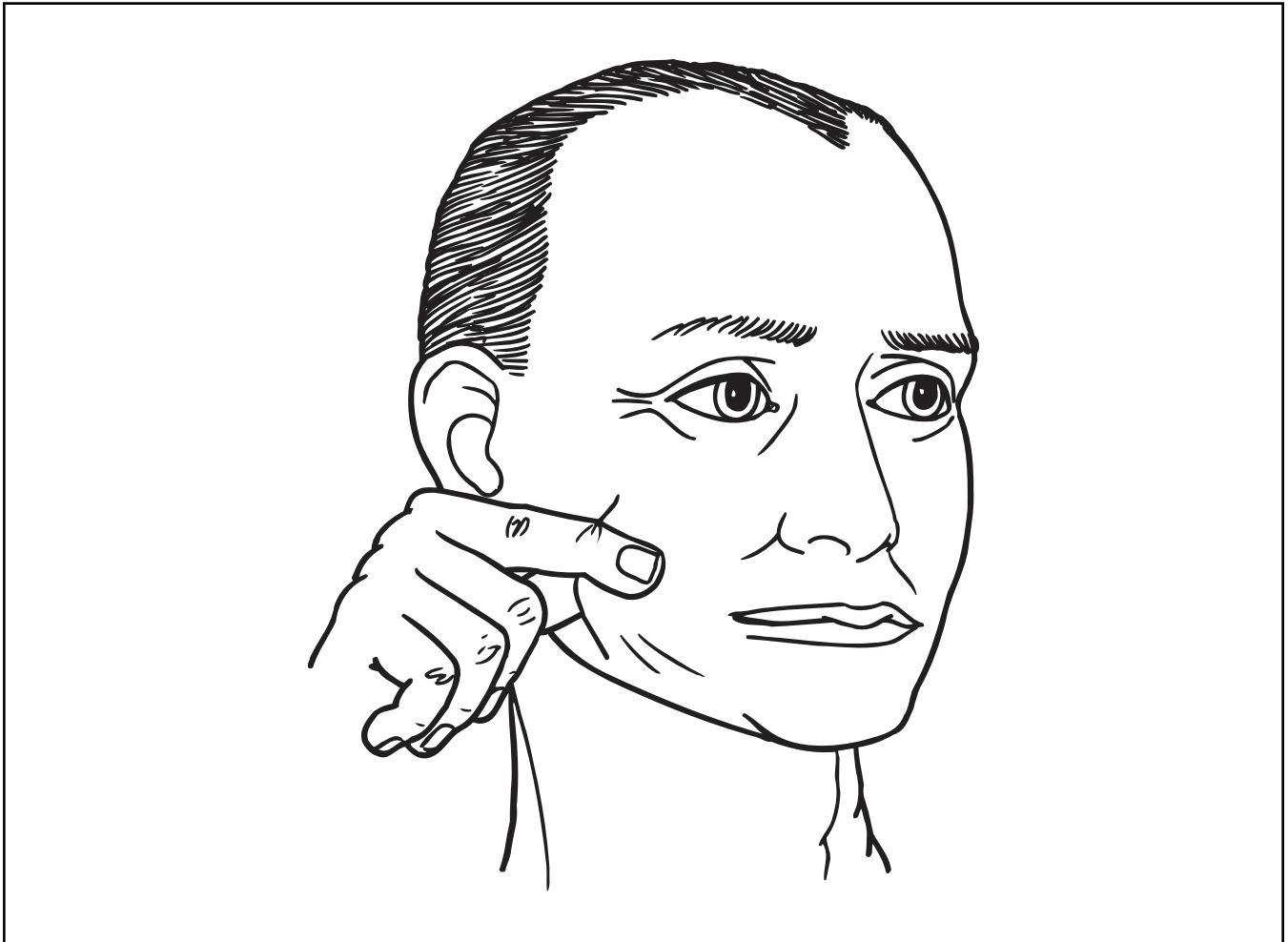
Put the top of the T of a Chewy Tube sideways in your mouth lengthwise (parallel with the earlobes) in front of your teeth. Do not bite down on it. Hold the long end securely and attempt to pull it out of your mouth. Use lip strength to keep the Chewy Tube in your mouth.

Release the outward pull on the tube and pull it back in using lip strength. Repeat 10 times as tolerated. Increase number of repetitions as tone increases.

Benefits

- assists in stretching and strengthening the inner cheeks
- assists in providing resistance for improved lip rounding
- improves lip seal

Squeezing and Kneading the Cheeks

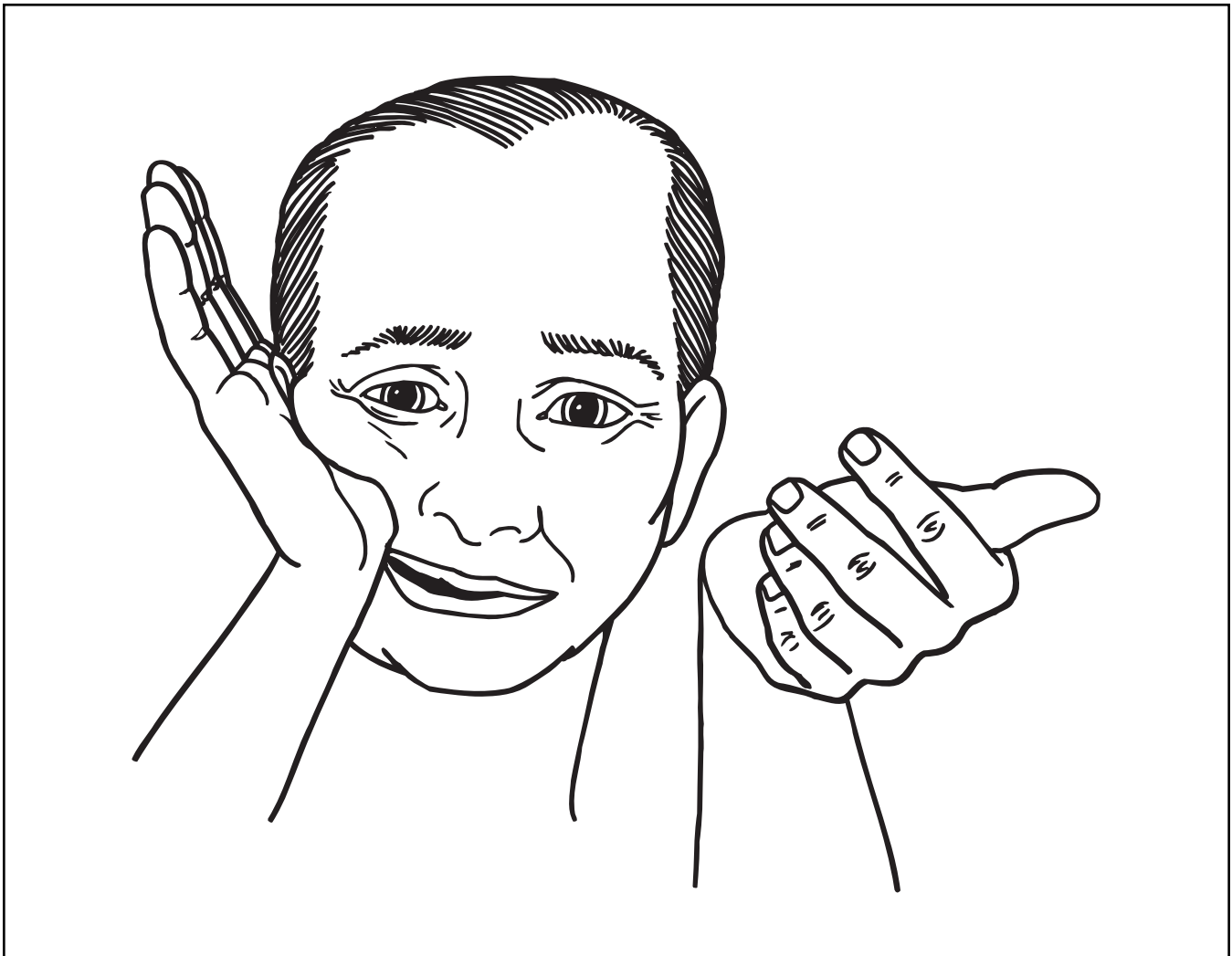


Grasp cheek in the middle with the index finger and thumb. Squeeze and knead the cheek, working to smooth out knotted musculature and/or to provide stimulation to weakened muscle tissue. Do each side one at a time or alternate from one side to the other using one hand on each cheek. Knead all the way around the cheeks, starting in the middle and moving in a circle.

Benefit

- smooths, stretches, tones, and stimulates cheek musculature

Rocking Palm Cheek Stretch

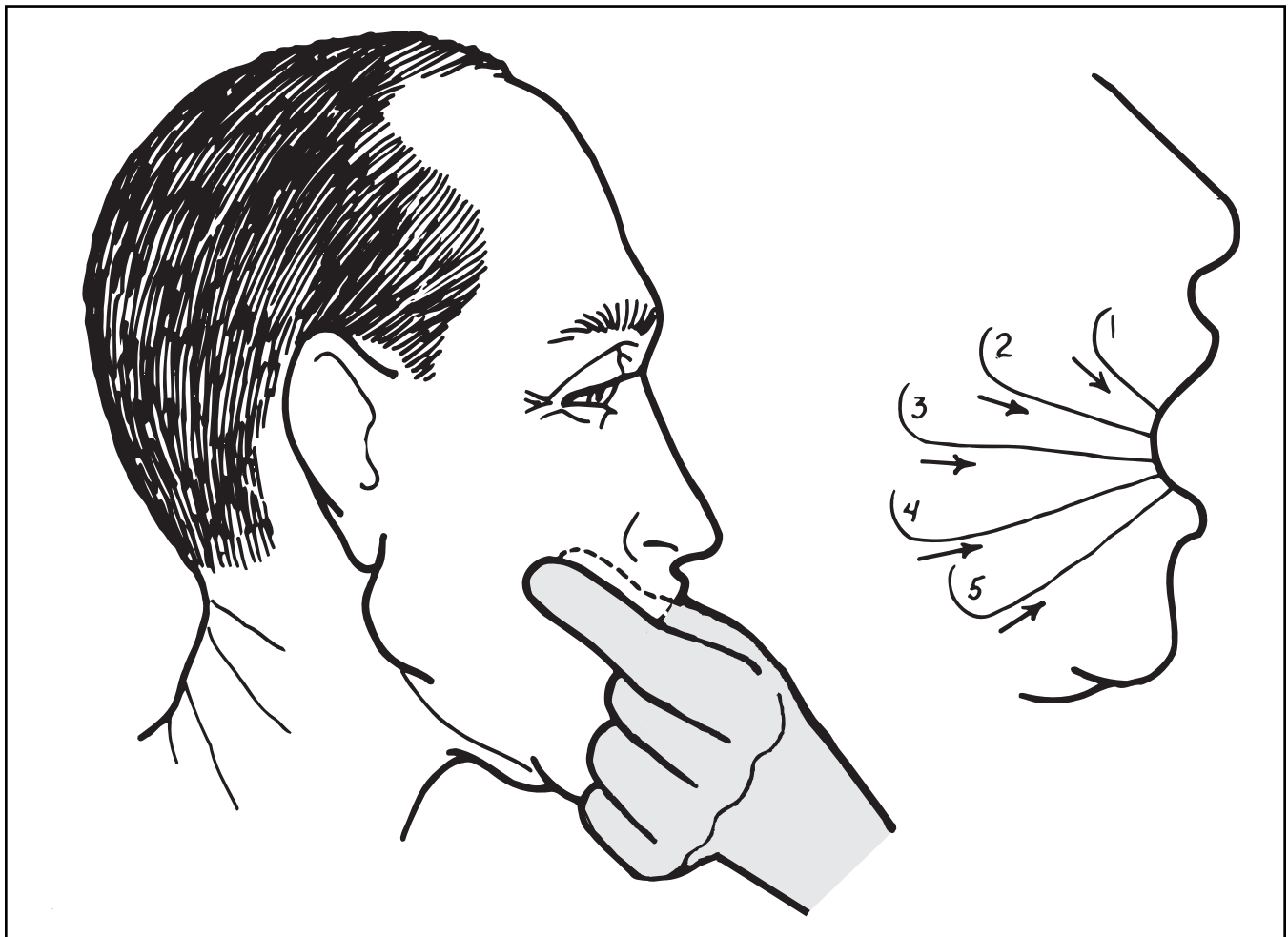


Put base of palm on cheekbone. Exert pressure on one cheek, pushing up and into cheekbone from the center. Switch to the other palm and cheekbone, exerting pressure for a count of 2. Rock back and forth from one cheek to the other. Lean elbows on the table for steady pressure and to assist in the rocking motion.

Benefit

- tones nasal area of cheeks

Buccal Cavity Pull

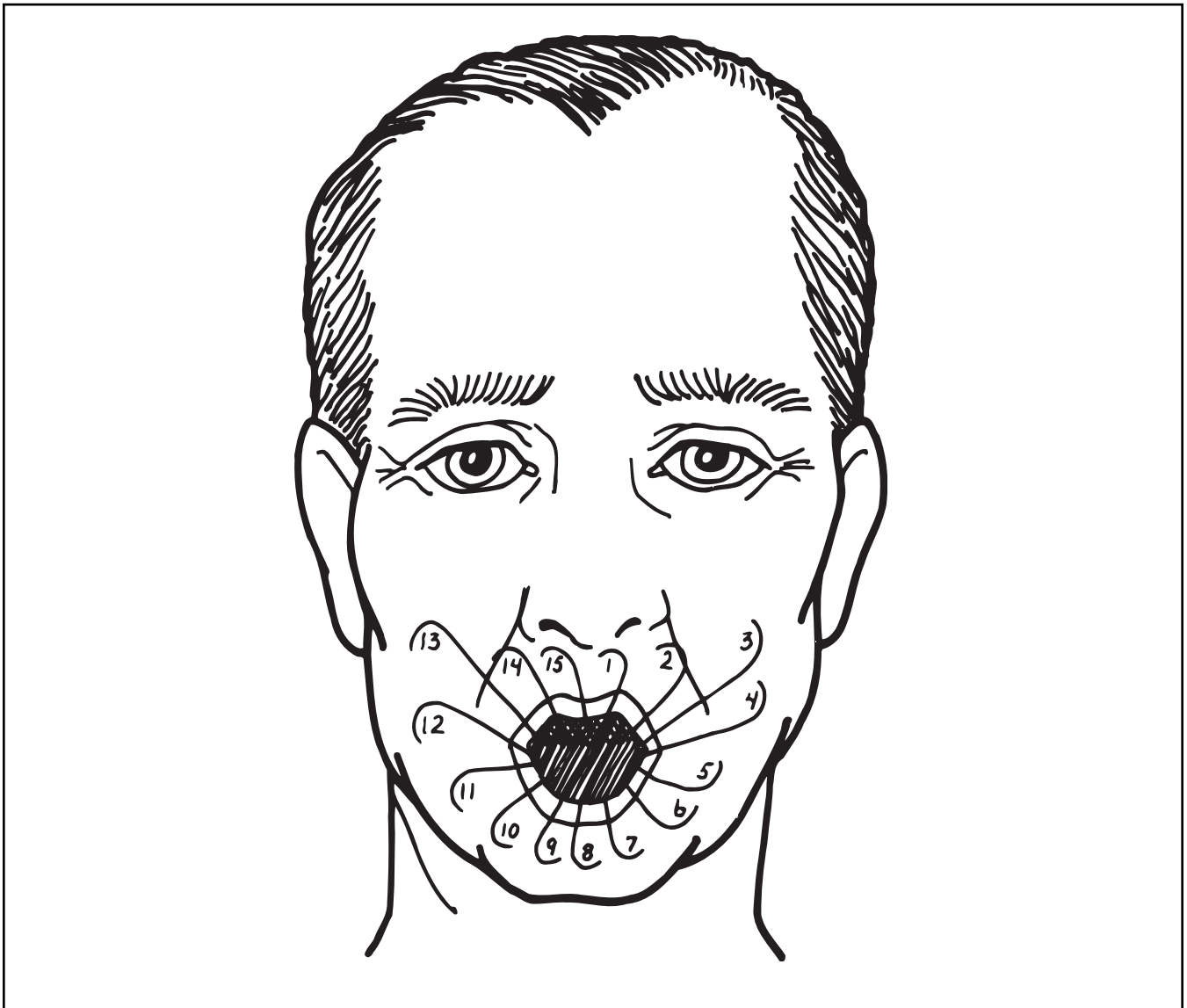


Put thumb inside mouth and index finger on outer cheek. Lightly squeeze index finger and thumb as you pull the cheek toward the corner of the lips. Follow the diagram for stretching cheeks. Go slowly to stretch restricted cheek musculature. Repeat. Perform exercise on the other cheek.

Benefits

- encourages toning
- stretches hypertonic or restricted cheek musculature

Extended Buccal Cavity Pull

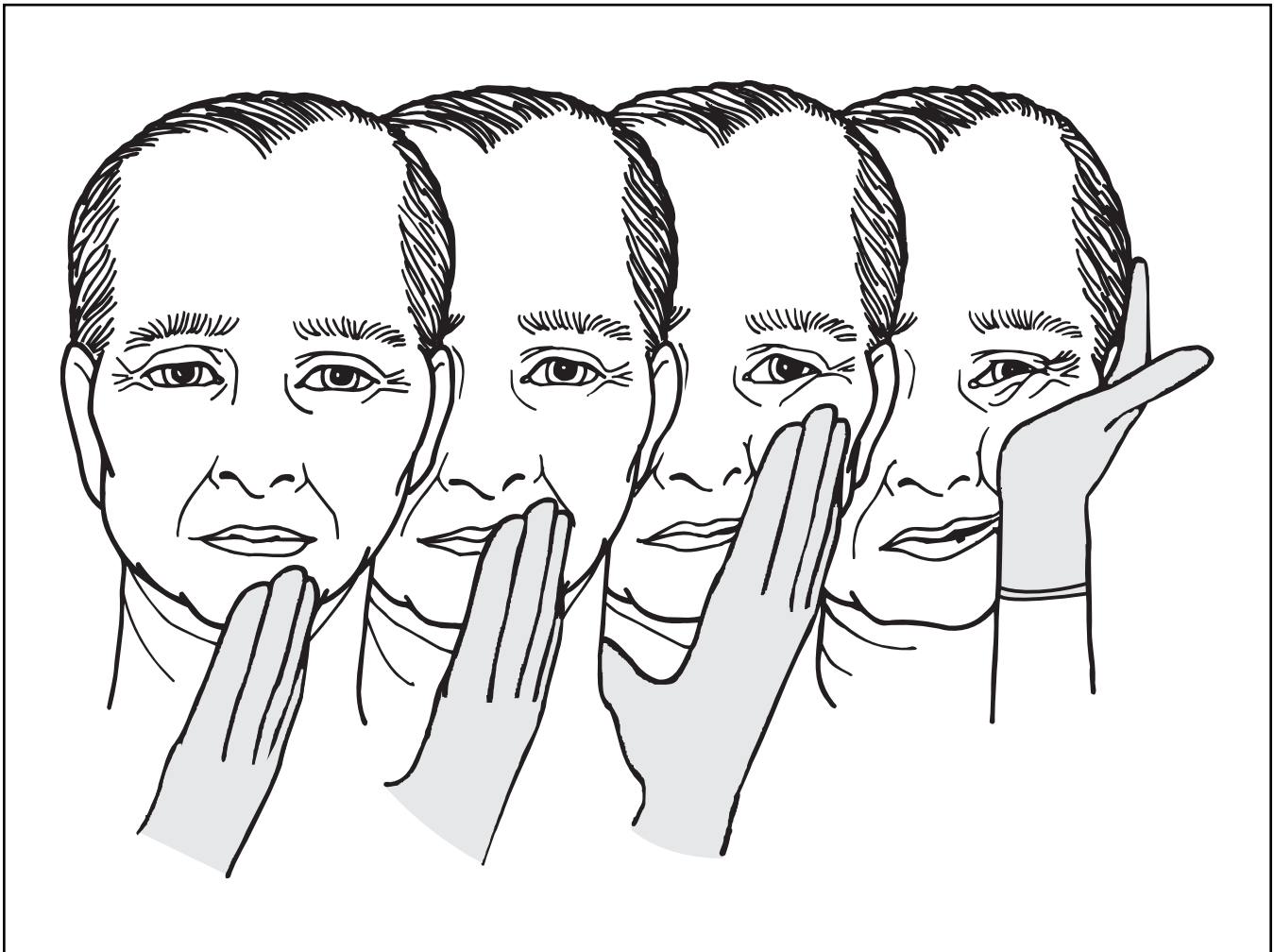


Put index finger inside mouth and thumb on outer cheek. Lightly squeeze index finger and thumb as you pull cheek toward lips. Move fingers and follow diagram to stretch cheeks. Stretch and pull sides evenly.

Benefit

- stretches and tones cheek musculature

Sustained Palm Massage of Cheeks



Place fingers from right hand on chin. Move fingers, then palm of hand from the chin over the right cheek to the end of the right eyebrow. Move upward only with sustained pressure, stretching the cheek musculature up and over the cheekbone. Continue pushing upward to the edge of the right eyebrow. Always start at the chin and push upward using smooth, even pressure. Repeat on the same side. Switch to left hand, continuously sliding upward to the left cheek, then following up to the edge of the left eyebrow. Repeat.

Benefit

- stretches and tones cheek musculature

Muscle Responsibility

There are a variety of muscle movements associated with speaking (e.g., opening the mouth for a cup, sucking on a straw, grinding food in the mouth). The following is a list of the muscles in the head and neck and what they are responsible for.

digastric, geniohyoid, myohyoid	assists with depressing the mandible; stabilizes the jaw; opening of mouth for spoon, cup, sucking, and munching
lateral pterygoid	depresses the mandible, draws the mandible forward and sideways, stabilizes the jaw, assists with graded jaw movements
temporalis	raises and retracts the jaw; assists with graded jaw movements in sucking, chewing, munching
masseter	raises the jaw, assists with protraction and closure of the jaw, assists with graded jaw movements for sucking
medial pterygoid	raises mandible; assists with protraction and graded jaw movements for sucking and biting
buccinator	maintains inner cheek tension near lips, assists with cheek action for moving food bolus from side-to-side, assists with lower lip tension
obicularis oris	assists with lip closure, lip protrusion, lip compression, lip elevation, lip tension
mentalis	wrinkles chin; assists with lower lip elevation, extended lip protrusion, and parting of the lips

All musculature assists in speech production. For specific sound per muscle production, see Table 1.5 of *Oral-Motor Assessment and Treatment: Ages and Stages* (Bahr 2001).

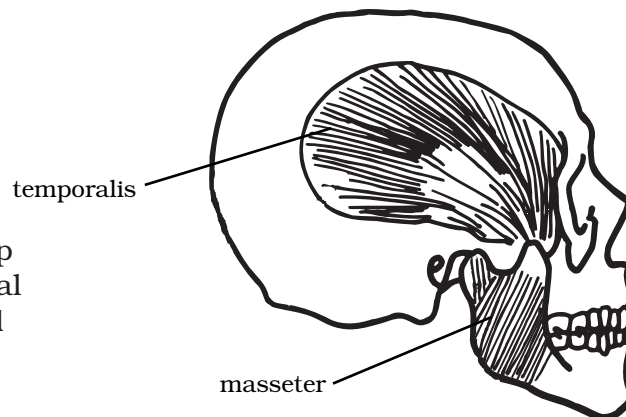
Chapter 11: Jaw Exercises

Temporomandibular Joint

The temporomandibular joint (TMJ) is a synovial joint that allows range of motion and relatively free movement between the bones that make up the joint. The movements of the muscle allow it to:

- depress
- elevate
- protrude
- retract
- lateralize
- rotate

The full range of motion allows for lip placement, tongue positioning, spatial configuration of the oropharynx, and laryngeal height.



Lax or Hypo-functioning Joint

Lax joint ligaments can impair oral-motor function which causes errors in approximation and alignment. This is evidenced in individuals with Down syndrome. In individuals with cerebral palsy and traumatic brain injury, unilateral TMJ immobility is commonly experienced, causing asymmetry during oral-motor functioning. Errors in immobility (i.e., stiffness, lacking range of motion) are evidenced as drooling, difficulty chewing, difficulty munching with proper placement onto the molars, difficulty opening and closing the jaw in a hinge-like fashion, pocketing of food in the cheeks, biting on a cup or straw for stability, and loss of liquid when drinking with a cup.

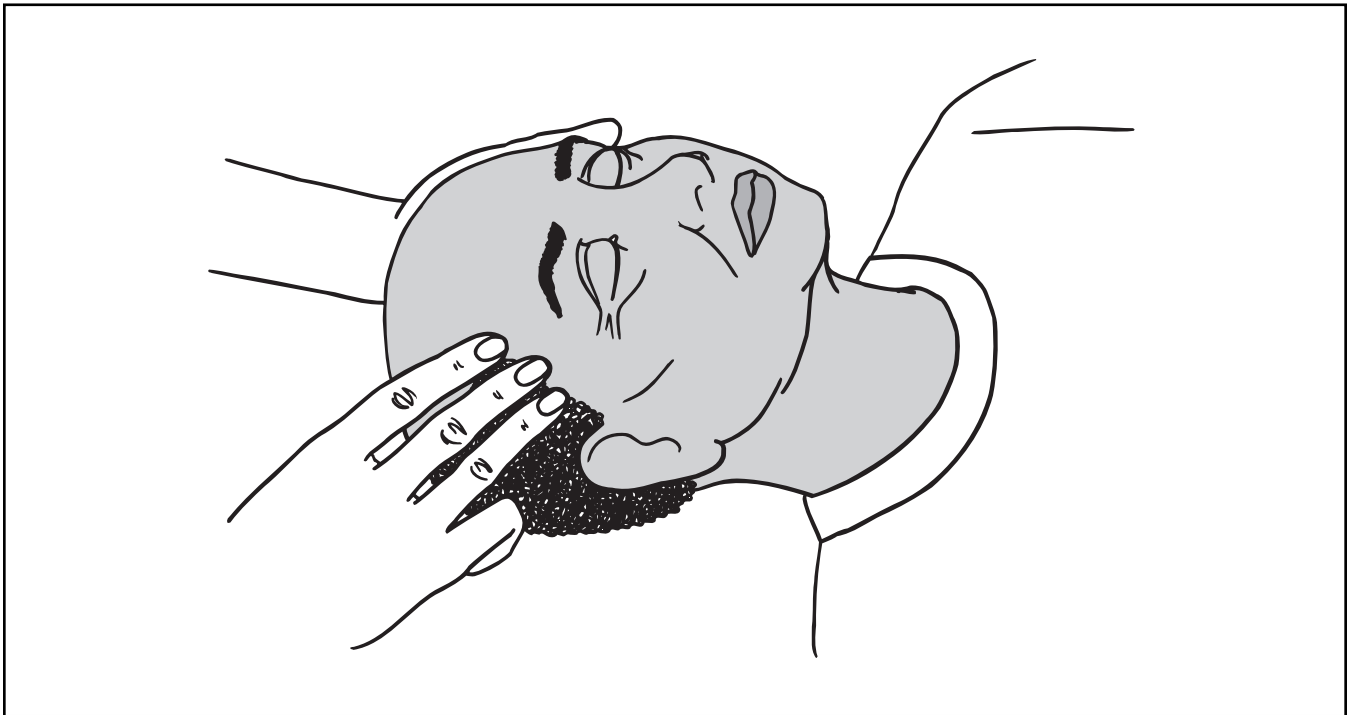
Oral-motor massage and postural strategies will help create normal tone in the TMJ and surrounding areas. They will also help to strengthen tongue elevation, achieve lip closure, maintain jaw stability, and improve resonance and speech intelligibility as well as decrease drooling. Stop any interventions that may cause hyper- or high tone. Interventions that can increase tone are tapping, resistance, and icing.

Restricted, Stiff, or Hyper-functioning Joint

Massaging tense TMJ musculature can help reduce tone. Long, striated strokes are used to stretch and relax musculature. Warm compresses to the TMJ, stretches, yawns, breathwork, and communication strategies (e.g., positive messages, inquiry) are also effective in relieving restrictive musculature.

Biofeedback can also be of benefit as it will reduce tone and increase range of motion. Electrodes are placed on the client's muscle. Loud and frequent beeps indicate an appropriate resting state of the muscle. A decrease in sound and infrequent beeps relay information indicating muscle restriction and tension. The client is made aware of correct tone via the feedback system. This helps to facilitate improved voluntary oral-motor function.

Temporalis Release



Press three fingers against the temporalis area on one side of the client's head at the level of the forehead. Move the scalp in small circles. If a painful spot is found, hold the pressure over it for five seconds. Move fingers to an adjacent spot and repeat, relieving bound musculature and stored tension as you go. Do both sides of the head simultaneously.

Encourage the individual to yawn or sigh during the exercise. Be open to discuss any emotional release or mental block that emerges as a result of freeing the musculature of the head. Ask the individual where the tension or pain has shifted. The client may respond "my shoulder," "my neck," "my nose," or "my leg." The ache may shift several times. Remind the individual that this is a process and over time, with practice, the imbalances, pains, and weakness will improve.

Note: If you are unsure whether an intervention will help, try it. Our muscle and soft tissue system is so interconnected. Many times pain and muscle restriction, imbalance, or weakness is interdependent upon a group of muscles working together. Work the whole area. Ask for the individual's input. Body knowledge is amazing. Just ask the client to talk about his body. Where does he feel pain, sensitivity, restriction of movement?

Be sure to note all findings and report them to the client's primary physician. A referral to physical, occupational, or massage therapy may be indicated.

Stabilizing the Jaw

Stabilizing the jaw allows freedom of fine motor movement of the tongue and facial musculature. It is important to stabilize the jaw when seeking to isolate a particular facial or tongue movement for controlled graded movement of the muscle.

Bite Blocks

A bite block is used to:

- stabilize and maintain the client's jaw in desired positions to strengthen and increase range of motion of the tongue
- allow access to the oral cavity when working with clients who exhibit a strong bite reflex
- increase range of motion of jaw through gradually increased bite block sizes
- strengthen the client's jaw by having him bite down on the bite block

For hygienic purposes, clients should have their own bite block apparatus. Clean the apparatus with soap and hot water before and after each session. Items that may be used as bite blocks or jaw stabilizers are:

- tongue depressor
- Chewy Tube
- end of toothbrush
- corks – varying sizes of corks make effective bite and resistance blocks (Put gauze around the cork or a finger cot over the cork to make it easier to hold onto, for hygienic purposes, and to contain pieces of the cork if it crumbles.)
- rolled gauze

When to use a bite block:

1. To gradually increase the client's jaw opening, begin with a narrow item such as a Chewy Tube, a tongue depressor, or the end of a toothbrush. Before and after this exercise, have the client open his mouth as wide as possible to establish a baseline and to gauge improvement. Note muscle resistance to each item as you place slightly larger bite blocks in the client's mouth. Repeat from smallest to largest bite block, again noting the resistance of the jaw.

- To stabilize the client's jaw for the tongue exercises, place the bite block between the upper and lower central incisors. Instruct the client not to bite down on the block, but to relax her teeth on the block. Perform the tongue exercises with intermittent breaks to rest the jaw musculature.

Have the client attempt to perform the tongue strengthening exercises using various sizes of bite blocks. Practice subsequent tongue range and strength abilities with and without the bite block.

- If a bite reflex is probable, roll gauze into a cylinder of desired thickness and use it as a bite block. A bite reflex is common in infants and children.

Head and Jaw Stability

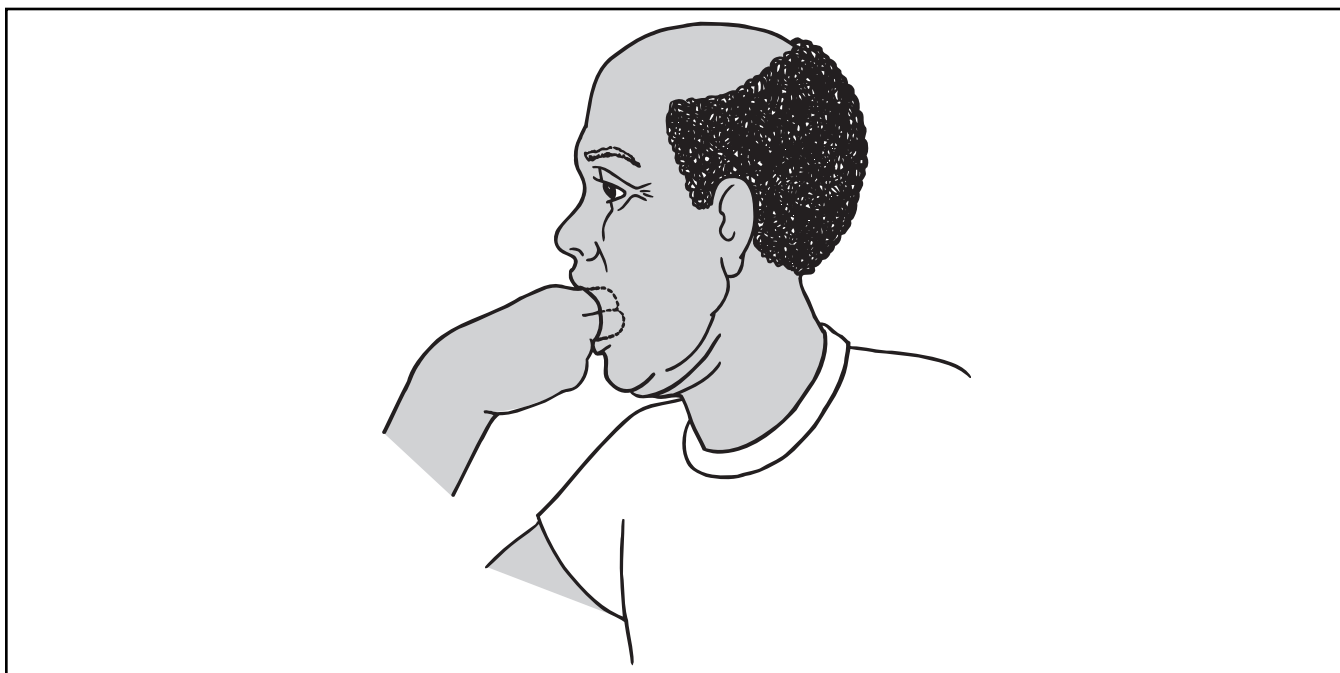
If the client lacks tongue mobility, he might overcompensate by using his jaw. His tongue may be flaccid or move very little so he compensates by using his jaw to raise and lower it. By stabilizing the client's jaw, you will be able to clearly assess the client's tongue strength and range of motion more accurately. The following suggestions will help you stabilize the client's jaw.

To stabilize the client's head and jaw:

- Grasp the back of the client's head with your index finger and thumb at the base of the neck as it joins the skull, approximately two inches behind the ears. Once the client's head is propped into place, use your other hand to stabilize the jaw as described above. You may wish to use an assistant to aid in stabilizing the client's head.
- Depress the client's lower lip with your index finger. Then depress his jaw with your middle finger, holding his mouth open varying degrees according to tongue tip stretch desired.
- Place your thumb under the client's chin to grip the jaw and further stabilize it. This allows independent movement of the raising, retracting, lateralizing, or protrusion of the tongue.
- You can also prop the client's head up by stabilizing the client's elbow on the table with his fist secured under his jaw to hold it firmly shut.



Jaw Opening Expansion



1. Have the client place one knuckle in the opening of his mouth and hold it for 15 seconds.
2. Then have him put another knuckle in his mouth to increase the size of his mouth opening and hold for 15 seconds.
3. Continue by having the client add his thumb on top of his knuckles and hold for 15 seconds. Remind the client to keep his neck relaxed and to try not to squint his eyes. Also remind the client to keep breathing freely, gently inhaling and exhaling.

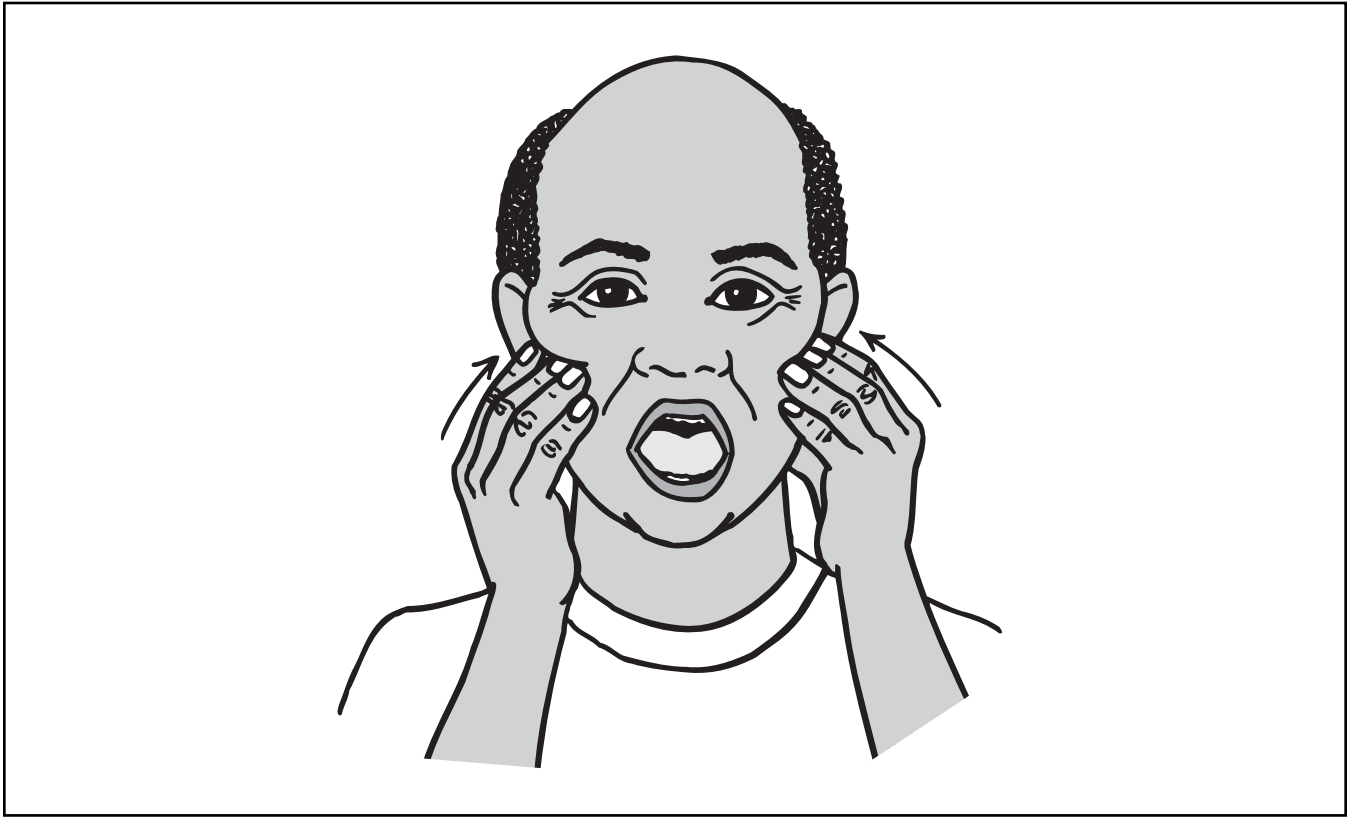
Reduce the time if the client is experiencing discomfort. The goal is to stretch, not strain. Breathing will help to eliminate tension. A person who has experienced jaw or head injury may have difficulty getting his mouth wide enough for two knuckles width. Go slowly and give the jaw time to relax open. These exercises should be done over time or as the client is comfortably able to in the therapy setting.

Note: Bite blocks of varying widths can be used in place of the client's knuckles if desired.

Benefit

- stretches and strengthens the jaw

Releasing Jaw Tension



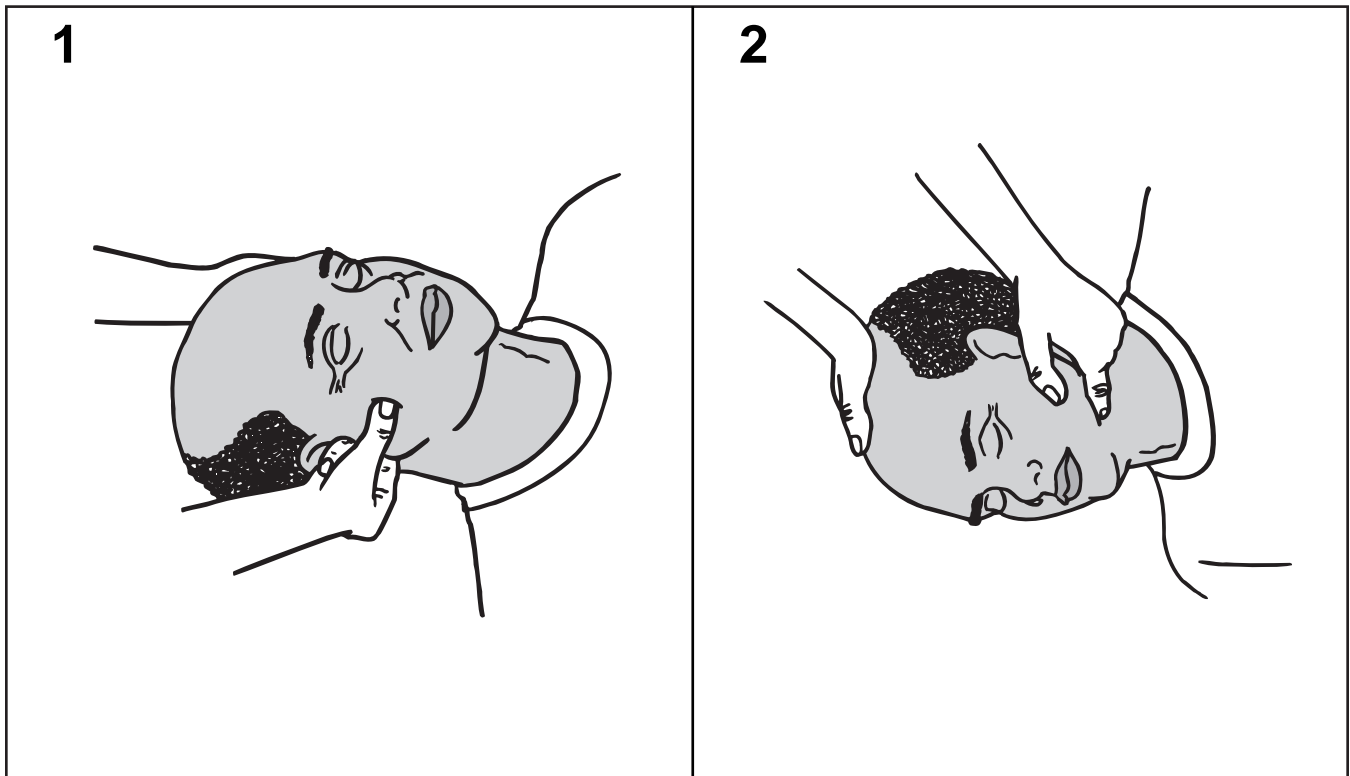
Place the fingertips of both hands on your upper jaw. Press firmly and slowly with equal pressure on both sides, letting your fingers go through the surface tissue of the cheeks until you feel the resistance of the muscle that runs from the cheek to the lower jaw.

You may feel the resistance as hardness or soreness. Increase pressure until you begin to feel discomfort. Breathe deeply to release any tension in the jaw. Open and close the jaw, sounding “AH” loudly to release tension. Continue to apply on and off pressure for 30 seconds. Repeat once as tolerated.

Benefits

- releases tension
- reduces difficulties with overall head and neck pain

Jaw Massage



Have the individual relax his jaw so his teeth do not touch. Support his head with your left hand. Place the thumb of your right hand on the right side of the client's head where his jaw meets his TMJ as shown in picture 1. Apply pressure slowly and gently. The client should not be wincing or clenching his jaw. Make circular motions with the thumb before releasing.

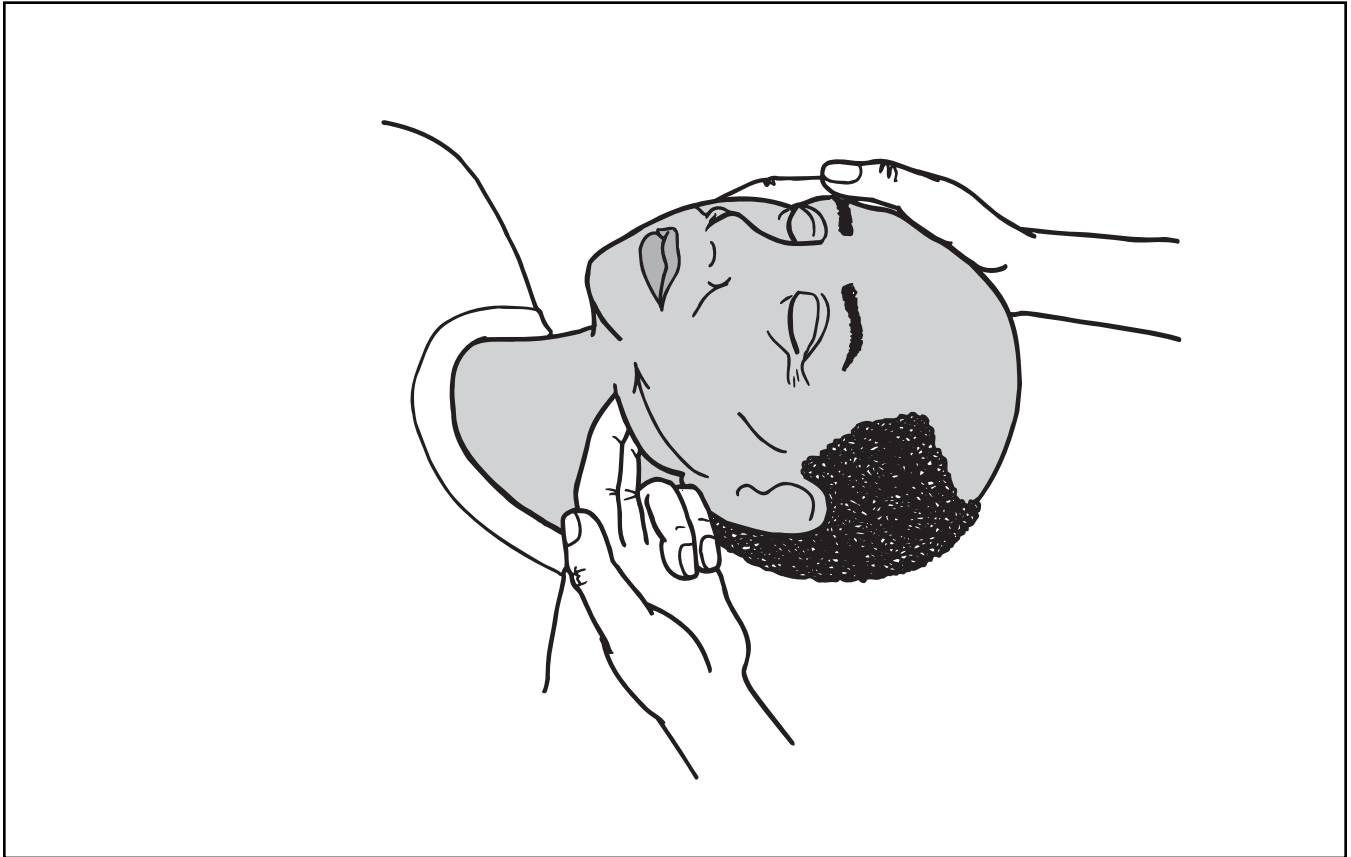
Move a half of an inch down toward the tip of the jaw and repeat. To secure thumb pressure, place a stabilizing finger or two below the jaw as shown in picture 2. To stretch these muscles, have the individual open his mouth. Repeat on the other side in the same manner.

Note: Releasing and toning this musculature is a process. Healing takes place over time. It may be necessary to request other intervention strategies such as neuromuscular massage therapy, physical therapy, or occupational therapy to further assist the rehabilitation process.

Benefit

- releases jaw and neck tension

Stretch and Massage



Gently support the client's head with one hand. Place your other hand under the client's jaw by his earlobe. Apply pressure with your fingertips as you move in half-inch increments along the length of the jaw to the point of the chin.

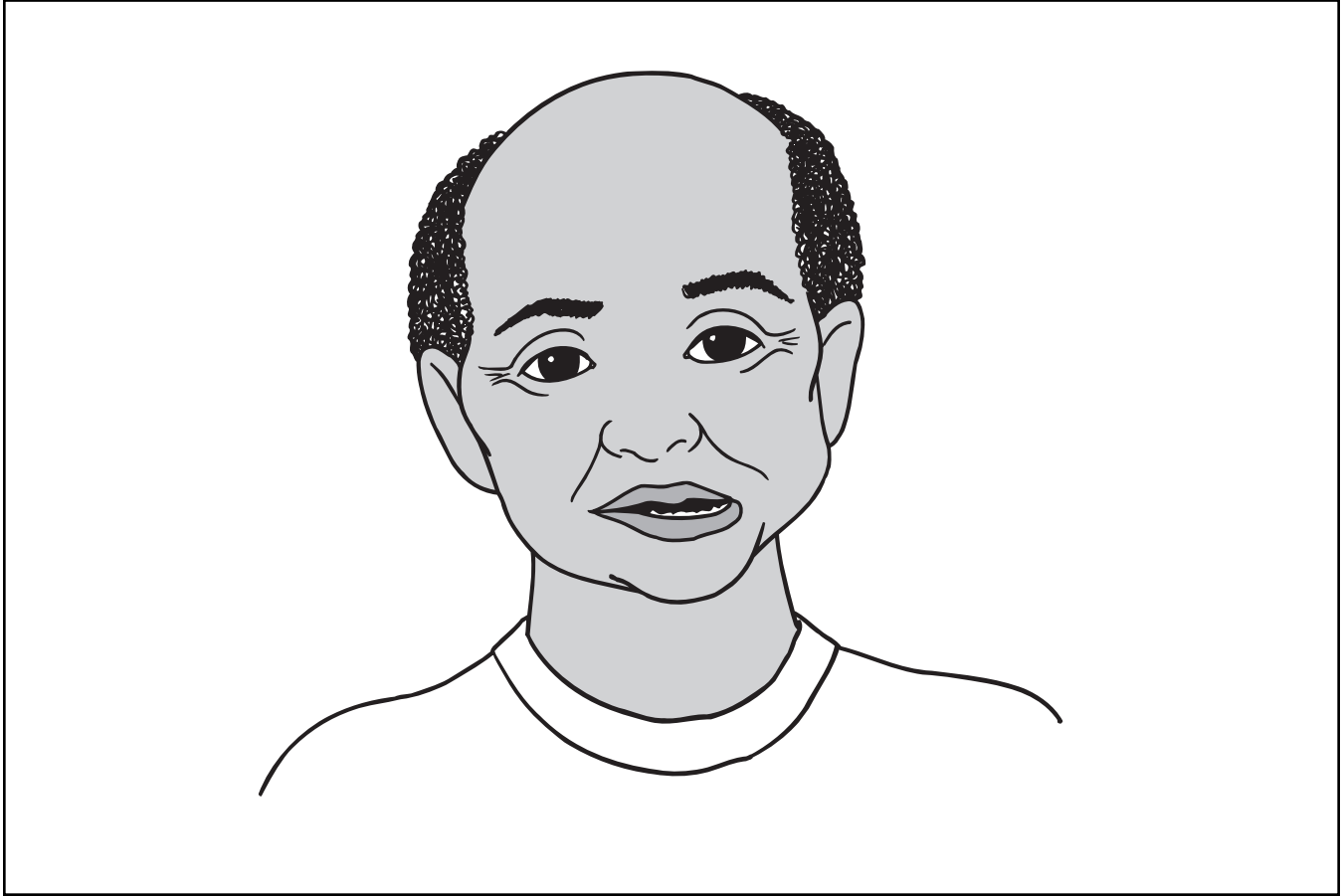
Remember, this is a sensitive area where many muscle groups come together so it can be tender. Your application of pressure can send waves of relief to the temporalis muscle, the neck, the tongue, and the face.

Note: The client may want to apply the pressure himself. Remind him to go slowly.

Benefit

- massages underneath tongue, releasing jaw tension

Jaw Rotation



Move the jaw in a circular pattern. Begin with a small mouth opening and move it clockwise 3 times. Then move it counter-clockwise 3 times. Increase to a wider mouth opening and move the jaw clockwise and counter-clockwise 3 times each. Repeat 3 times as tolerated. You may wish to massage the masseter muscle before and after this exercise.

Benefit

- stretches and strengthens range of motion for chewing and munching

Jaw Opening Resistance



Position the client's head so that it is secure and upright. (If the individual is lying on a bed, hold the top of his head with one hand). Stand behind the client and place your hand gently on the bottom of his chin. Have the client try to open his jaw while you apply light resistance. Then allow the jaw to open fully. Repeat 2 to 3 times. Remind the client to relax his neck.

As jaw strength and range of motion increases, offer slightly more resistance. Again remind the individual to relax the neck.

Benefit

- strengthens the jaw for opening and downward motion

Increase Jaw Strength



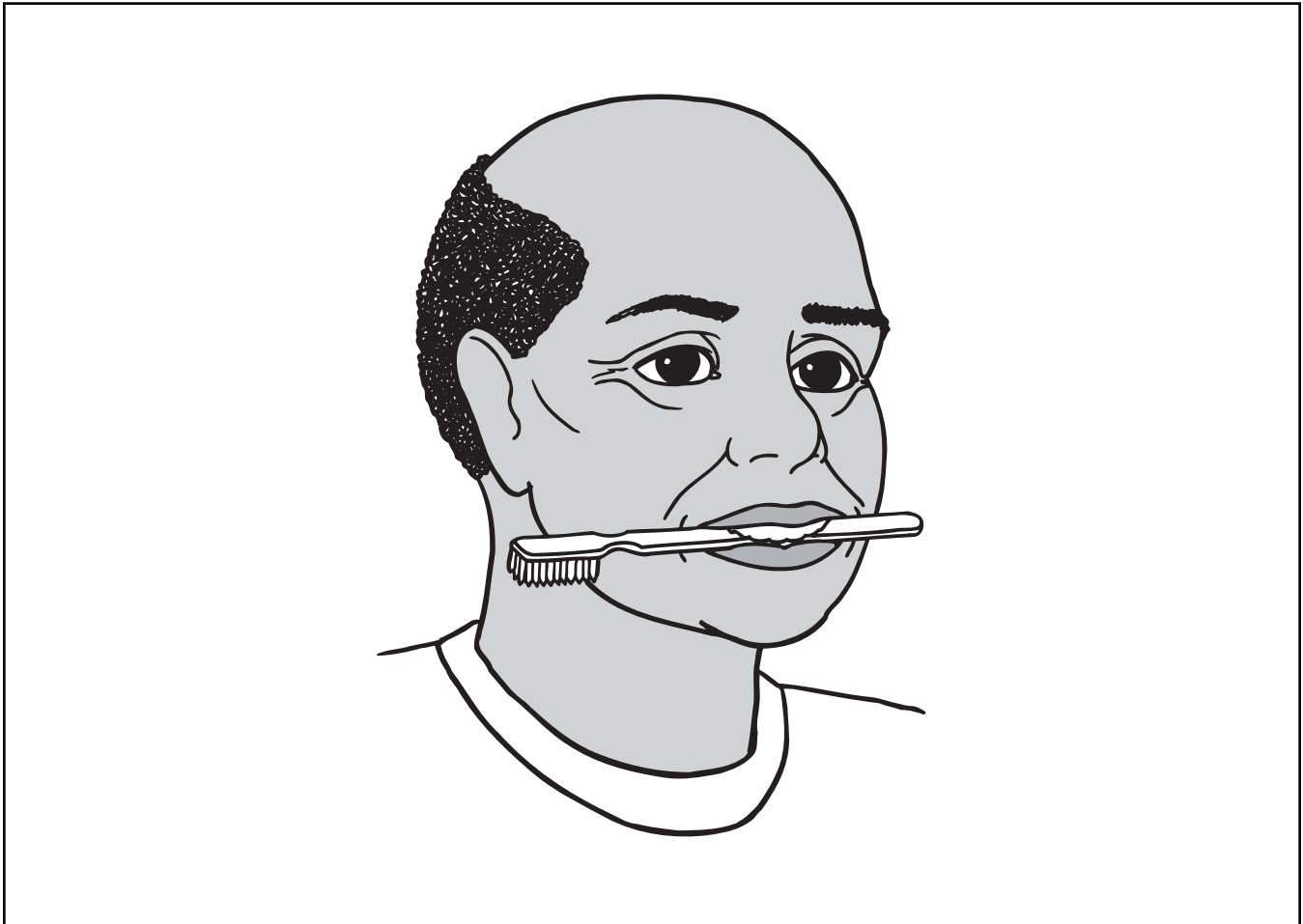
Hold a washcloth, organza material, gauze, tongue depressor, Chewy Tube, or the end of a toothbrush between the client's teeth. Have him hold it on the right side for 5 seconds. Lightly tug on the cloth to provide resistance. Then switch to the other side. If possible, have the individual bite with his back teeth to strengthen the back jaw musculature.

Note: The cloth provides a wider and softer clenching surface.

Benefit

- strengthens the back jaw for closure and stability necessary for improved transfer of food from the oral cavity

Decrease Jaw Clench

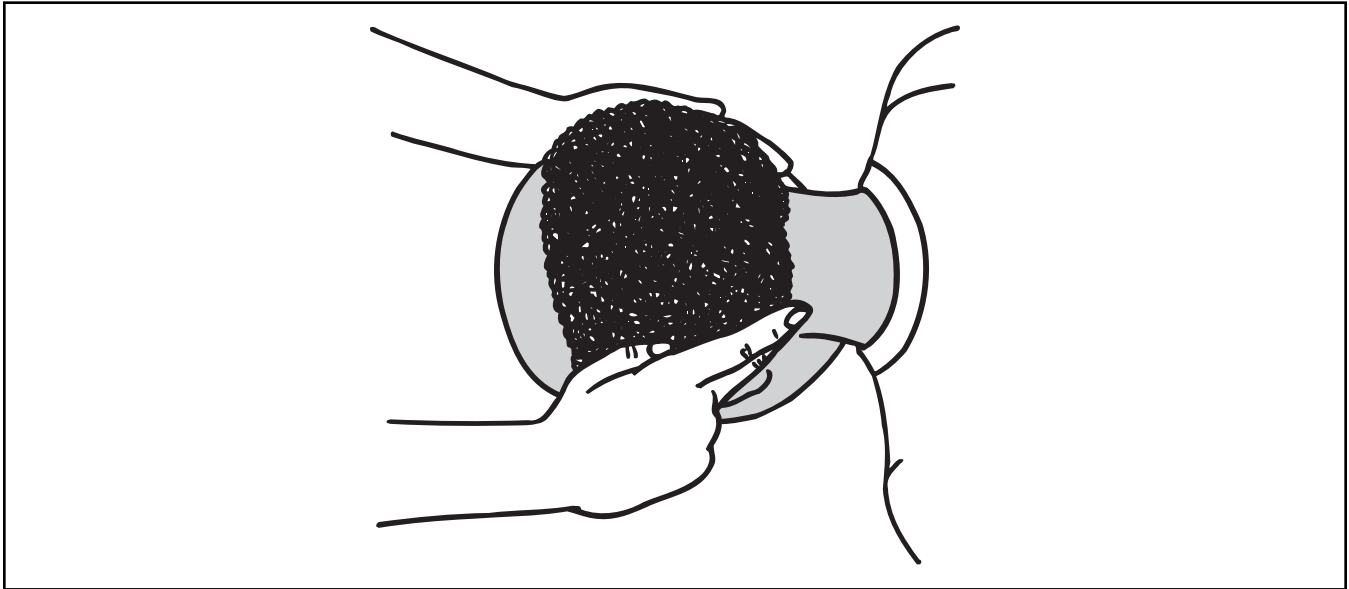


Place a toothbrush horizontally in the mouth, directly behind the front teeth. Clench the toothbrush lightly for about 5 minutes. Repeat this exercise several times during the day.

Benefits

- reduces jaw pain, jaw clenching, and grinding of the teeth
- effective in reducing tinnitus (can occur as a result of excessive temporomandibular tension)

Jaw, Head, and Neck Release



Have the individual lie face down. (He can also lie face up if desired.) Using either your fingers or knuckles, press upward at the base of the skull, into the little hollow at the back of the neck (i.e., the occipital bone). Press in as firmly as tolerated and move in small circles. Do both sides simultaneously.

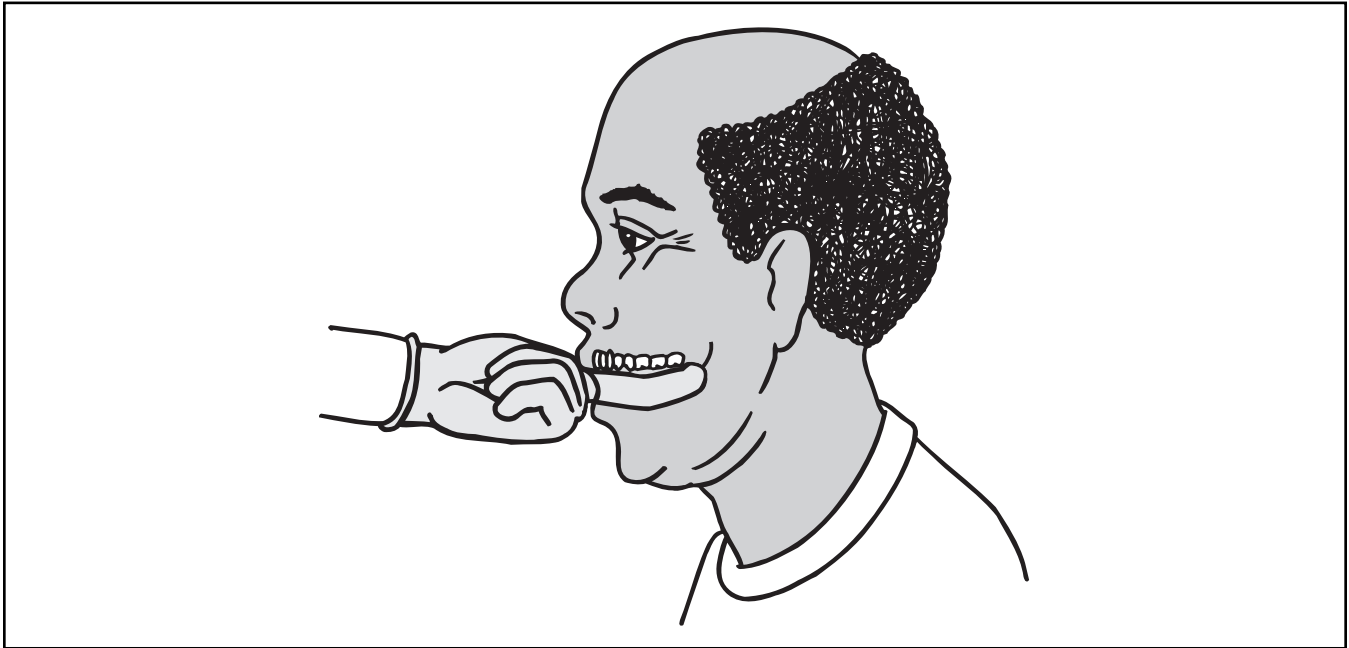
If the individual has frequent headaches, a stiff neck, and/or shoulder pain, he may experience tender, painful, and/or bound musculature. Gently work your way in, plying the muscles to reduce tension and blockage. Move to the immediate right and left of the original point of the occipital ridge and repeat.

Benefits

- decreases head, neck, and face pain
- increases range of motion of neck

Note: Encourage the individual to breathe, sigh, and express whatever comes to mind. Bodywork is a stimulator for speech production, sensory awareness, and a release of repressed feelings and emotions. Listen and respond attentively with empathy. Ask, "How is the pain? How are you doing? Are you feeling any other sensations in your body?" Sometimes blocked musculature will release a wave of tingles or warmth to arms, fingers, face, feet, or belly. There are many trigger points in the neck for the stomach. You may hear the stomach gurgle or growl. This is a good sign. The pain may move to a forearm or the lower back. The restriction and pain may shift two or three times or just go away. Other stretches, interventions, and/or massage techniques may be applicable then. Research indicates that most of the complaints leading to TMJ Disease are attributed to the binding of muscles systems at trigger points. (If you'd like to work more trigger points, see pages 74-82.)

Rear Molar Gum Massage



Place your index finger in the client's mouth to the gums behind the upper back molars. Rub the areas. It may feel tender to some individuals and feel very good to others. By stretching and rubbing the gums, you can help the client release tension. Repeat on the lower gums. You can also use a Chewy Tube, one side at a time.

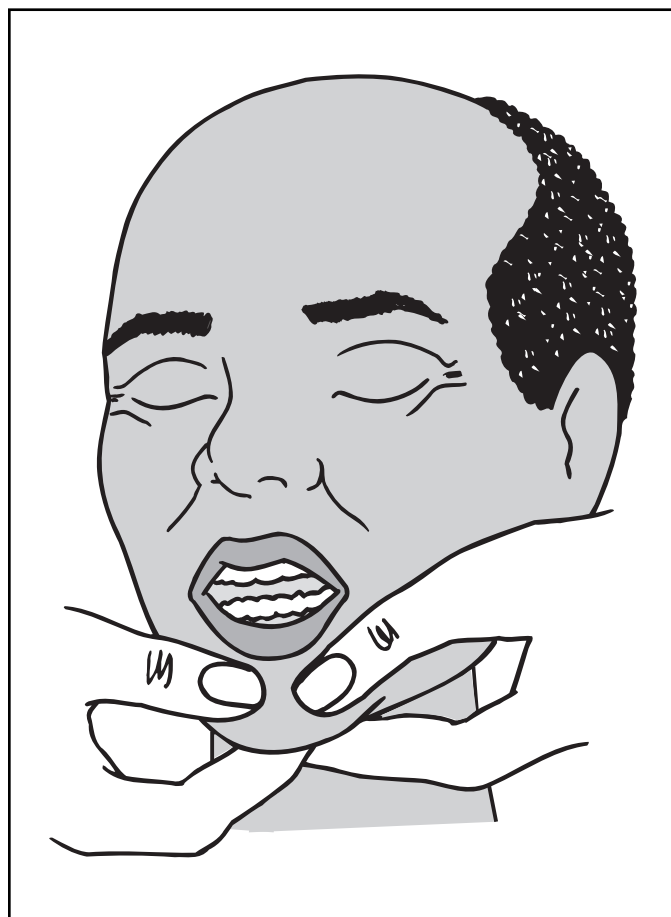
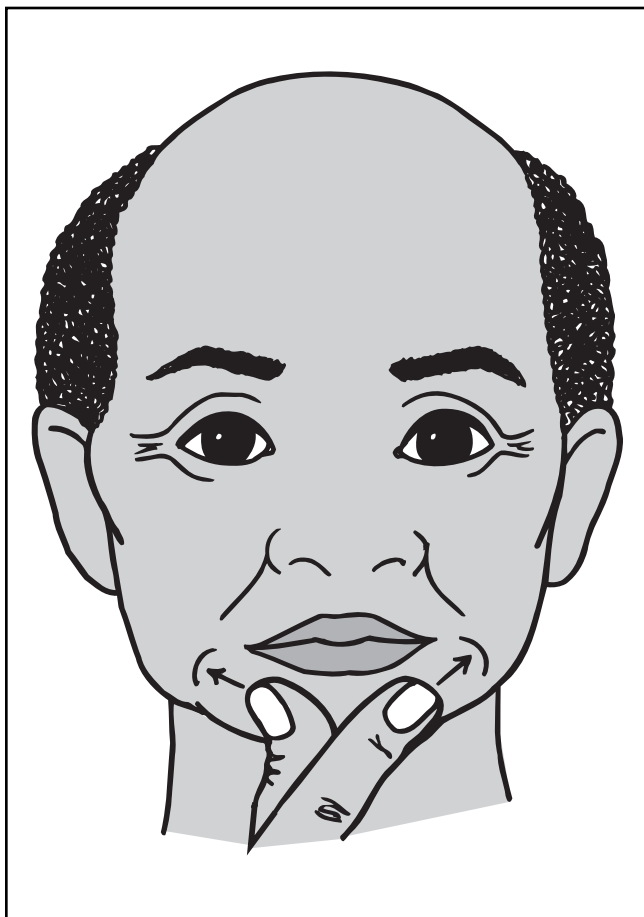
If you use a Chewy Tube, have the client bite down on it with his gums. If the client isn't able to bite down, manually assist by opening and closing his jaw with your hand. Remind the client not to bite with his teeth as this increases jaw tension. It may also be necessary to remind the client to go slowly and to breathe through his nose to avoid gagging.

Note: The client may prefer to do this exercise himself. If so, have him do one side at a time so that he can focus more easily. Use a bite block to maintain jaw opening.

Benefits

- releases the jaw and relieves tension
- reduced overactive gag reflex
- may help initiate a swallow
- may help release the throat for voicing

Chin Massage



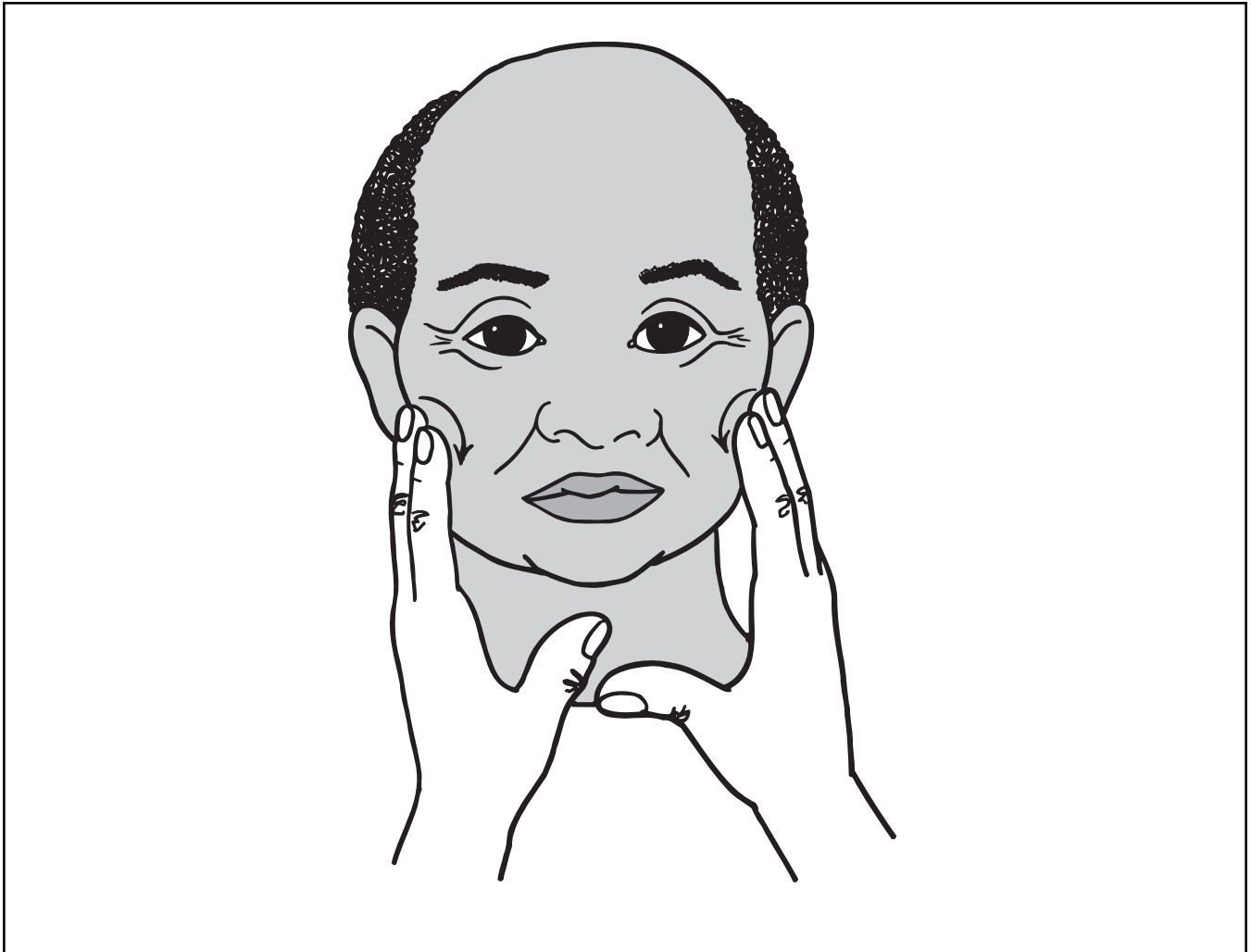
Rest index finger and thumb on the chin. Massage outward along the jaw line halfway up the cheek (toward the mandibular joint). Always start at the chin and massage up and outward only.

Massage the chin to reduce hypertonicity. Conversely, gently tap the chin to increase tone. If there is paralysis on one side, tap on that side and massage the unaffected side. In addition, massaging both sides will help build tone on the weakened side as well as stretch and relax the unaffected side.

Benefits

- reduces excessive or inappropriate tension
- improves muscle tone

Jaw Muscle Massage

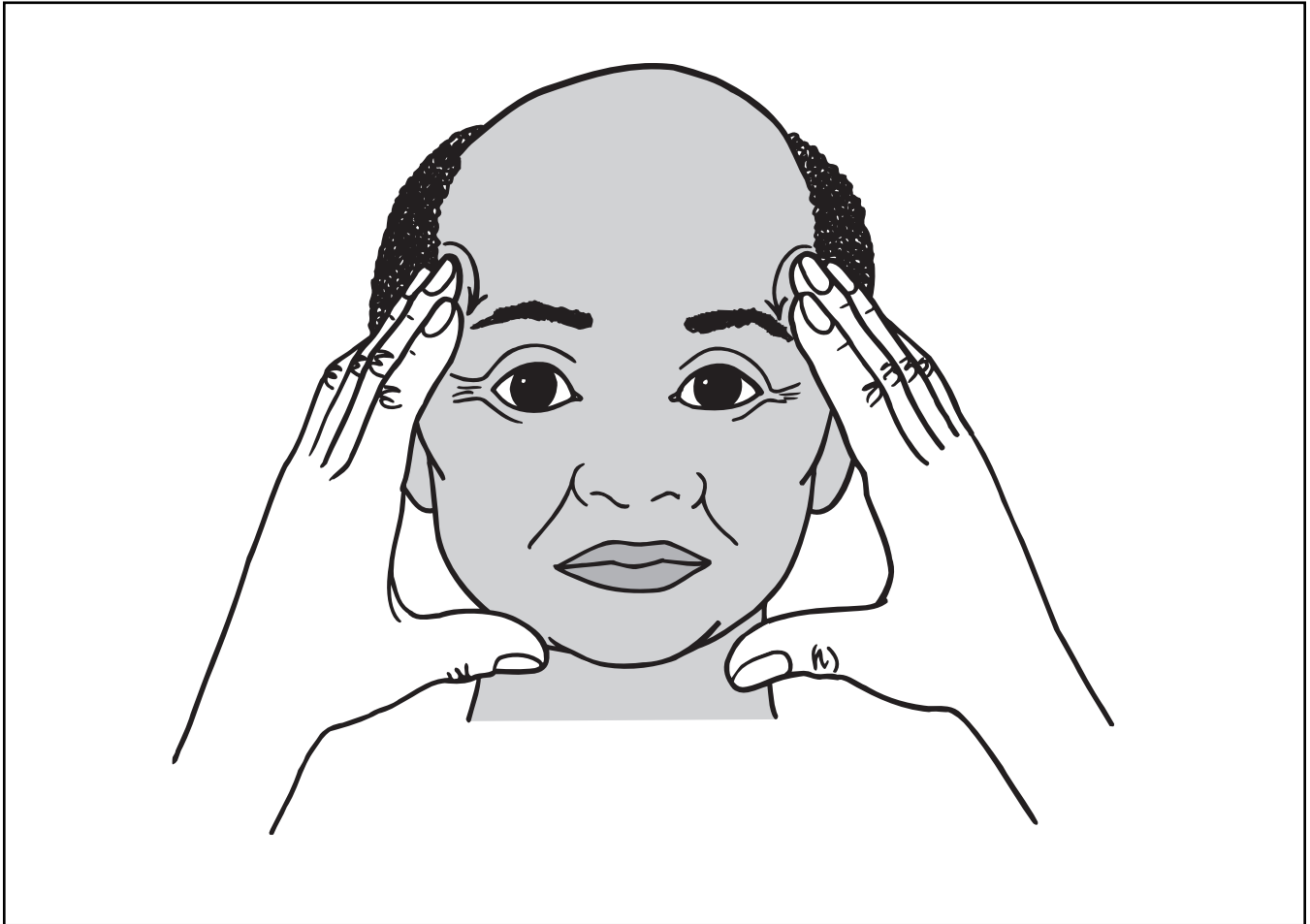


Apply gentle pressure with the index and middle fingers to temporomandibular joint on each side. Rub in a circular motion for 30 seconds. Keep jaw relaxed. Reverse circular motion.

Benefits

- reduces jaw tightness and strain
- relaxes tight jaw muscles
- firms weak jaw muscles

Temple Massage



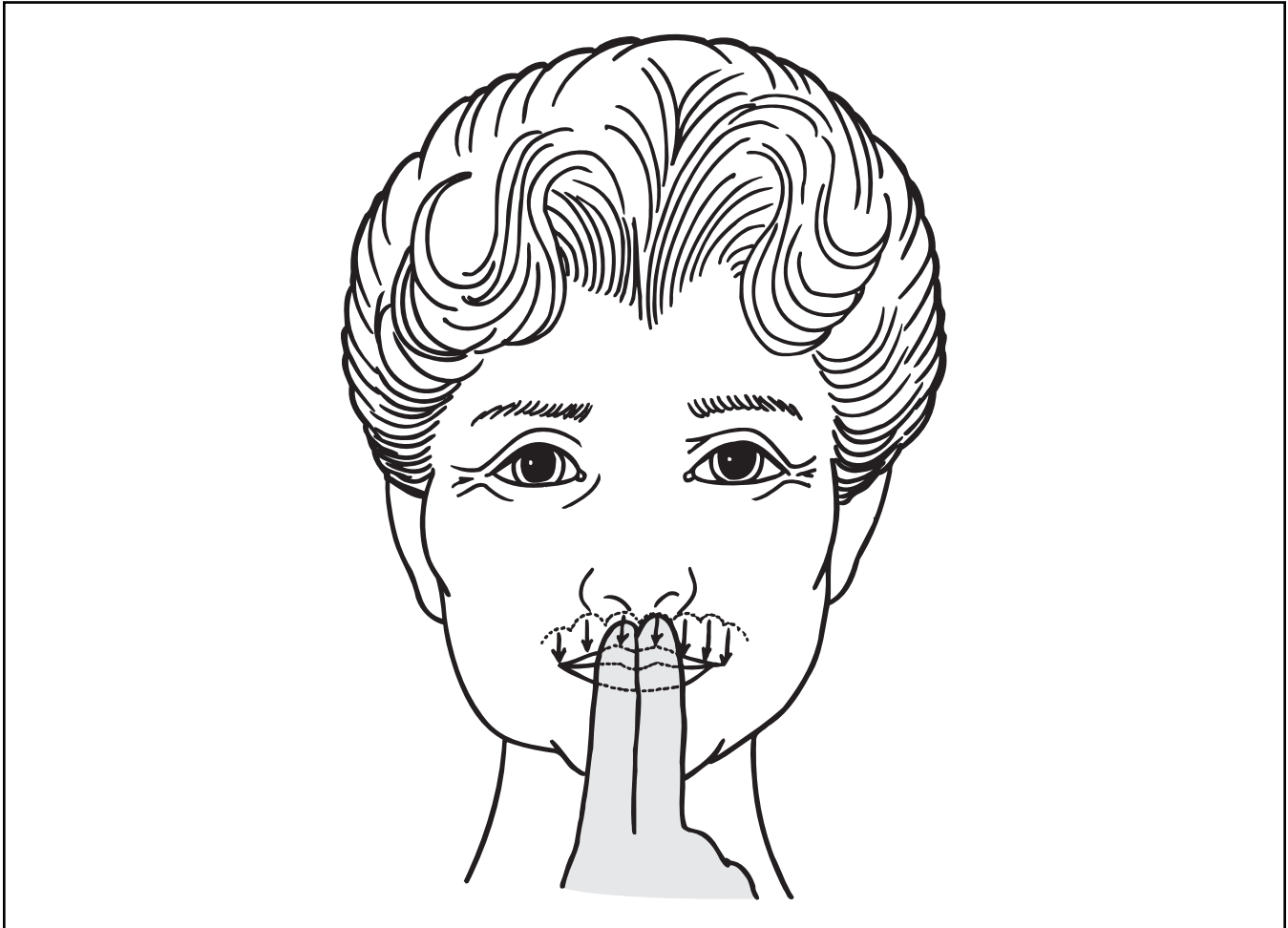
Place fingers on temples, applying pressure. Rub in a circular motion. Maintain steady pressure to temple. Rest. Reverse circular motion. Continue steady pressure in a circular motion.

Benefits

- relaxes temporomandibular joint
- reduces grimacing and facial strain

Chapter 12: Lip Exercises

Upper Lip Stretch

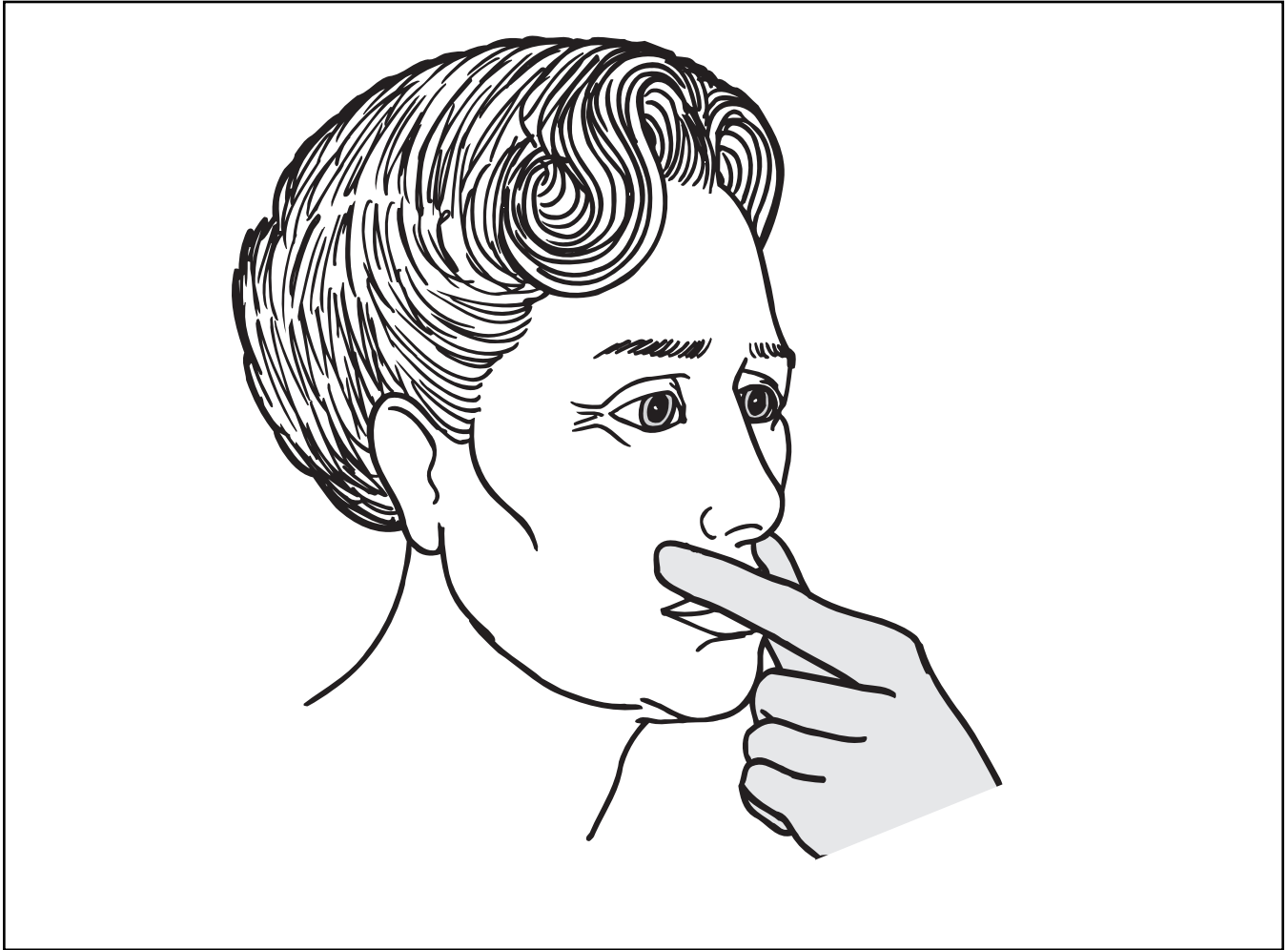


Begin with two fingers as shown at base of nose. Apply moderate pressure as tolerated with downward motion only. Then move fingers slightly to the right. Press downward only again. Then again move fingers slightly to the right and downward until you reach the corner of the mouth. Go back to midline at nostrils and repeat on left side. Repeat 3 to 5 times on each side in slow, even, downward motions.

Benefits

- stretches and elongates upper lip
- approximates upper lip to lower lip
- improves lip closure

Corner of Upper Lip Downward Stretch

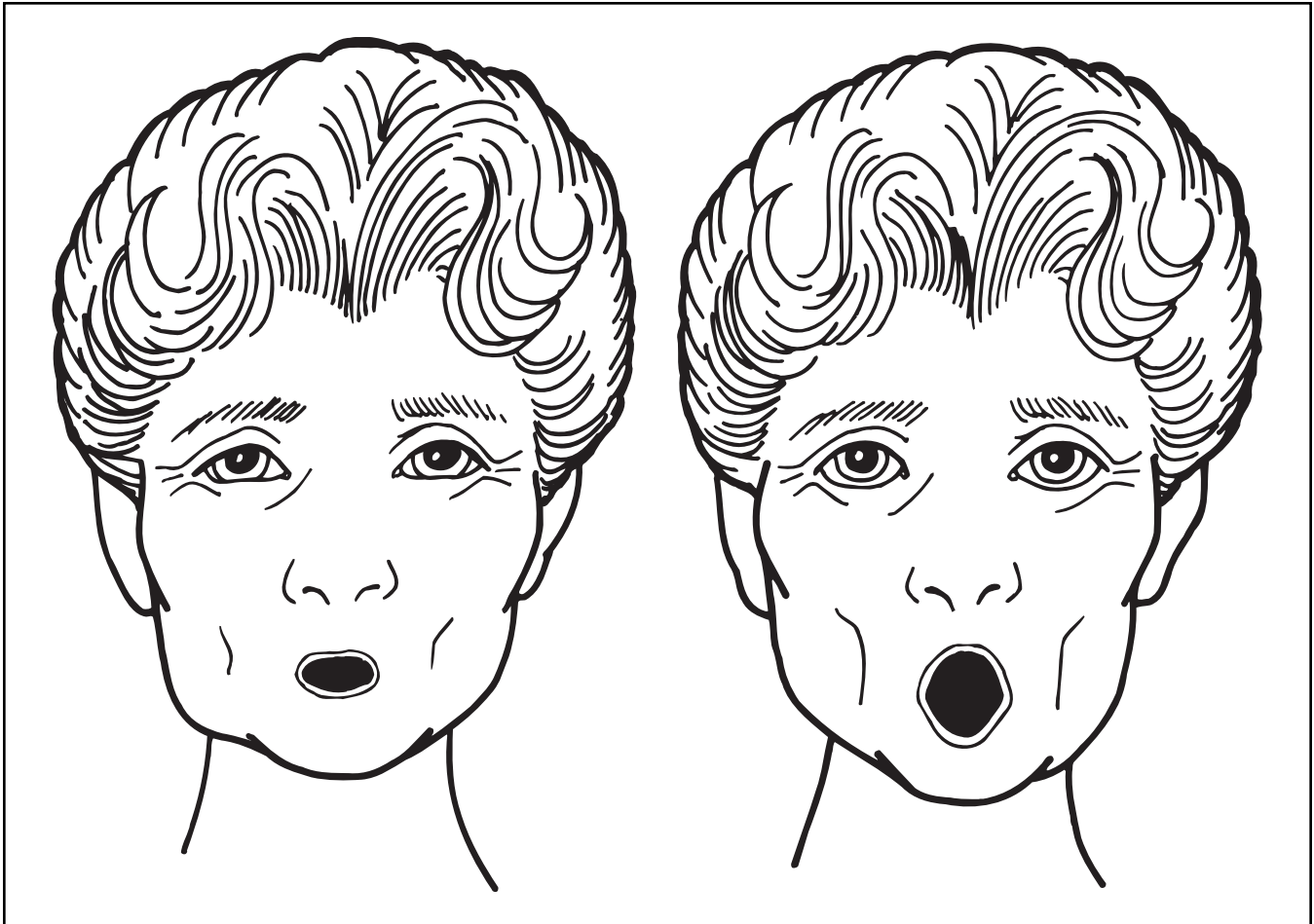


Place index finger on the corner of each side of the upper lip below the cheek. Place thumb on the other side of the upper lip. Apply pressure and press down for 30 seconds. Repeat 5 to 10 times.

Benefits

- stretches and elongates upper lip to form a seal for /p, b, m/ and to suck on a straw
- strengthens lip closure to reduce drooling

“O” Exercise

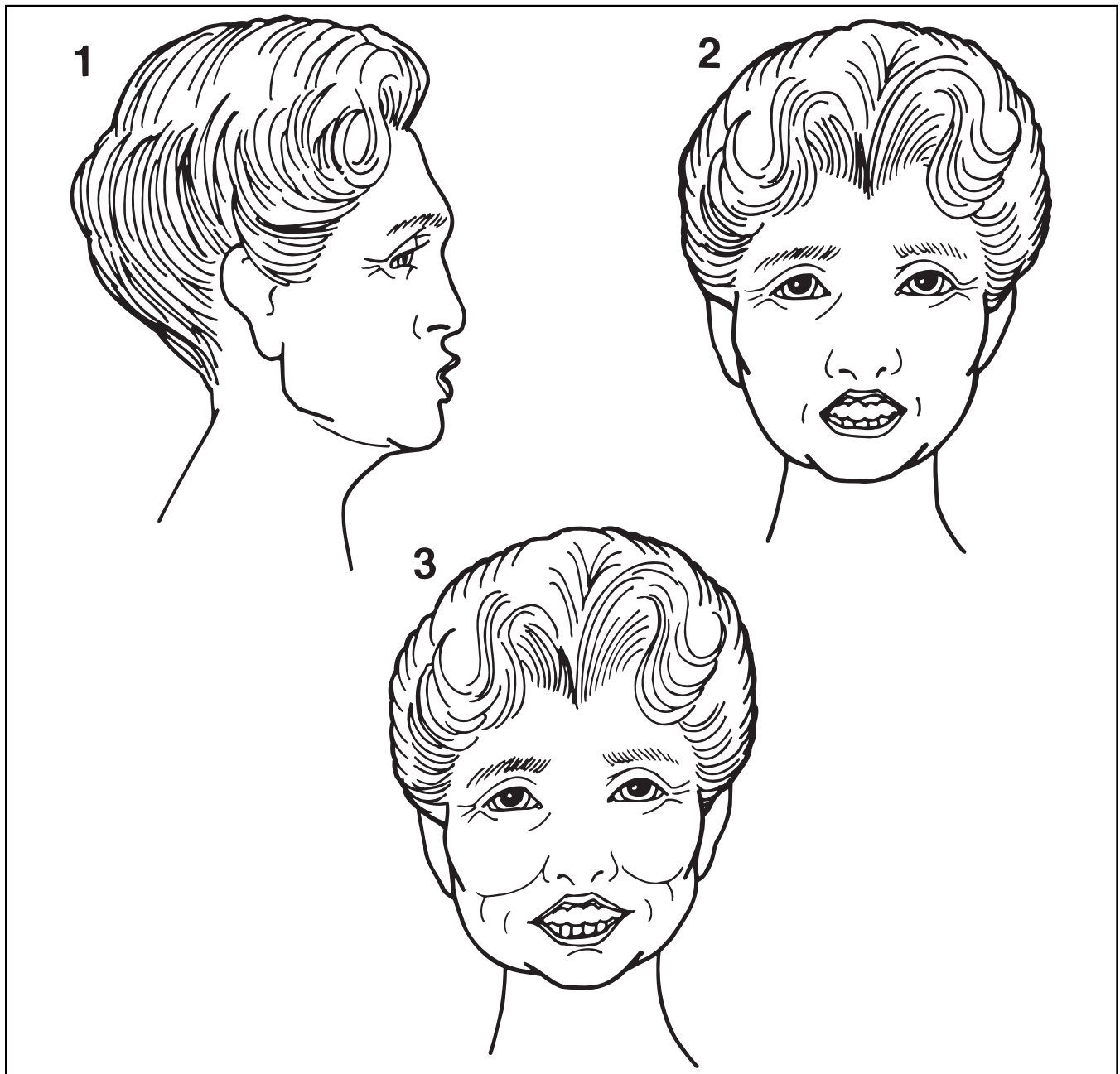


Hide lips under teeth. Purse lips in an “O.” Open jaw. Pull lips inside mouth as much as possible while stretching jaw open. Relax neck muscles.

Benefits

- strengthens lips and cheeks
- improves stretch, tone, range of motion of front of lips, nose, and cheeks

Lip Curl



Press lips outward. Try to curl top lip upward and bottom lip downward. Maintain curl and smile.

Benefit

- strengthens and improves range of motion of lips and cheeks

Upper Lip Curl

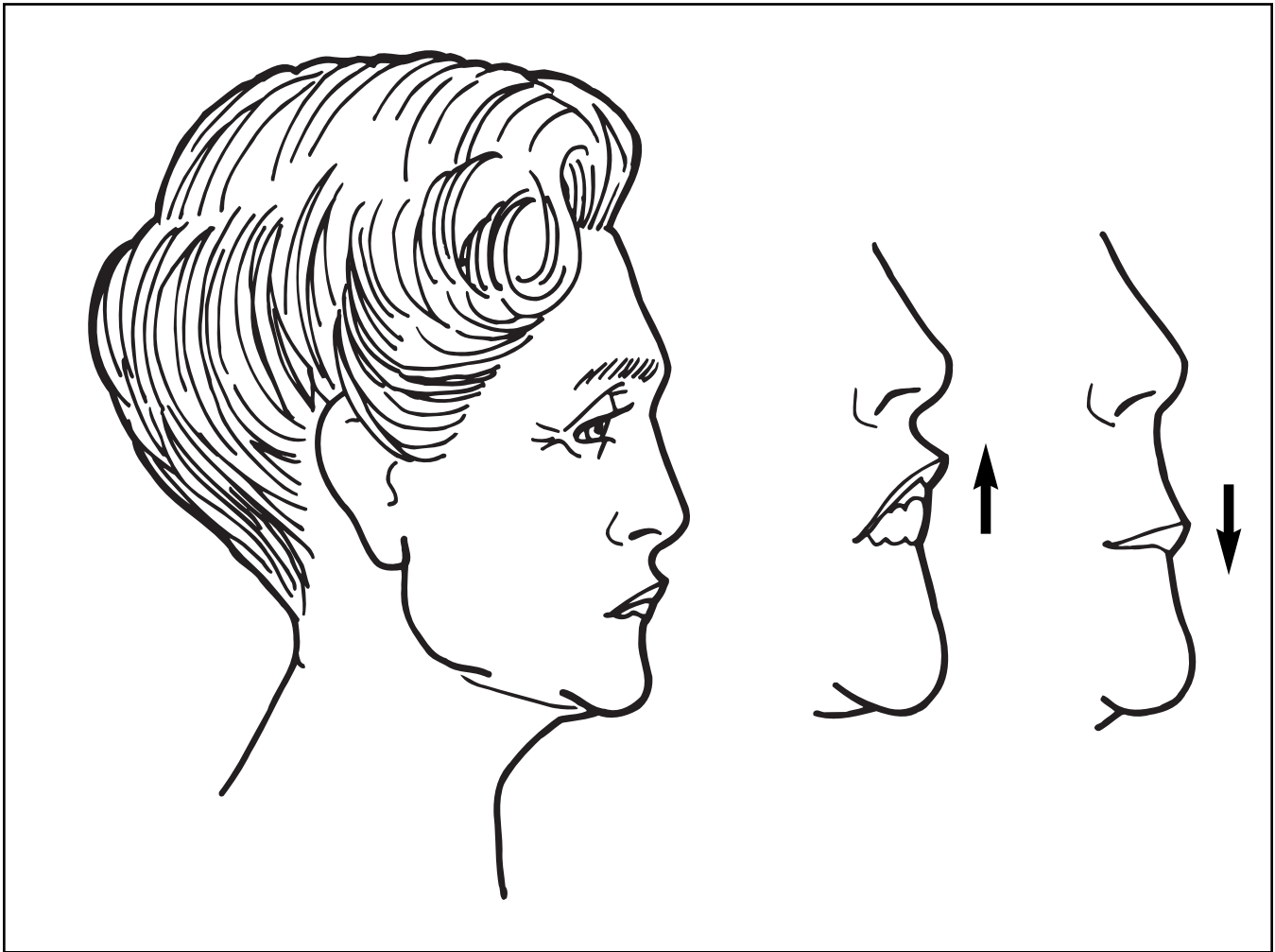


Lift upper lip to show the gumline. Pull upper lip into smile toward ears to full extension. Concentrate on stretching upper lip up and back. Keep jaw relaxed.

Benefits

- strengthens upper lip
- improves range of motion of upper lip

Upper Lip Exercise



Bite gently on lower lip. Raise and lower upper lip. Repeat the up-and-down motion. Keep face relaxed, moving lips only. Do not squint or move your cheeks.

Benefits

- strengthens upper lip musculature
- improves range of motion and agility of upper lip

Smile Exercise 1



Smile. Show upper and lower teeth and gums in a wide grin. Clench teeth gently. Relax neck. Do not squint.

Benefits

- strengthens lips and cheeks
- stretches and improves range of motion of lips and cheeks

Smile Exercise 2

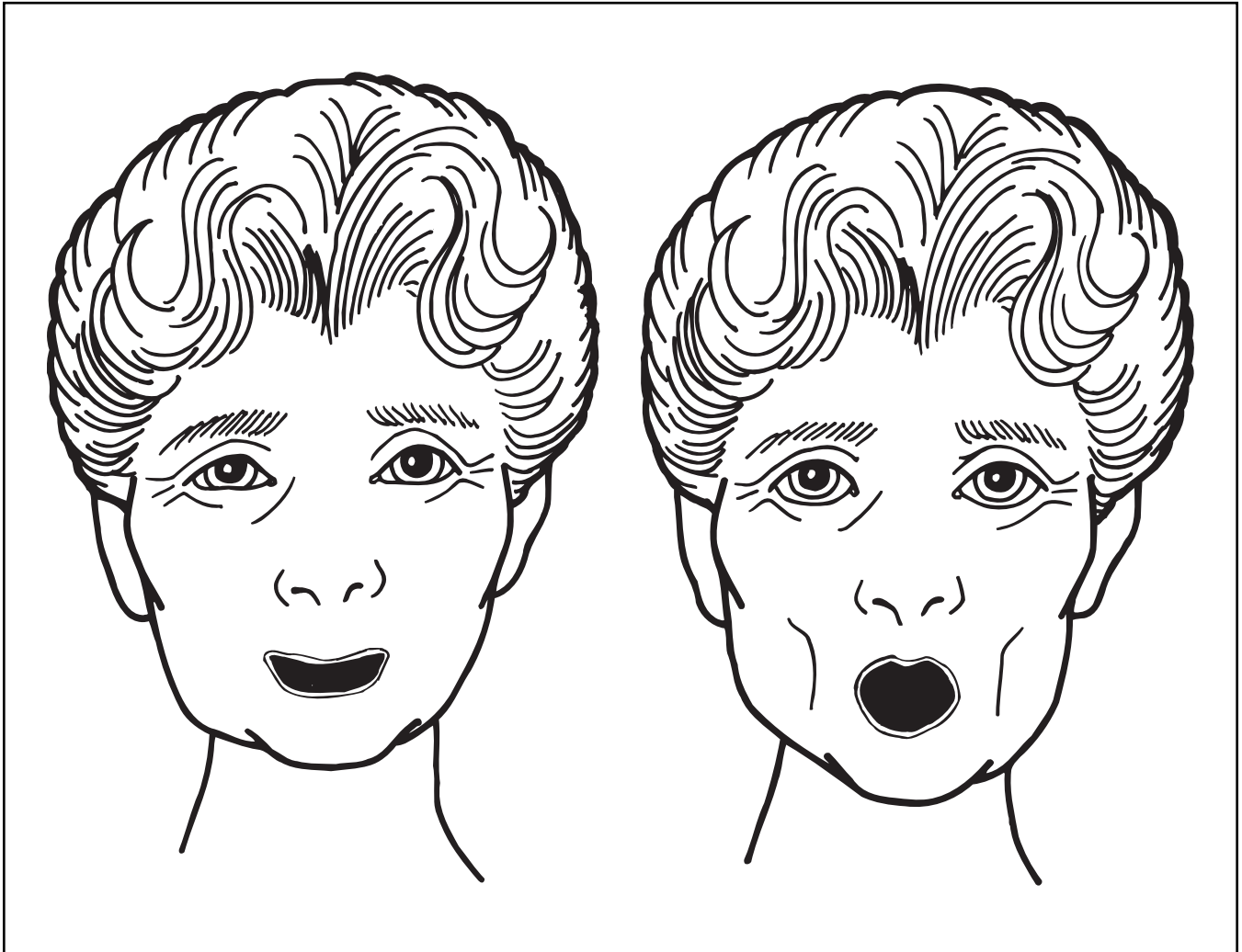


Show all upper and lower teeth in a wide grin. Open jaw. Maintain full extension of lips. Hold for 10 to 20 seconds as tolerated. Sustain for longer time as strength improves.

Benefits

- strengthens lips and cheeks
- stretches and improves range of motion of lips and cheeks

Inner Cheek Jaw Stretch



Smile with lips hidden under teeth and open jaw wide. Extend jaw as much as possible while keeping lips under teeth. Relax neck muscles.

Benefit

- stretches and tones inner cheeks, jaw, and lips

Lip and Cheek Stretch

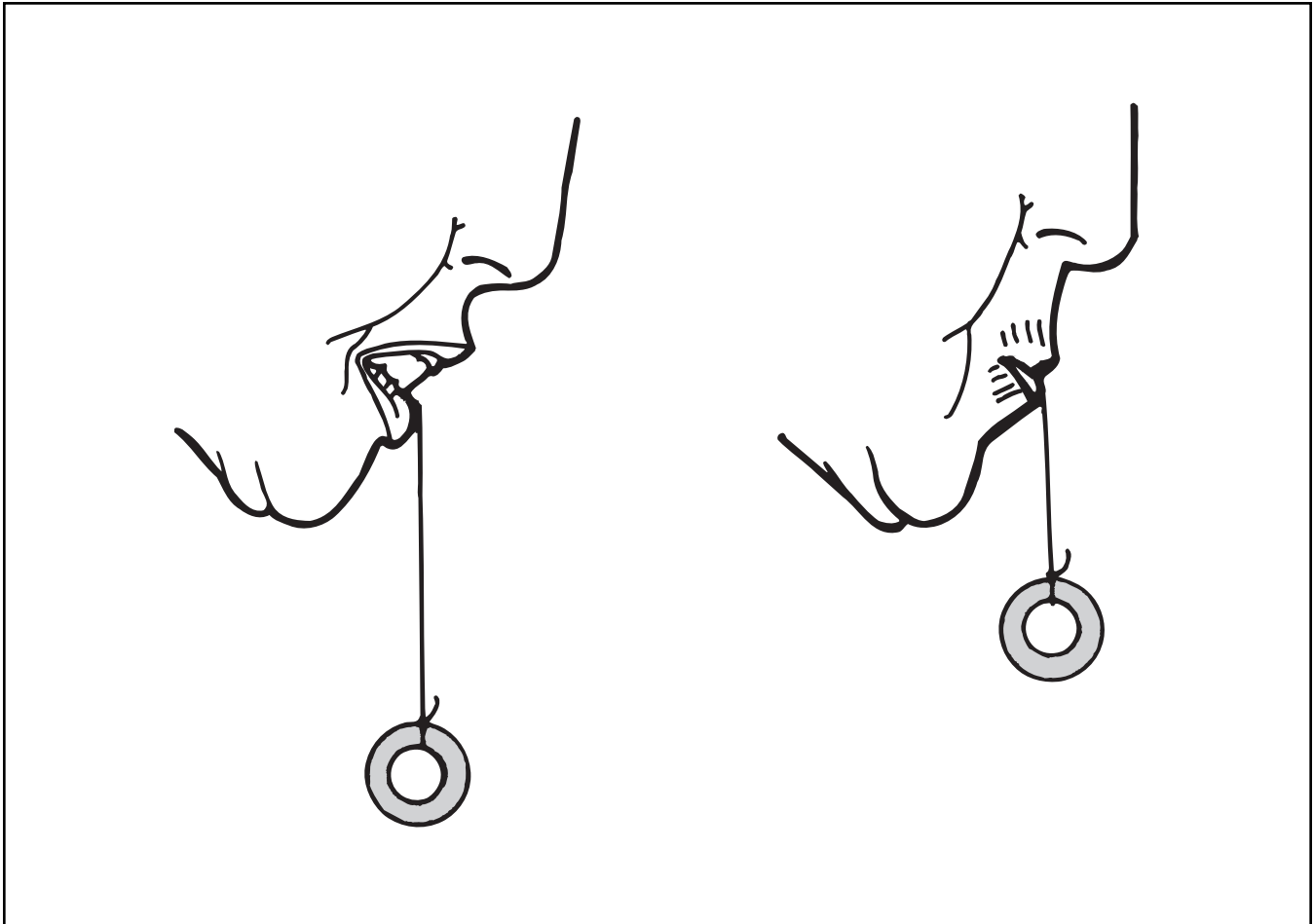


Hide lips under teeth. Keep mouth closed and pull lips in a straight line. Stretch lip corners toward jaw. Stretch as wide as possible, maintaining a closed mouth. Then smile wide with a closed mouth. Relax neck muscles.

Benefits

- strengthens lips and cheeks
- improves range of motion of lips and cheeks

Teeth and Pursed Lip Strengthenener



Tie a 12-inch piece of string or dental floss to a bolt nut or a Lifesaver. Grasp the string with your teeth and attempt to pull the string in with pursed lips. Alternate biting the string and using a lip press to bring the weighted item up to lips. Repeat. Do not put weighted item into mouth.

Note: Use extreme caution to make sure that the weighted item is not pulled into the mouth and swallowed.

Benefits

- reduces drooling
- strengthens inner cheek and lip musculature

Lower Lip Extension

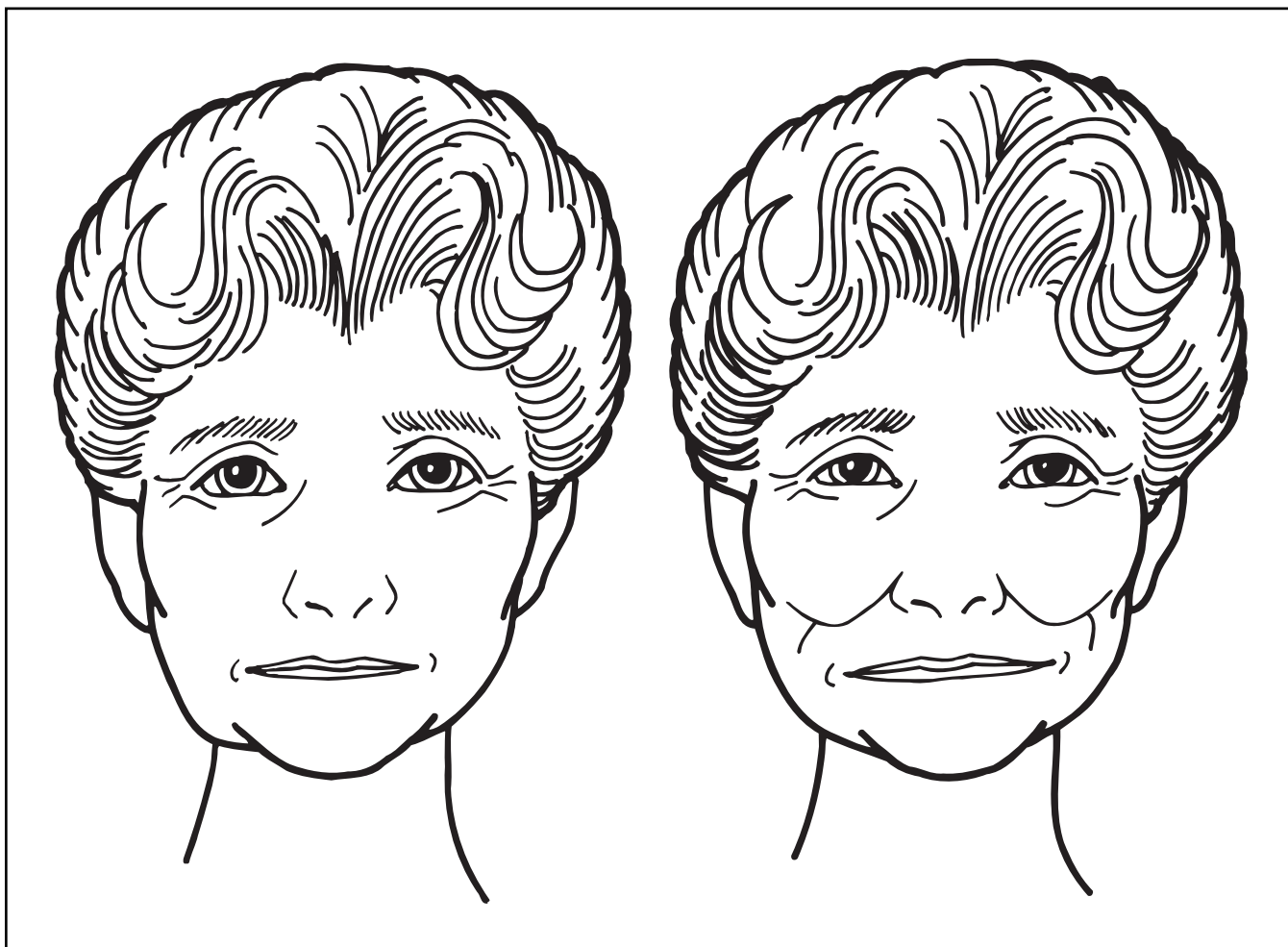


Lift lower lip up. Hold to full extension. To also work neck, raise head upward and hold.

Benefits

- strengthens lower lip
- stretches and tones neck
- improves range of motion of lip and chin musculature

Lip Press



Press lips together firmly and evenly. Keep lips pressed together and begin to smile. Broaden smile to full extension. Use equal pressure with both lips.

Benefits

- strengthens lips and cheek musculature
- improves range of motion of lips and cheeks

Cheek Puff/Lip Purse

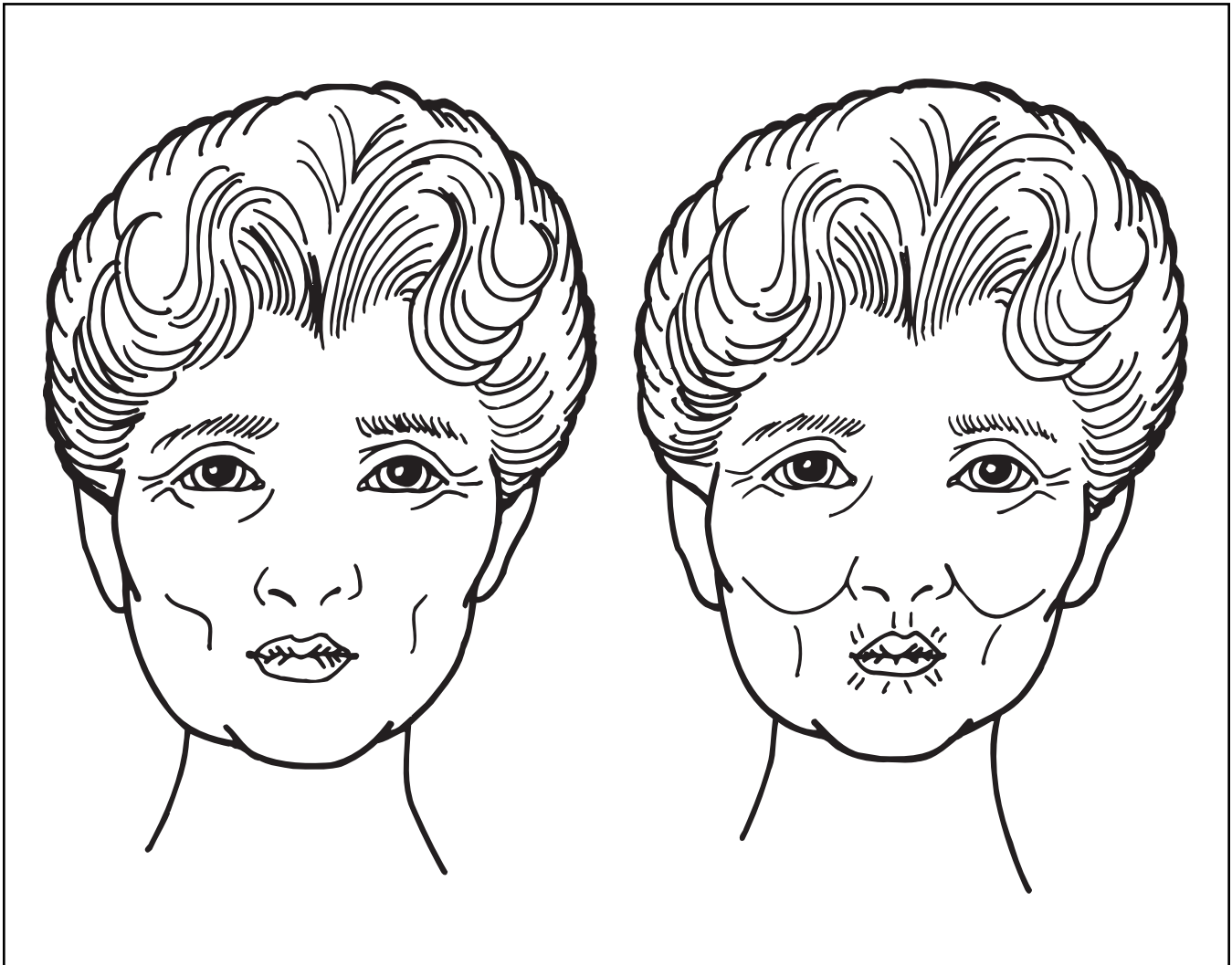


Puff out cheeks with securely pursed lips. Hold air in puffed-out cheeks. Do not let air out of nose or lips. For added difficulty, hold air in left cheek only. Then switch to right cheek only.

Benefits

- strengthens lip pursing
- stretches and tones cheeks

Lip and Cheek Toner



Close lips. Pretend to suck on a straw, but keep lips closed. Suck in inner cheeks. Maintain suction in mouth. Relax neck. For added difficulty, raise cheeks in a smiling manner.

Benefit

- strengthens and tones lips and cheeks

Lip Vibration

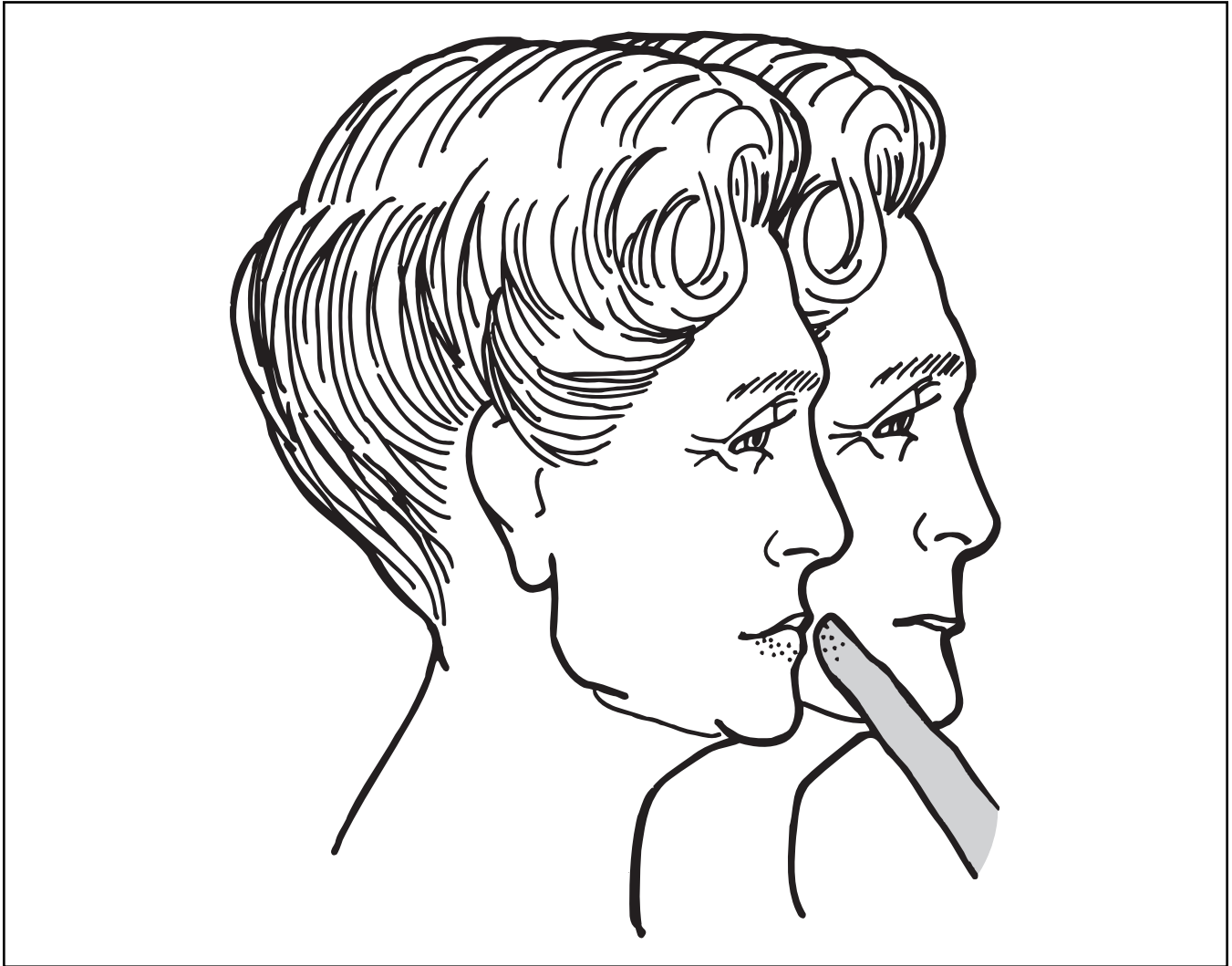


Exhale air through slightly pursed lips, allowing vibration to occur.

Benefit

- strengthens inner lips

Upper Lip Movement

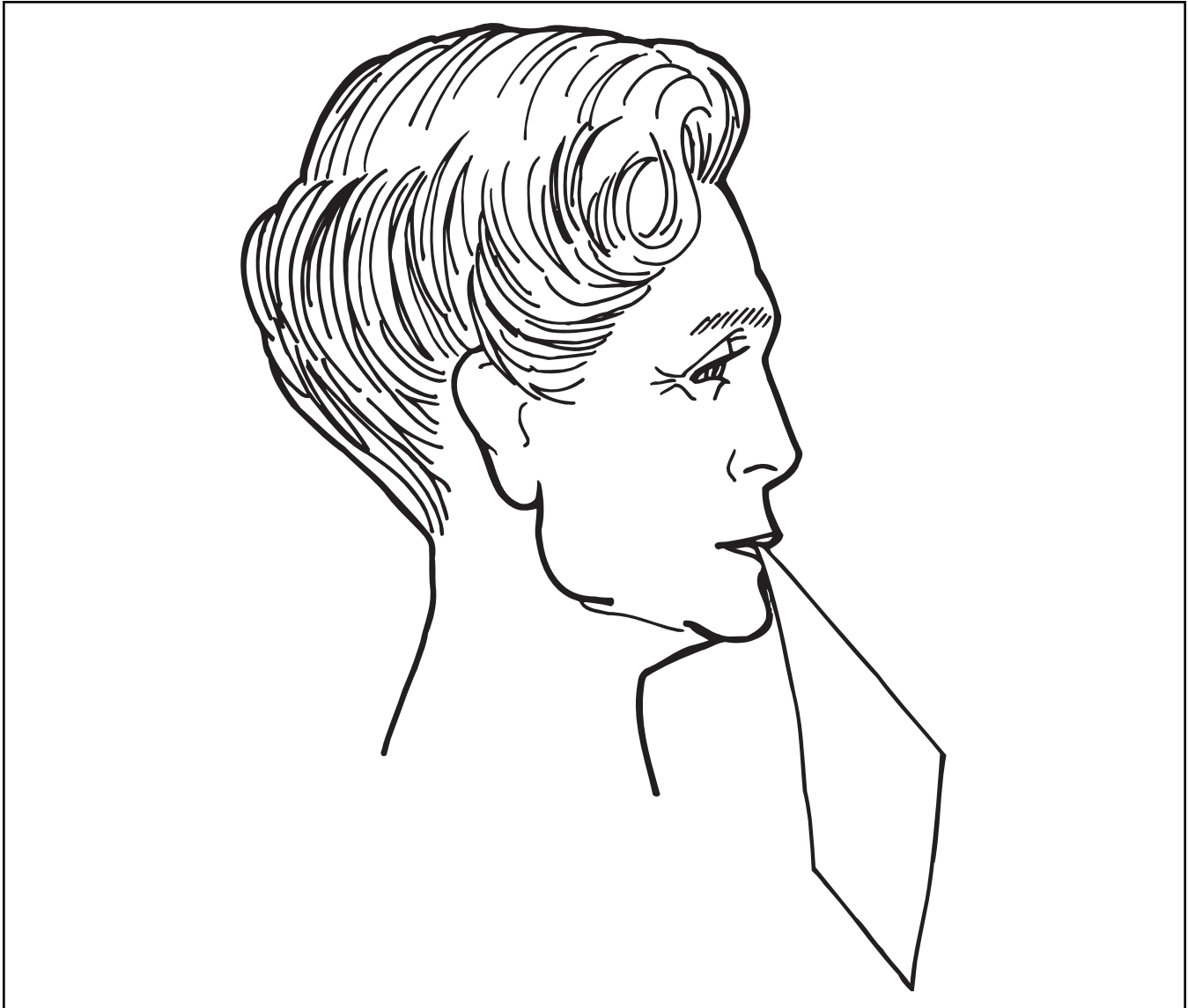


Apply peanut butter, jelly, honey, or any other soft, tasty substance to outer edge of lower lip. Try to wipe substance off with upper lip. Allow upper lip movement only.

Benefits

- reduces drooling
- strengthens lips

Lip Hold

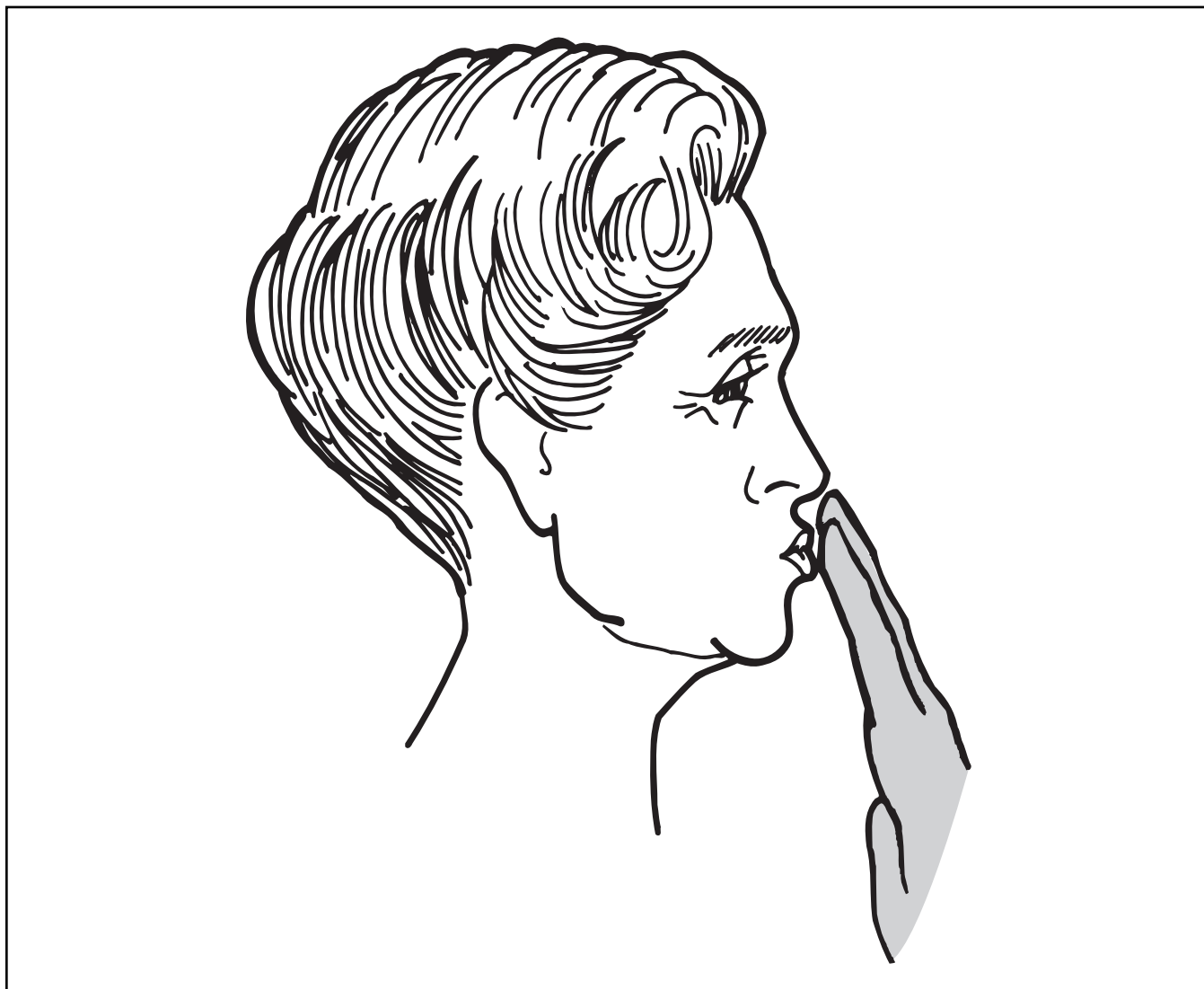


Put a corner of a sheet of paper, a napkin, a cloth handkerchief, or a washcloth between lips. Press firmly with lips only. Hold in place 20 seconds or longer as tolerated.

Benefits

- reduces drooling
- strengthens lips and inner cheeks

Kissing Exercise



Purse lips and throw a kiss. Then close lips tightly and say “m . . . m . . . m” to encourage lip closure while placing fingertips on pressed lips to throw a kiss.

For additional practice, produce the sounds /m/, /p/, and /b/ to encourage lip closure. Start with “me . . . me . . . me.” Concentrate on tightening the lips. Then say “pea . . . pea . . . pea . . .” and “bee . . . bee . . . bee . . .”.

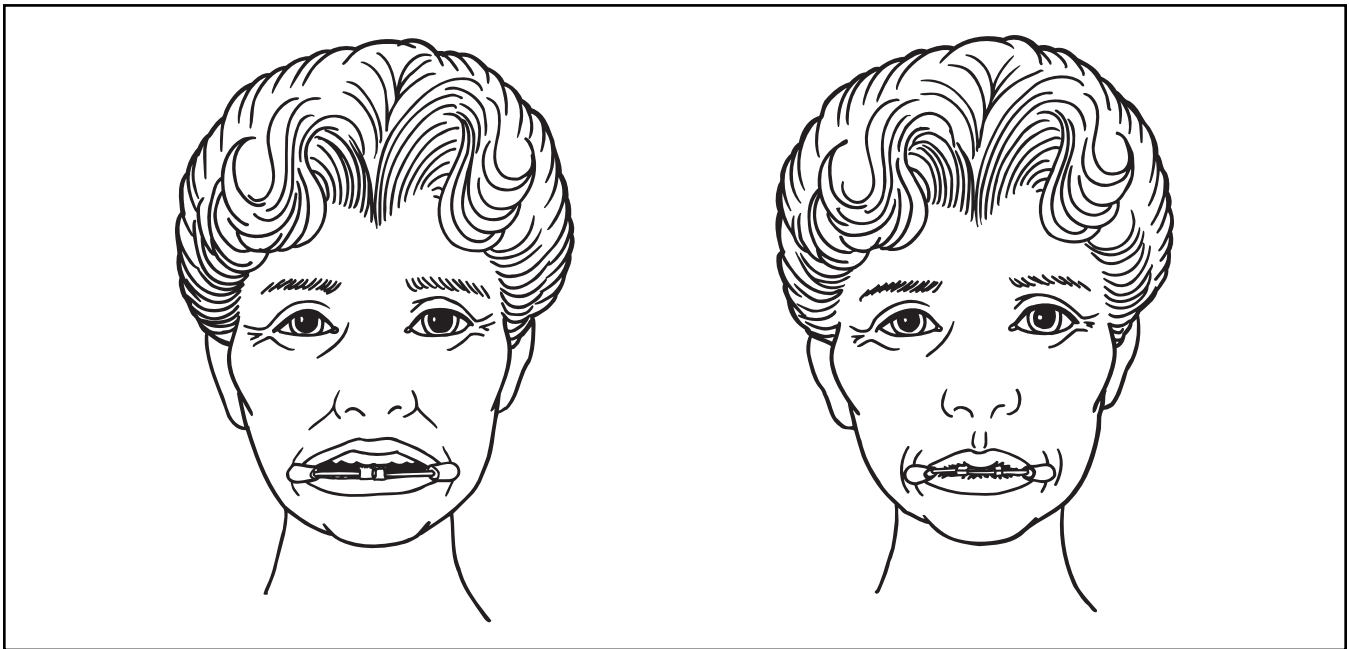
Benefits

- improves lip pursing
- assists in pre-speech formation of /m, p, b/

Resistance Exercise

Facial-Flex is a resistance tool that is placed in the client's mouth and is held by the lips. When the device is in place, the individual squeezes and releases.

- improves lip strength and range of motion
- strengthens hypopharynx, neck, cheek, and lip musculature
- improves articulation
- improves voicing (strengthened musculature increases oral resonance)
- strengthens cervical musculature



Regular daily exercise with the Facial-Flex has also shown improvement in straw drinking, reduced spillage and drooling of foods and liquids, improved facial expression, and reduced food pocketing in the cheeks.

A standardized means of reporting progress is provided through counting the number of repetitions performed successfully, increasing the strength of the rubber bands used for resistance, and through improved speech and oral phase swallowing. (See the Resources list, page 259, for ordering information.)

Note: Before using this device, make sure the client has not had recent chin and/or neck surgery, or recent dental work. In addition, make sure the client is not under a physician's care for any facial condition or disability or TMJ muscle dysfunction. Be sure to report any unusual or severe pain associated with using the Facial-Flex to the client's physician.

Lip Massage (Obicularis Oris)



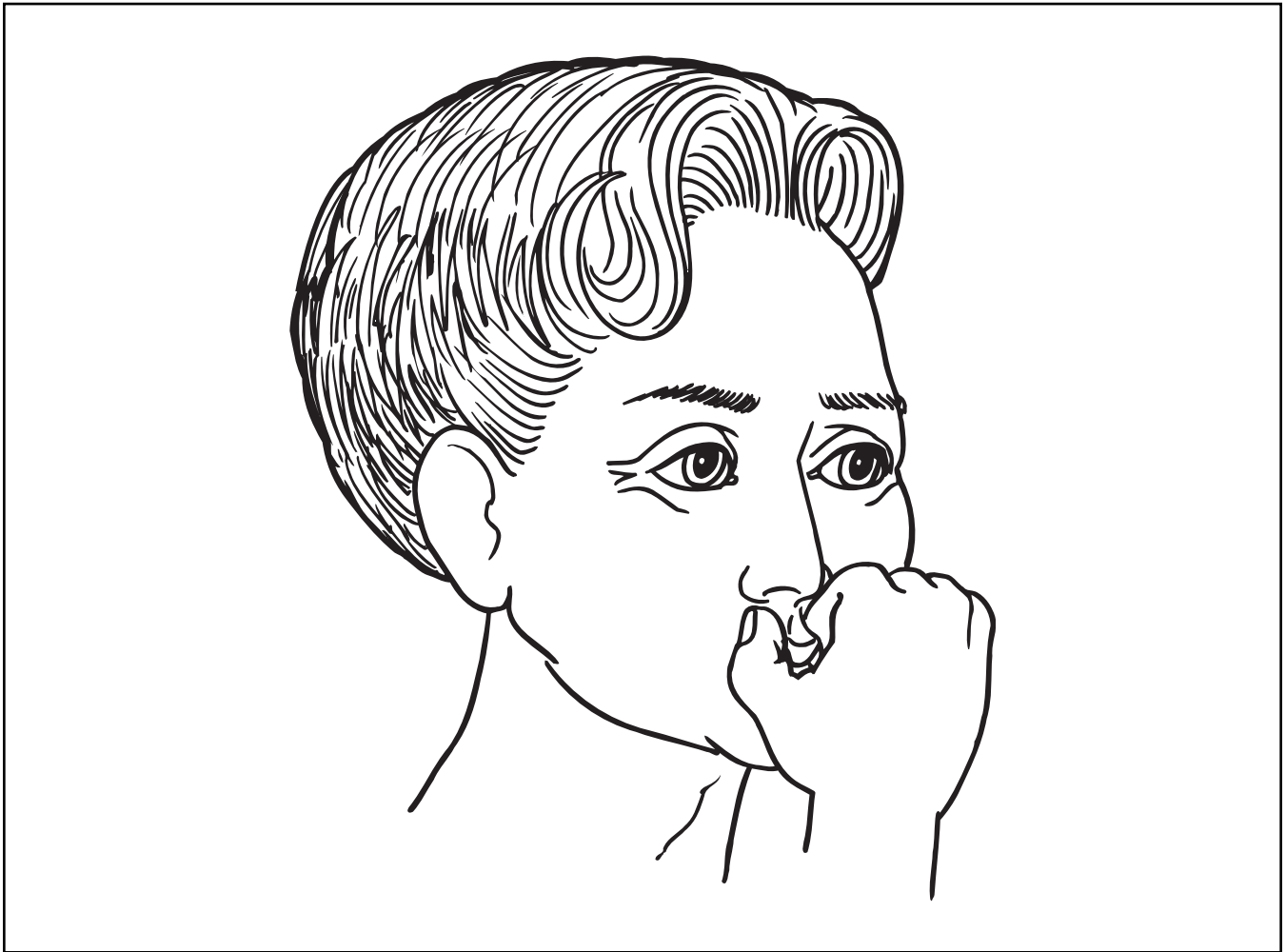
Secure the client's head with one hand so it doesn't move back or sideways. Use either your finger or thumb and place it on one side of the client's lower lip. Apply steady pressure and move around the entire mouth at half-inch intervals.

Muscles will respond to consistent soothing touch. Base the level of pressure on the comfort of the individual and the level of resistance necessary to work the tight musculature.

Benefits

- stimulates flaccid tissue
- releases tense musculature

Upper Lip Squeeze



Grasp upper lip under the bridge of the nose with the index finger and thumb. Apply pressure for 30 seconds. Then squeeze and gently massage musculature under the skin.

Benefits

- stretches and elongates upper lip to form a seal for /p, b, m/
- stimulates downward motion of lip to improve swallowing and reduce drooling

Upper Lip Stretch — Middle

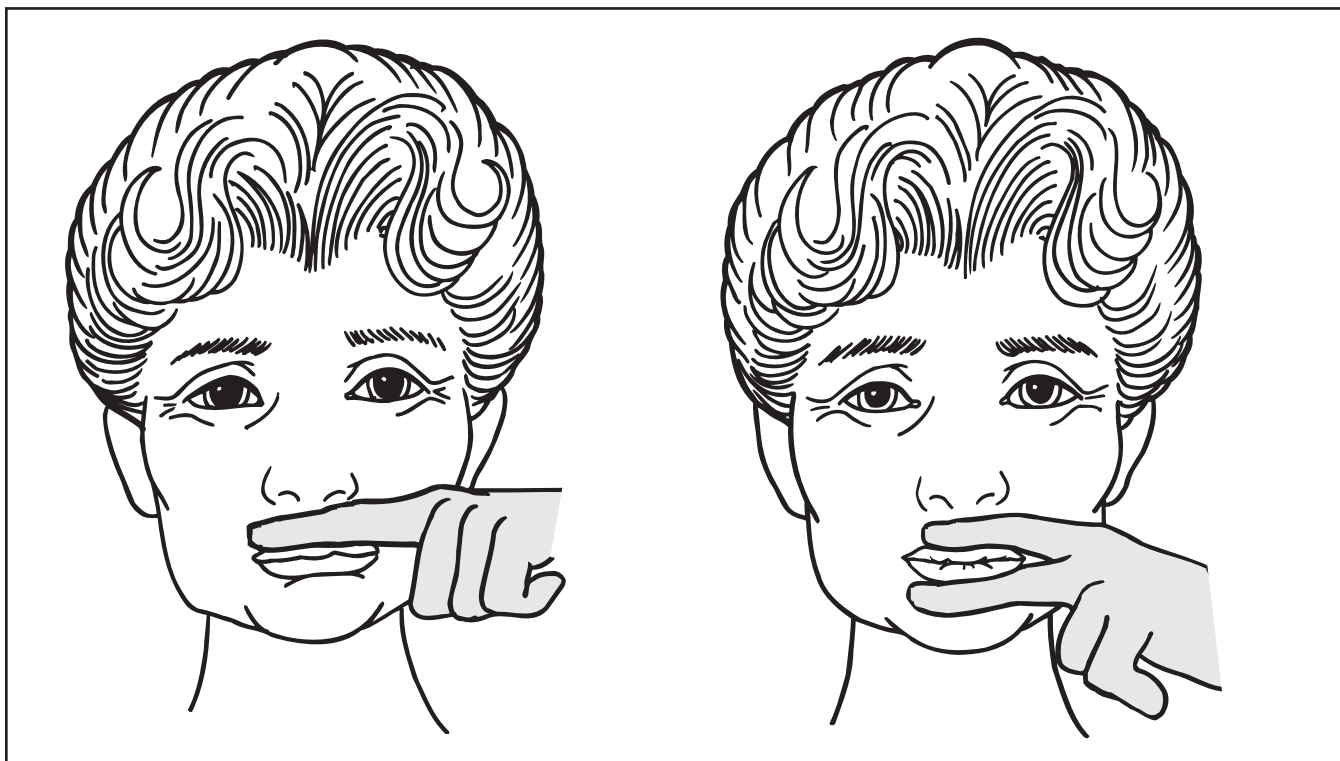


Place index finger horizontally over upper lip. Tuck side of finger up against the base of nose. Apply pressure and hold for 30 seconds. Repeat 5 to 10 times.

Benefits

- relieves tension in upper lip and nasal area
- assists in stretching and toning the upper lip to form a seal for improved swallowing and speech production

Assisted Raspberry



To determine if the client's lips are too weak to self-initiate and/or maintain a lip seal, have the client try to make a raspberry or buzzing noise with her lips. If she is not able to do it, put your index finger horizontally across her upper lip. Push it downward and ask the individual to take a deep breath and blow. If vibration is produced, try again but offer slightly less assistance. Continue offering less and less assistance until the lips and cheeks are strengthened for an improved lip seal.

If pushing down the upper lip does not create a seal sufficient for a bit of vibration, place your middle finger horizontally under the client's lower lip. Push her lips together and again ask her to take a deep breath and blow hard. If vibration is produced, repeat. Offer less and less assistance over time to strengthen the lips and cheeks.

Benefits

- builds tone and strength for lip seal for improved swallowing and speech production
- reduces drooling

Horizontal Lip Strengthenener

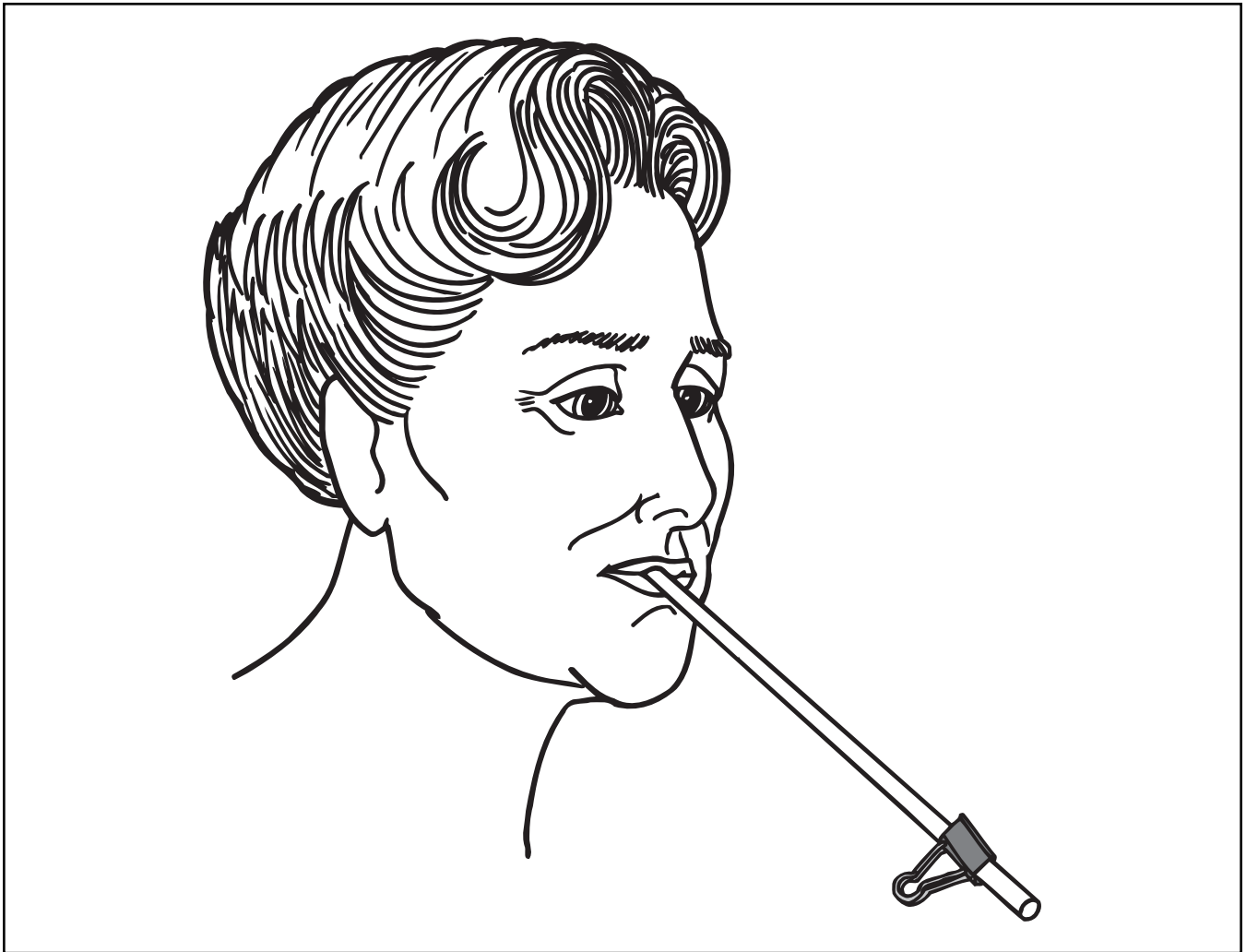


Place a tongue depressor or Popsicle stick horizontally between the lips only. Pull out gently on the stick with equal effort on each end to offer resistance to the lips. Start out offering very little resistance, then build up as the lips grow stronger.

Benefits

- improves lip seal and lip rounding
- strengthens inner cheeks and neck musculature

Rounded Lip Strengthenener



Place the end of a straw in the client's mouth, having her hold it with the lips only. Offer less and less support until the individual is able to support the weight of the straw on her own.

To add further weight, attach a paper clip to the extended end of the straw. As the client grasps the straw, ask her to push it up with her lips so that it sticks out of her mouth horizontally. Remind the client to keep her head still, her teeth closed and to only use her lips.

Benefit

- strengthens cheeks, chin, and lips

Party Favor



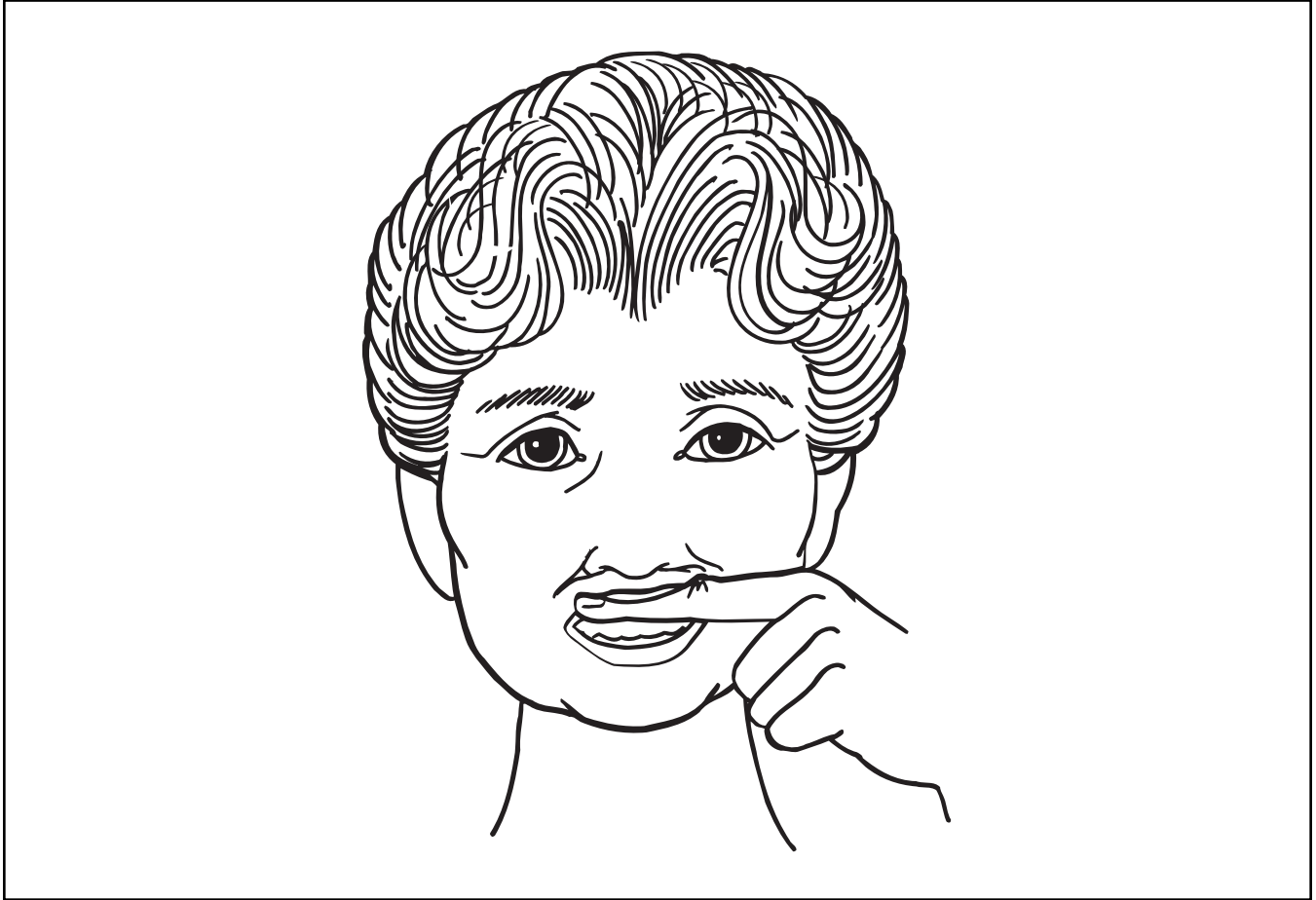
Have the client place a party favor blow horn in her mouth and create a lip seal around it. (You might need to use your index finger and thumb around the individual's lips to help create a seal.) Ask the client to blow hard and then to suck in hard. Repeat the action, taking breaks to avoid hyperventilation.

Note: If the client is having difficulty creating a lip seal, refer to the *Assisted Raspberry* exercise on page 171 or the other lip strengthening exercises for additional work.

Benefit

- strengthens and tones outer and inner lip seal and inner cheek muscles

Lip Frenulum Stretch



A restrictive frenulum can interfere with lip approximation for articulation. Daily stretching of the frenulum will free it from the gum and upper lip allowing greater range of motion.

Place flat side of index finger against the inner upper lip and push up against the gums. Apply moderate pressure as tolerated and hold for 30 seconds. Repeat three times.

Use the same technique for lower lip if the frenulum is restricting lower lip range of motion.

Benefits

- increases lip range of motion
- improves lip closure

Lower Lip Strengthenener



Hold upper lip up with index finger. Attempt to bring lower lip up to upper lip. Keep cheeks relaxed so the lower lip has a chance to strengthen.

Benefit

- stretches and strengthens lower lip to help it form closure with the upper lip

More Lip and Cheek Exercises

Chew Exercise

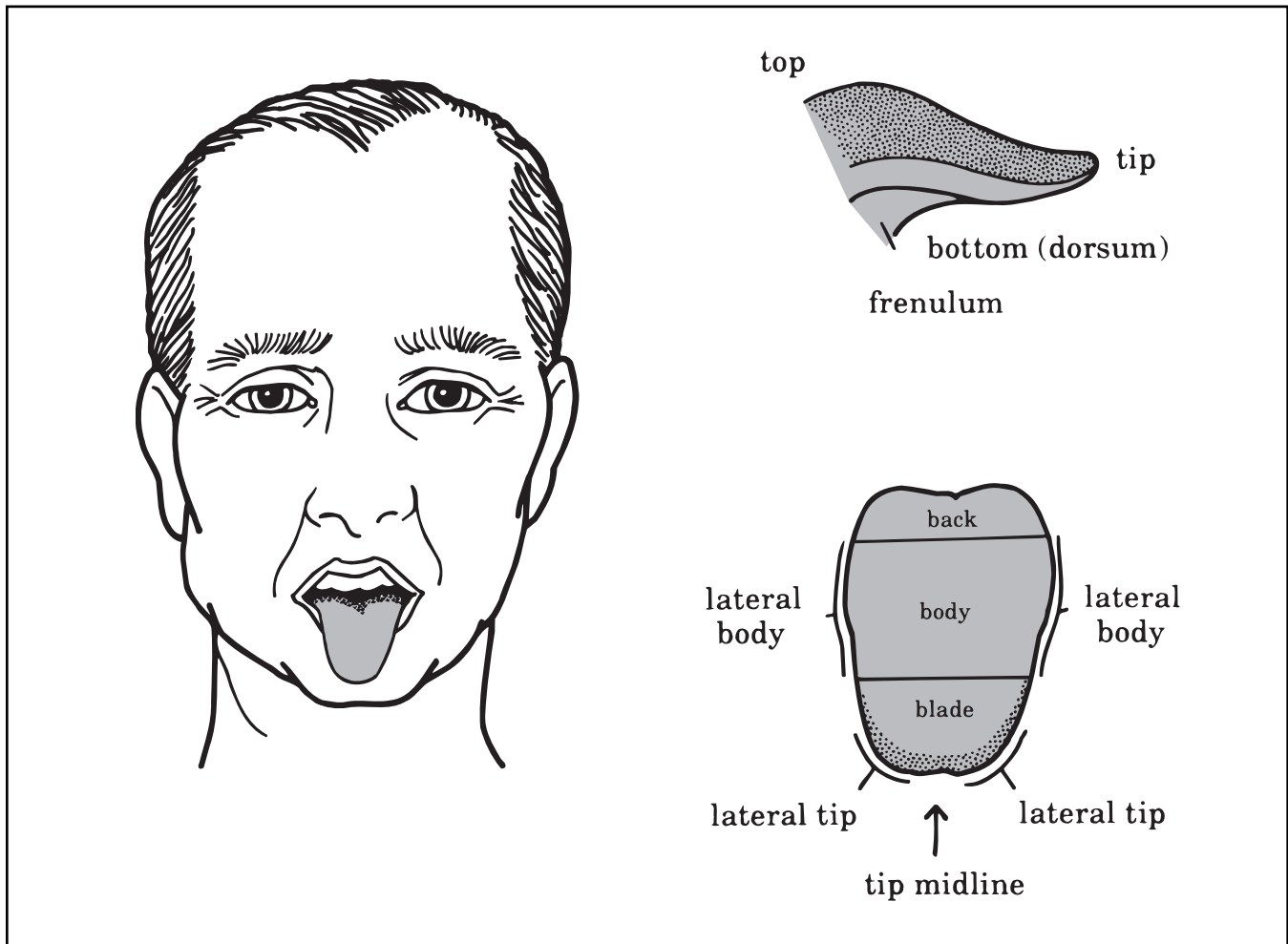
To build inner cheek tone in mild to moderate weakness, have the client smile, bite down on teeth, and maintain clench throughout the exercise. Squeeze cheeks hard while having the client say “chew” until lips end in a pursed position. Start with a tensed smile, and end with pursed lips as the word “chew” is uttered.

Whistling

Whistling will also strengthen inner cheek musculature and inner lip pursing. Have the client whistle a favorite song or silently count to 50, making a short whistle on each number. For the client who is unable to make a whistling sound, the exercise is still beneficial in strengthening cheek and lip musculature.

Chapter 13: Tongue Exercises

Downward Tongue Stretch



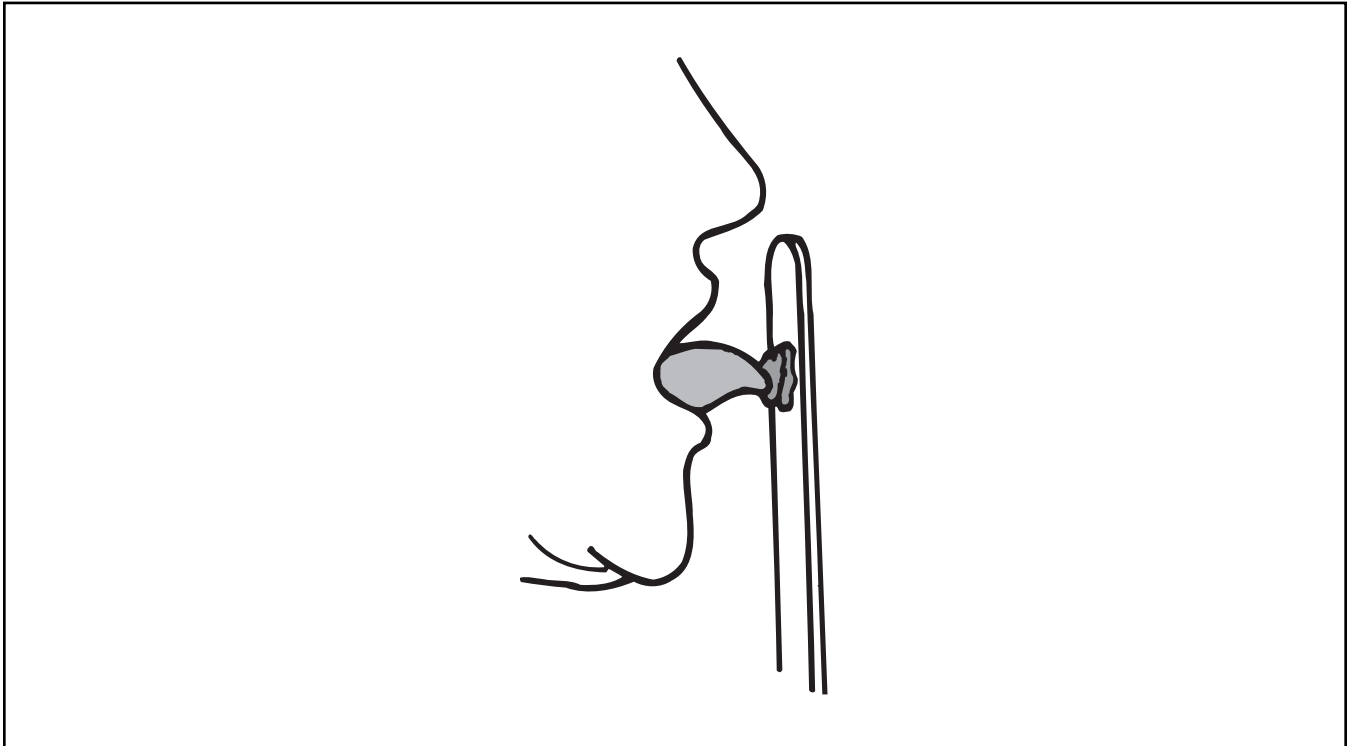
Protrude tongue downward toward chin with jaw open.

Note: Use a mirror for this and all other tongue exercises for visual cues and reinforcement of proper positioning.

Benefits

- stretches and strengthens tongue
- improves range of motion anteriorly
- teaches parts of the tongue

Tip Lick

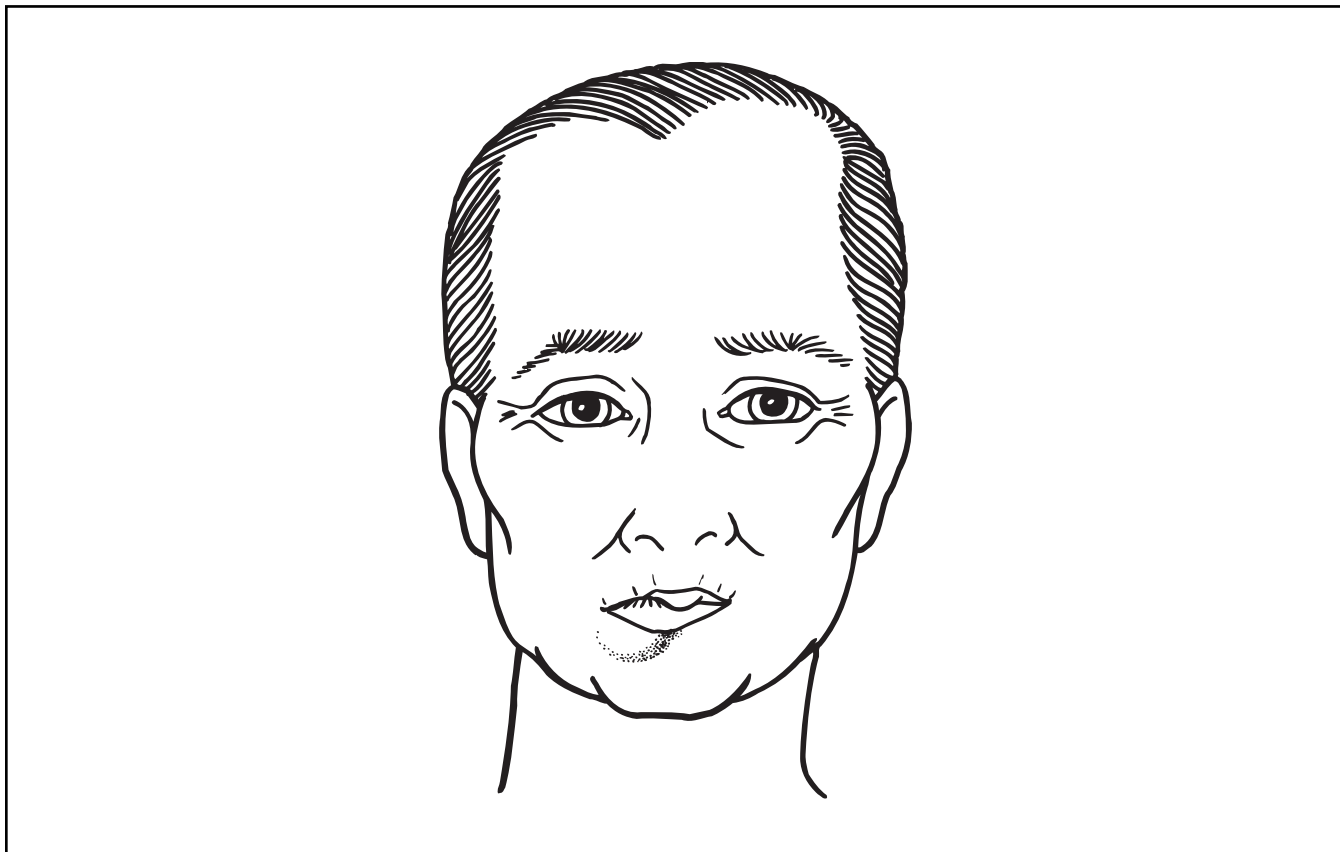


Place a small portion of peanut butter, jelly, caramel, or anything that will stick to the flat surface of a tongue depressor when placed vertically in front of the client's mouth. Have the client lick the substance using the tip of his tongue only. Repeat 10 to 15 times as tolerated.

Benefits

- strengthens tongue
- assists in pre-speech formation of /th, l, t, d/
- promotes bowl formation for bolus retention and transit of bolus during swallowing

Tongue and Inner Lip Massage



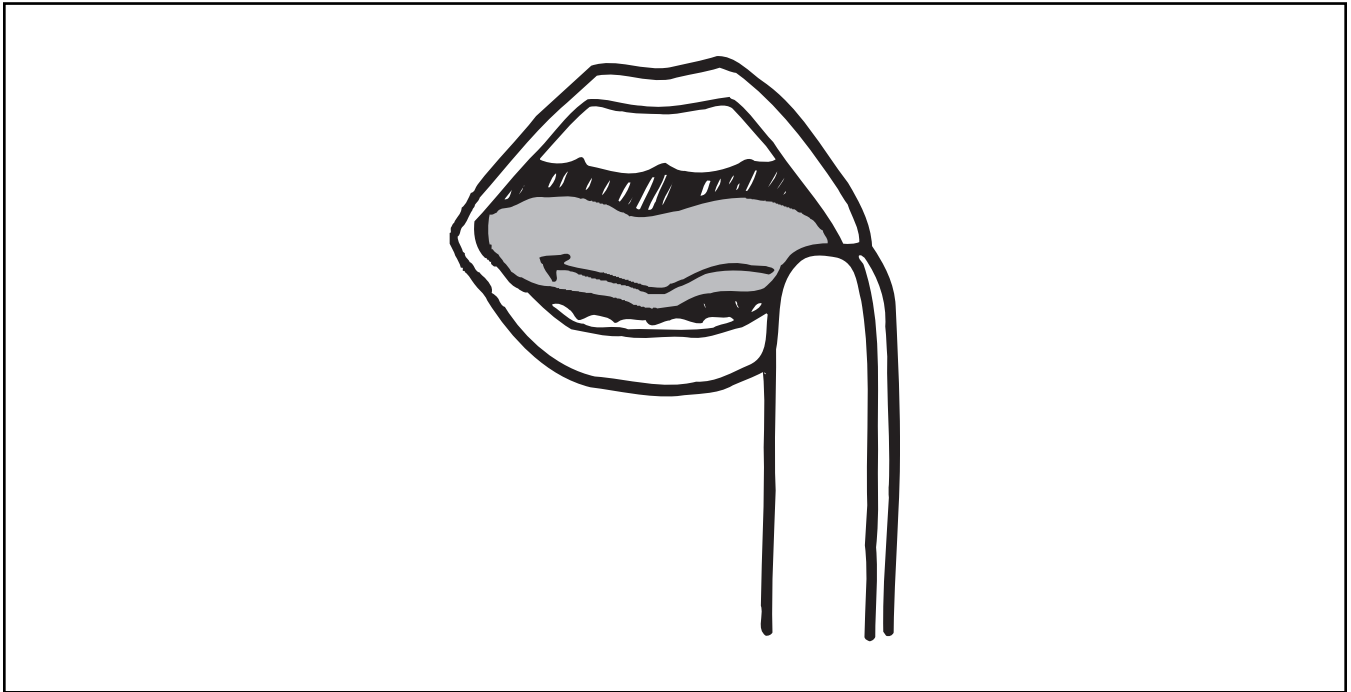
Push the inner lip out with the tongue. Press hard. Run it all around the lips, pushing hard. If the tongue is kept pushing forward around the lips, it will serve to strengthen the base and mid-sections of the tongue. It will also help to establish tongue tip control. Repeat around the lips 10 to 15 times.

To work the mid-sides of the tongue, widen the range of motion of the tongue to the sides of the cheeks. Continue in the same manner pushing the tongue into the cheek making a circular motion a few times. Then move to the other cheek. Remind the client to “push hard” and “let me see your tongue point out as if it is going to go through your cheek.”

Benefits

- strengthens base and midsections of tongue
- improves tongue control

Tongue Tip Scrape

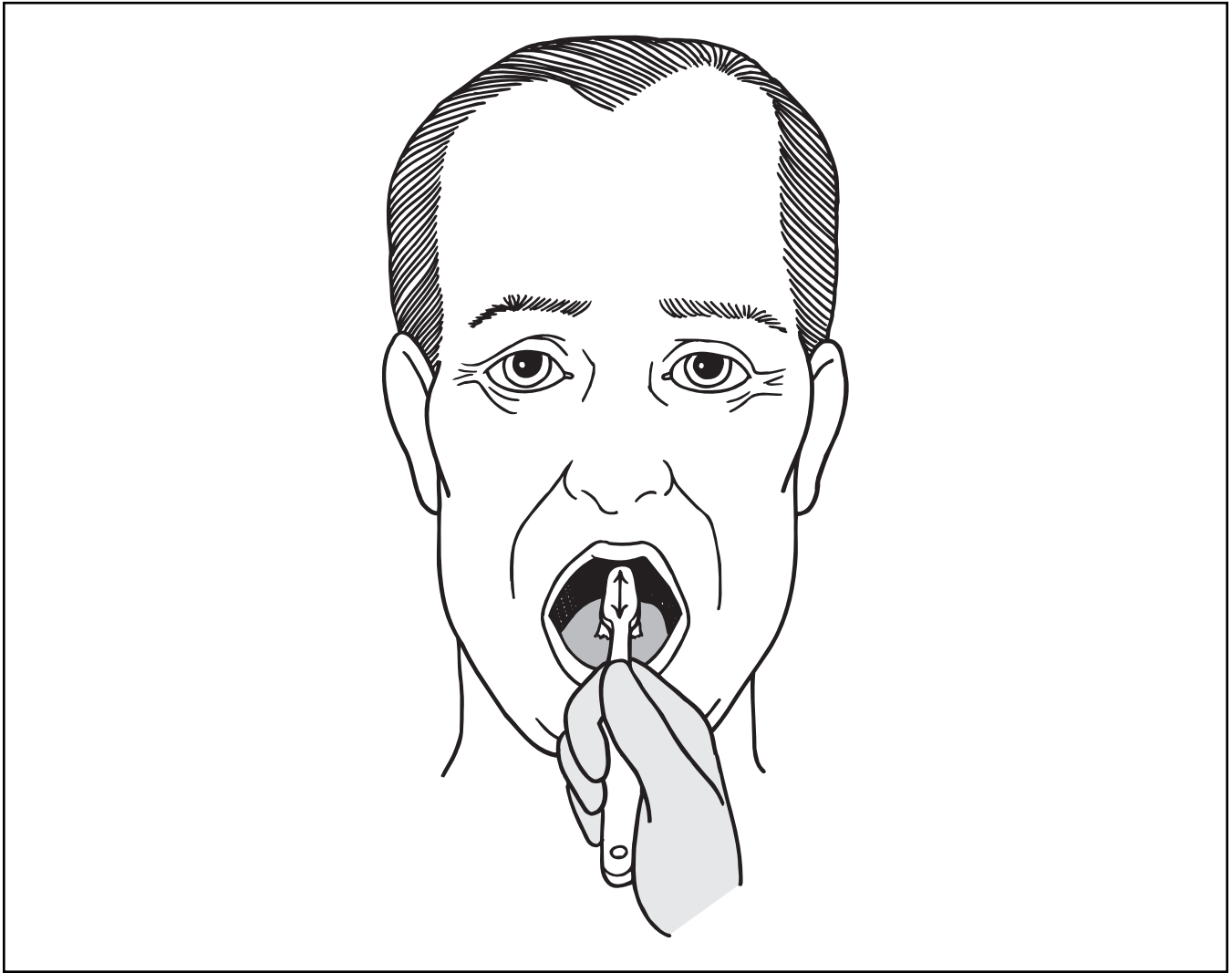


Lightly scrape the client's tongue tip with the edge of a tongue depressor, dental floss on a floss holder, or the end of a straw. Start on the left side of the tongue and move horizontally to the right along the tip only. Scrape in this direction 10 times. Then start on the right side and move along to the left along the tip only. Repeat 10 times in this direction.

Benefits

- widens tongue
- improves sensation awareness
- improves tip control

Back to Front Tongue Stroke

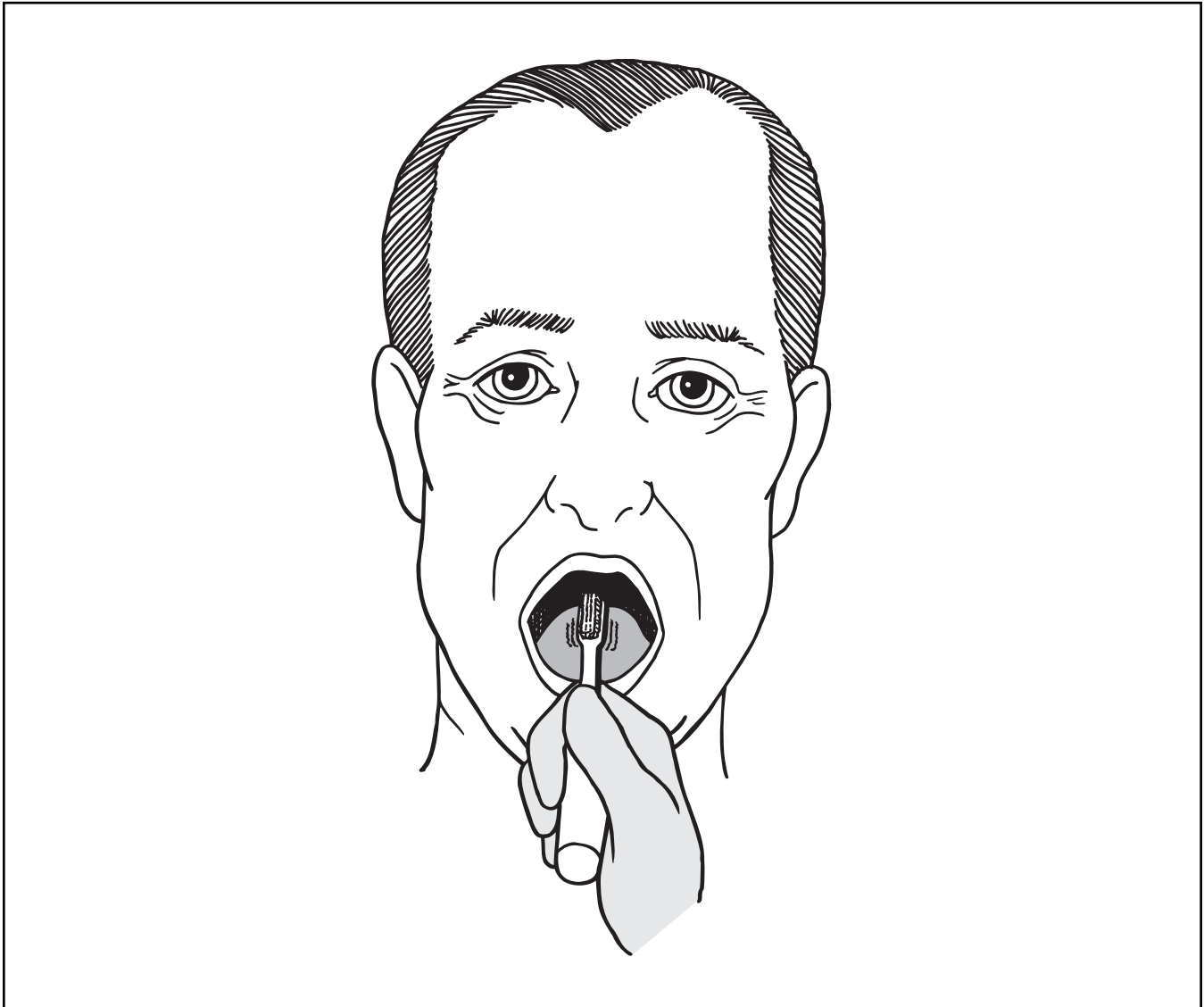


To flatten a balled up or bunched up tongue, lightly brush the top of the tongue with a toothbrush or a toothette in straight strokes from back to front. Stroke the entire top of the tongue. Always start in the back of the tongue and come forward. Repeat stroke 3 times.

Benefit

- elongates and relaxes the tongue

Flatten Tongue with Vibration

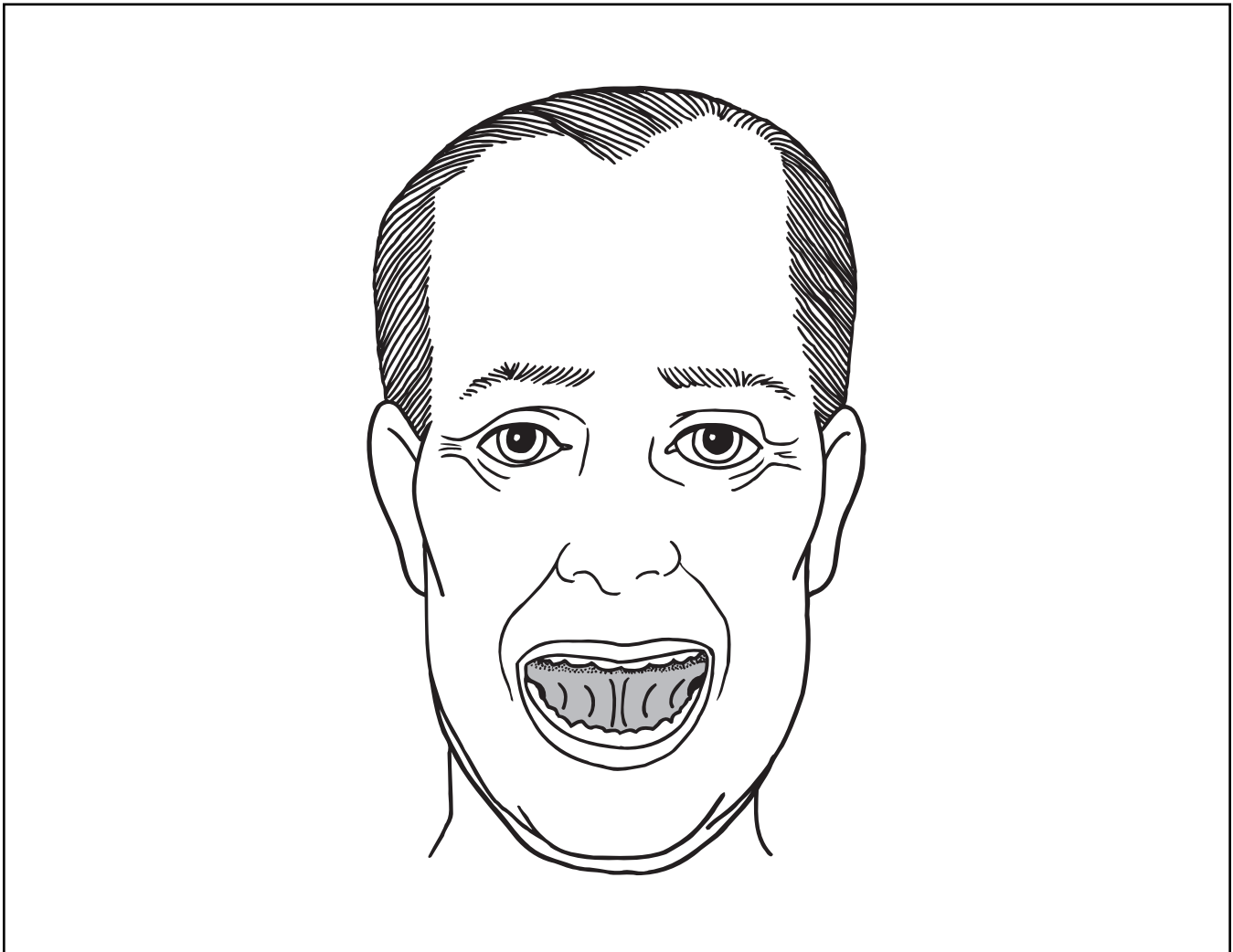


Use the back side of the brush end of an electric toothbrush and apply to the top center of the tongue. This will help to flatten it by breaking up bunched musculature. Apply downward pressure for 5 to 10 seconds as tolerated. Application of the vibration to the sides of the tongue may help the tongue to widen. In some cases it may cause the tongue to bunch or round upward again.

Benefit

- reduces tension in tongue

Tongue Click



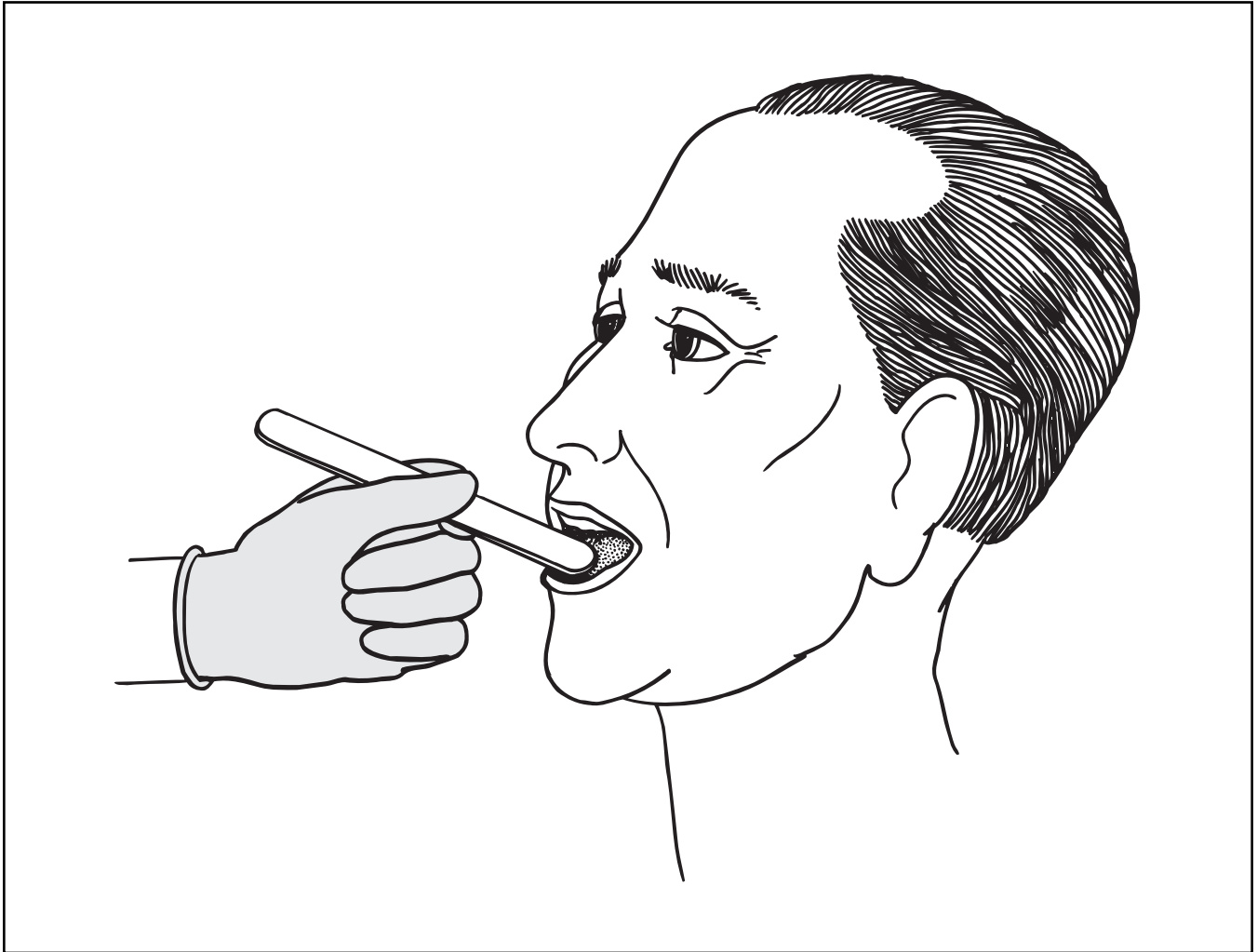
Click tongue against hard palate, making a loud clucking noise. Repeat for about 1 minute. Then click tongue with teeth clenched and jaw stabilized. Again, repeat for about 1 minute.

Note: This exercise may be practiced with the tongue tip only for a tip strengthening exercise. The noise produced will be quieter but will help with forming the sucking action of the tongue.

Benefits

- improves medial tongue raise and tongue widening
- increases bolus retention and transit of bolus during swallowing

Tip Only Resistance



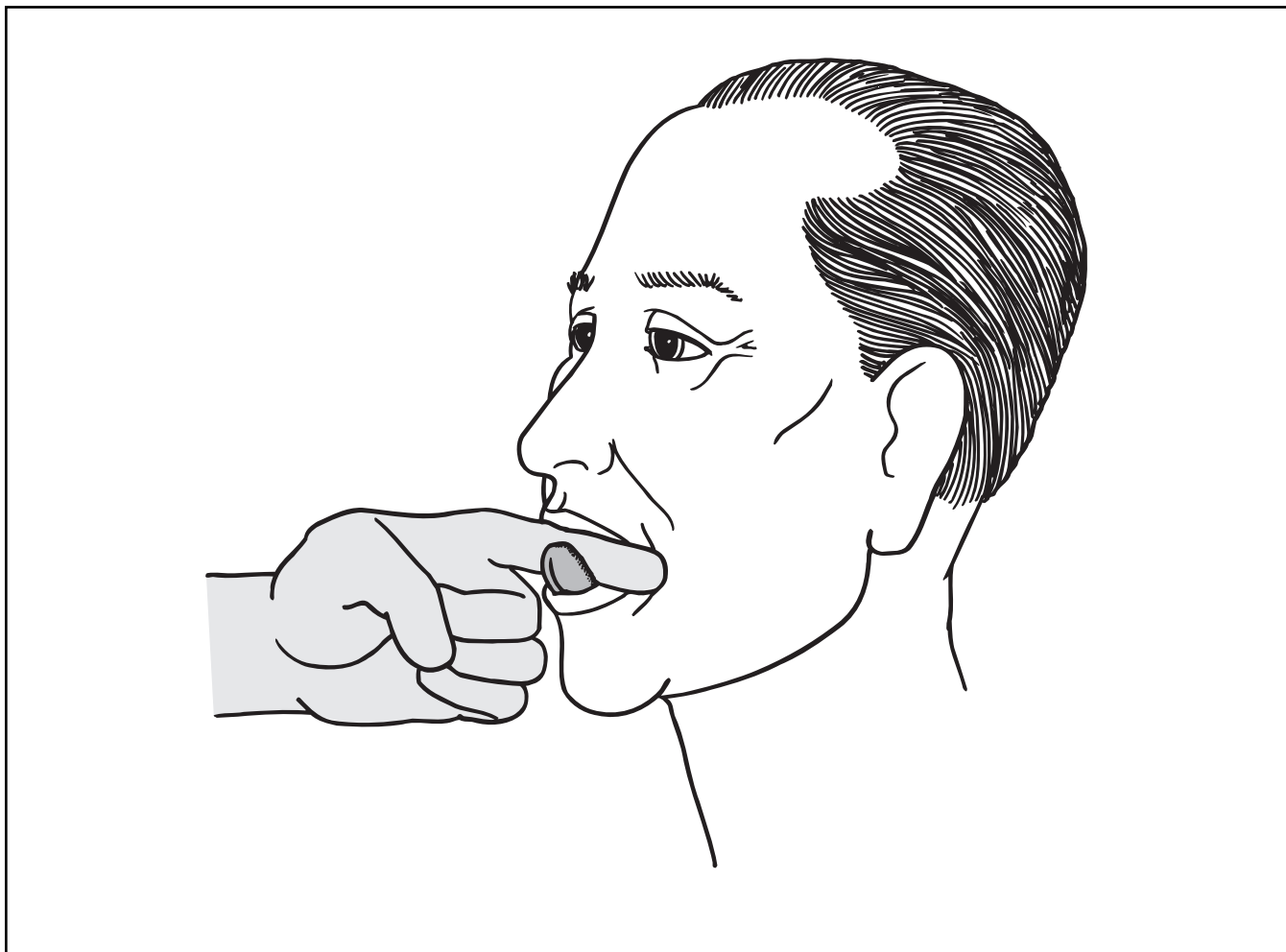
Apply and sustain downward pressure on the tongue tip only with the flat surface of a tongue depressor. Hold for 5 seconds. Repeat 3 to 5 times.

Note: Say “push up” to increase effort.

Benefit

- improves ability to raise tongue tip

Push Up to Bowl



Apply and sustain slight downward pressure on the surface of the tongue blade with the side of index finger. Hold for 5 seconds. Resistance of the tongue will produce a bowl-like motion of the tongue needed to hold a bolus. Repeat 3 to 5 times.

Note: Say “push up” to increase effort.

Benefits

- increases bolus retention and transit of bolus during swallowing
- strengthens tongue

Lateral Side Resistance



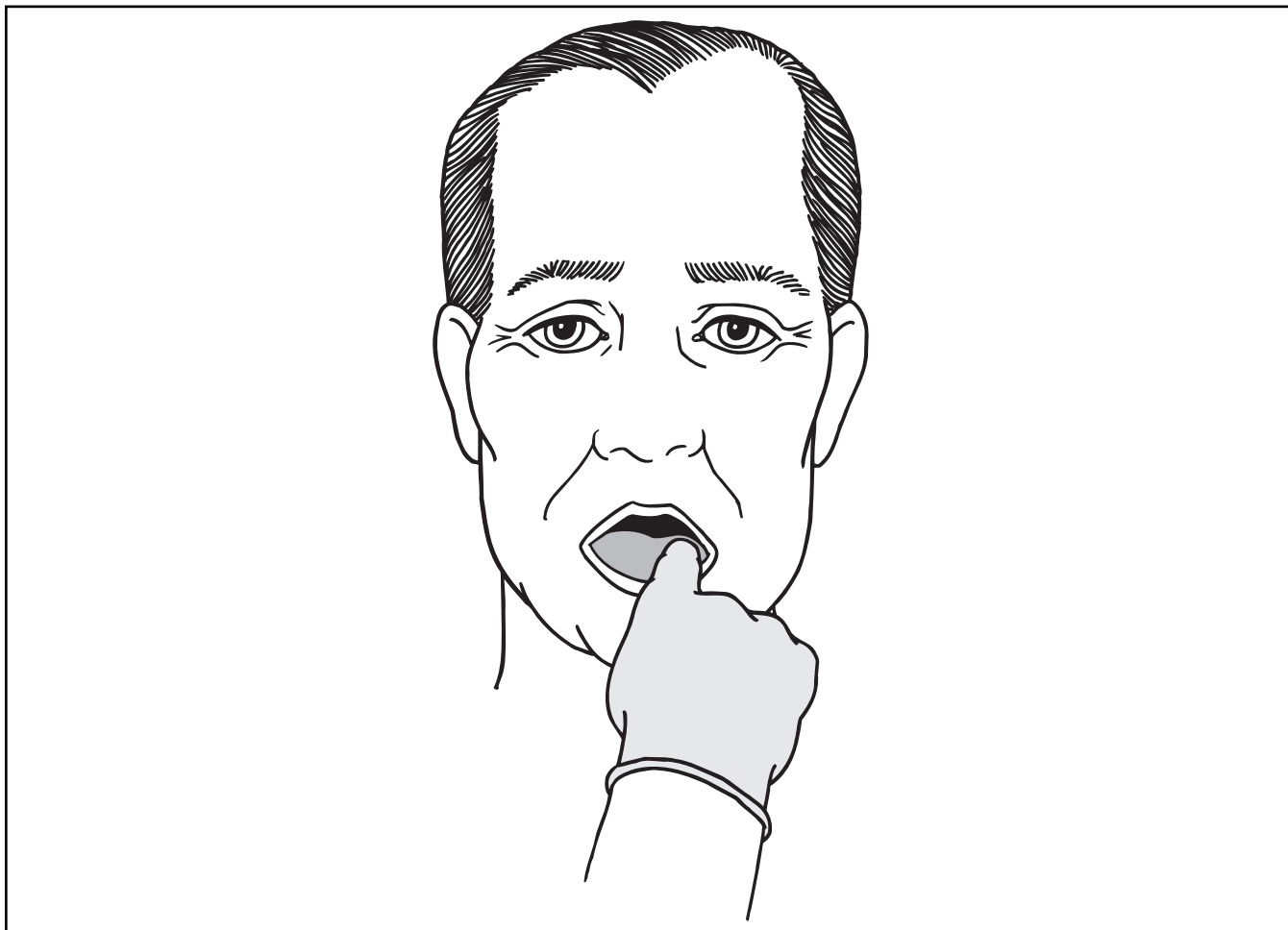
Apply and sustain pressure with fingertip or tongue depressor on the right (lateral) side of the tongue. Hold for 5 seconds. Repeat on the left side of the tongue. Do the exercise 3 to 5 times on each side.

Note: Say “push to the right/left” or “push hard against the depressor” for increased response.

Benefit

- encourages lateral motion and opposite lateral raising of the tongue

Push Up to Flat Tongue



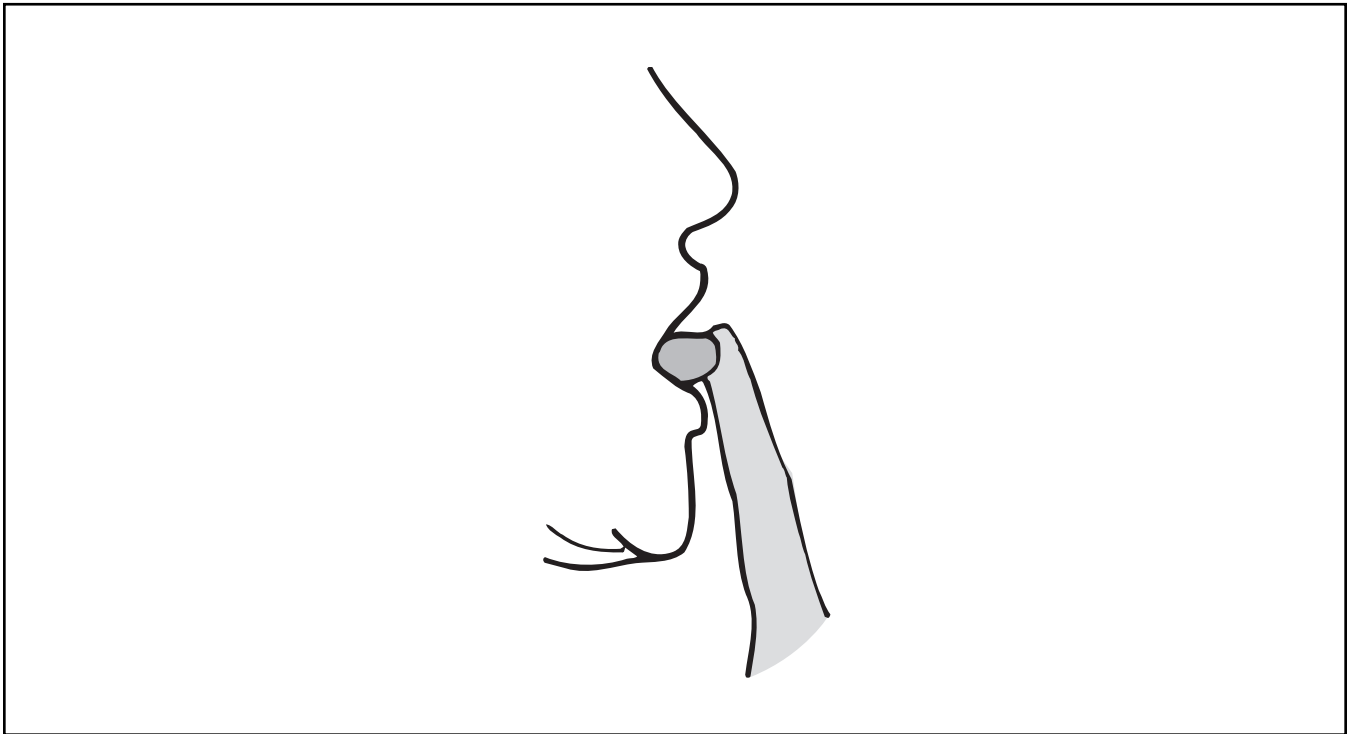
Apply pressure with a fingertip or tongue depressor flat on the top of the tongue to the right of the midline over the tip, blade, and body of the tongue. Avoid pressure to the back of the tongue. Hold for 5 seconds. Repeat on the left side. Do the exercise 3 to 5 times on each side.

Use a tongue depressor, Popsicle stick, or lollipop for resistance to the top surface of the tongue. Place the tongue depressor on the tongue and have the client push his tongue up against the tongue depressor. Encourage the client to hold the pressure for 1 to 5 seconds.

Benefit

- stimulates elevation of the body of the tongue

Blunted Tongue Tip Resistance

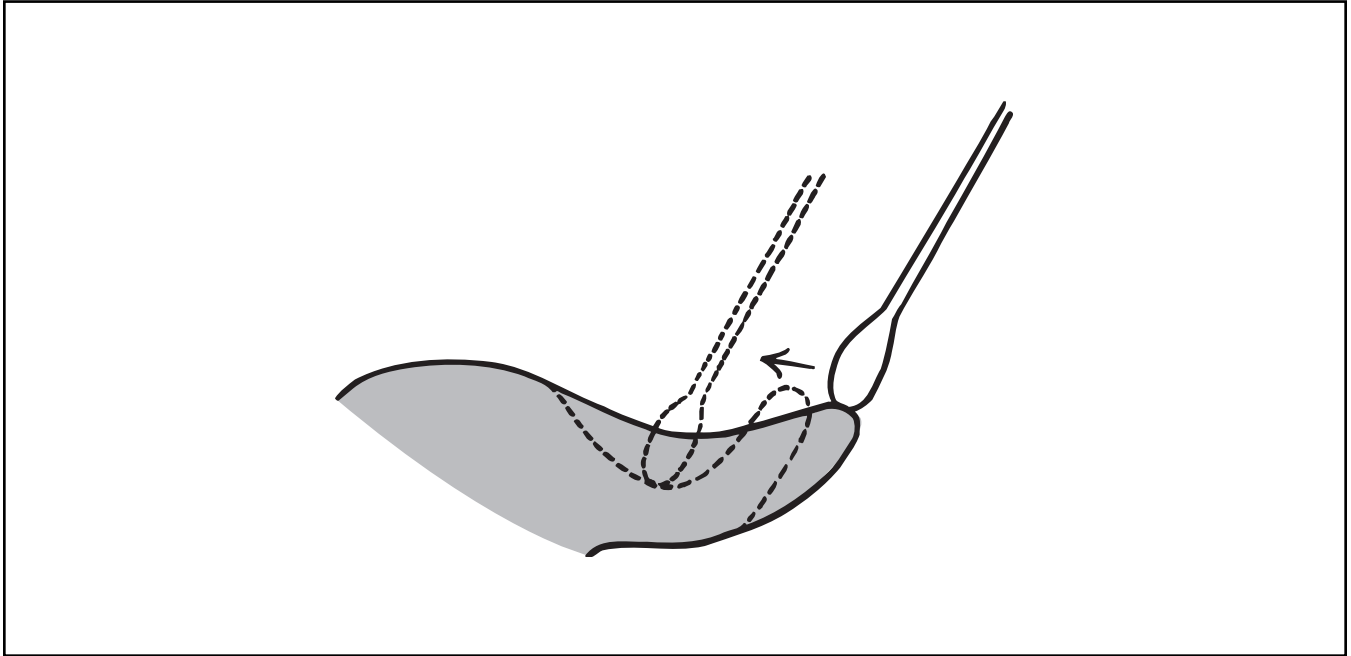


Apply light pressure with a finger or tongue depressor to the tongue tip, pushing it straight back into the tongue. Ask the individual to exert force and push the tip outward. Increase pressure to the tongue tip to increase resistance. Repeat 5 to 10 times as tolerated.

Benefit

- strengthens and widens tongue

Brush Back Tip Curl Formation



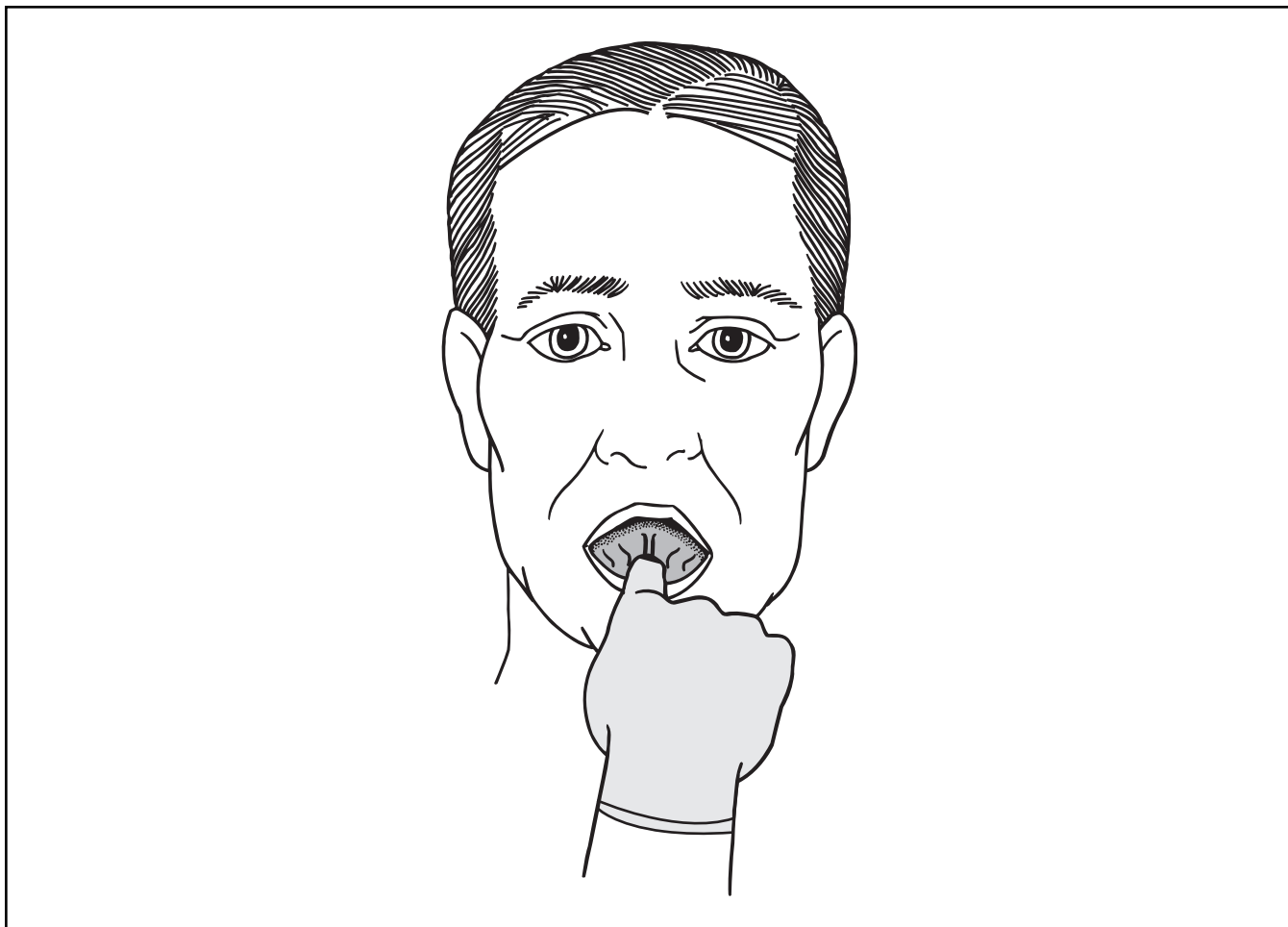
Start at the tip of the tongue at the midline and brush back approximately one inch on the blade of the tongue. The backward-only motion will stimulate an upward movement of the tongue tip. Repeat 10 times.

You can use a tongue depressor, gloved fingertip, or an iced cotton-tip applicator (place it in lemon ice or crushed ice to make it cold).

Benefit

- assists in bolus formation

Tongue Frenulum Stretch



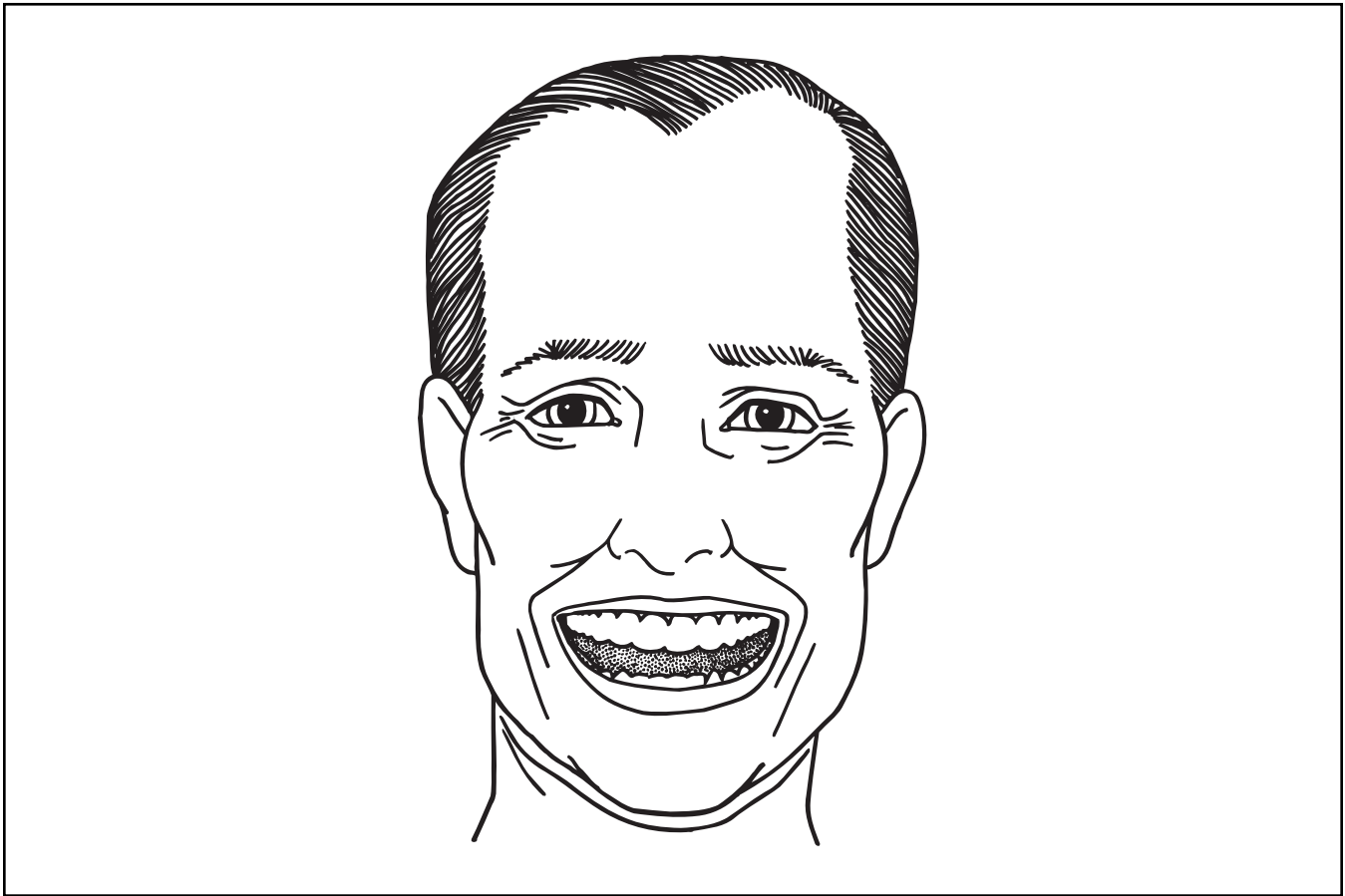
The tongue frenulum can restrict range of motion of the tongue for the /l/, /d/, /t/, and /th/ phonemes. When the tongue is restricted, it will form a heart and/or split down the middle when extended forward. In many cases, stretching the frenulum will reduce the need for surgery.

Have the individual open his mouth. Slide the flat side of your index finger under the tongue and apply light to moderate pressure against the stringy portion of the frenulum. Push straight back. Hold for 30 seconds or as tolerated. Repeat 3 times. Do this exercise 3 to 5 times a day. After facilitating this stretch for the client, show him how to place his finger on his frenulum for self-stretch practice.

Benefit

- increases range of motion of tongue

Tongue Widening



Have the individual say “ee” and elongate and exaggerate it. The tongue will widen naturally. Provide a model if necessary. It is best not to ask the individual to widen the tongue or to bring attention to the widening until he is able to establish it by practicing the “ee” sound.

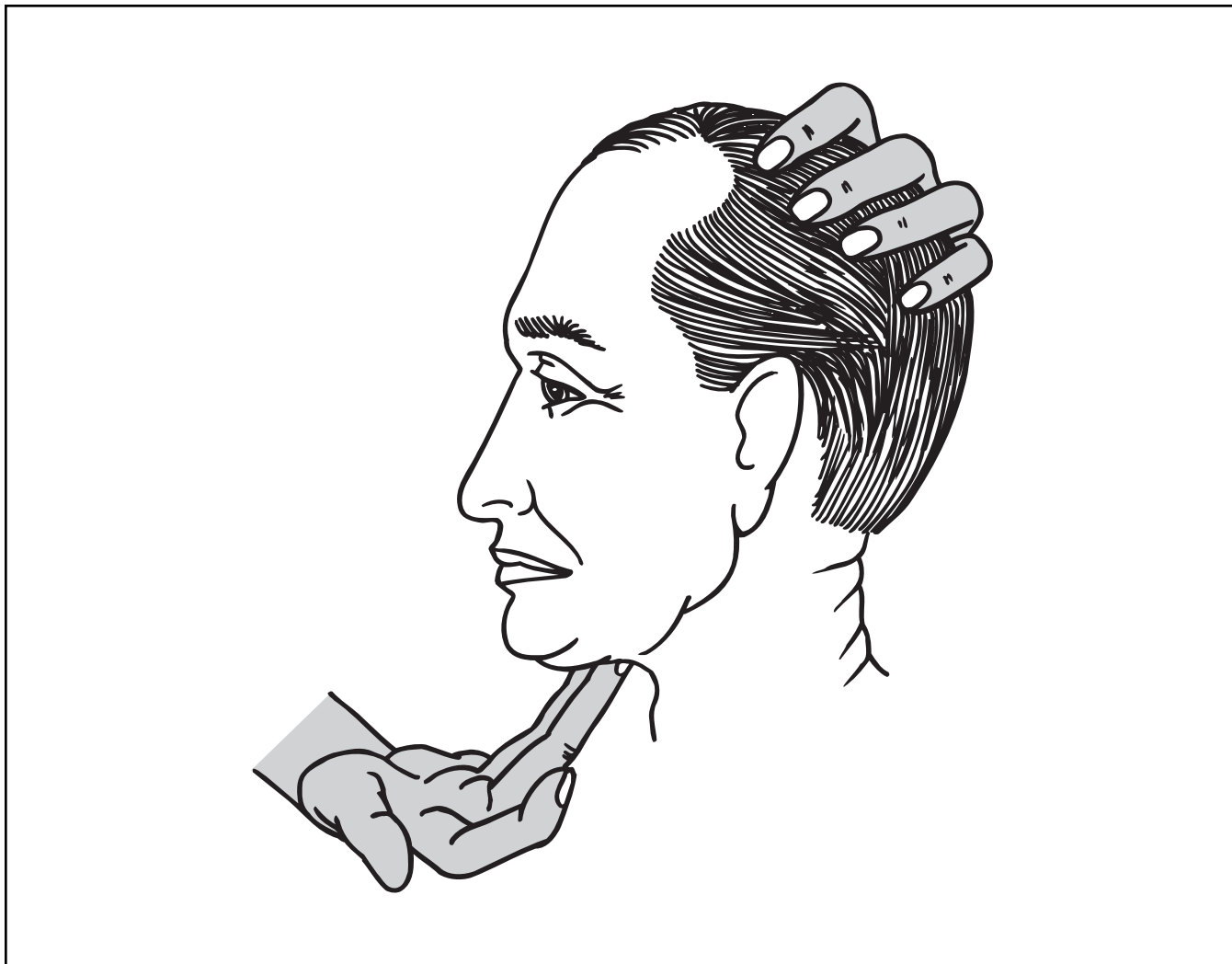
While the client is holding the “ee” sound, show him how the tongue touches the sides of his teeth. Ask him to hold it there after the “ee” sound is finished. Eventually the client should be able to widen his tongue voluntarily.

If the client’s tongue gets tired or he forgets how to widen his tongue, have him produce an “ee” to retrain his tongue.

Benefits

- reduces food pocketing
- aids in correction of lateral lipping

Base of Tongue Tap



Tuck the chin slightly down. Moderately tap up under the chin on the base of the tongue. Secure the head with the other hand at the upper back of the head. Tap 10 times.

Benefits

- aids in correction of lateral lisp and in pre-speech production of /r/
- relaxes tongue

Using Straws in Therapy

Therapeutic use of straws is effective in improving tongue retraction and lip rounding for speech clarity, swallowing, and voicing. Varying sizes of straws (gradated in size) and thickened liquid interventions are especially effective with individuals with Down syndrome, CVA, and head trauma to build strength and oral-motor efficiency of movement. Individuals with velopharyngeal insufficiency benefit by increased tongue retraction and improved oral resonance.

Note: Before entering any liquid into the mouth, remember to check which consistencies of liquids the individual is able to take orally. If the individual is listed as nothing by mouth (NPO), do not attempt these activities until you discuss oral-motor strengthening options with the physician or primary SLP.

Proper use of the straw encourages:

- jaw stability
- tongue retraction
- lip rounding

By using an increasingly more difficult series of complex straws and thicker liquids, the tongue muscle can be encouraged to retract. Tongue retraction allows the tip of the tongue greater mobility for clearing the oral cavity.

Start with the individual in a stable, upright position. Provide an average straw and evaluate performance. Begin with thin liquids. Progress to thicker liquids to increase tongue effort to draw the liquid into the oral cavity.

Check to see if the individual is biting the straw or suckling it with the tongue versus the lips. Biting is indicative of jaw instability. Place your fingers at the point where the straw meets the client's mouth and remove it.

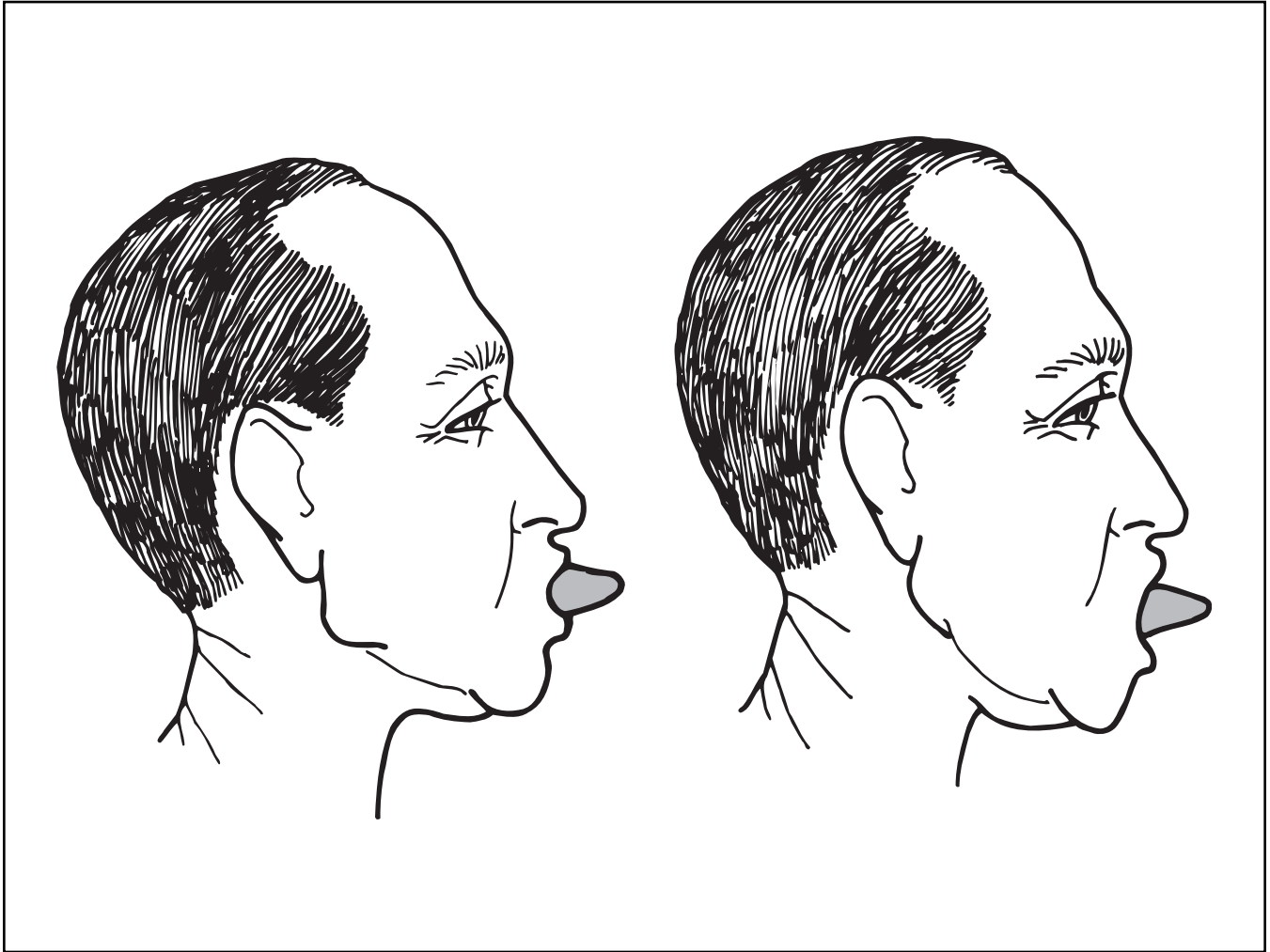
Then cut the straw to the level removed from the lips. Try again, but use a lip block (e.g., fingers around lips) with the straw to encourage sealing and rounding of the lips. Gradually remove the lip block as the individual is able to maintain a lip seal.

Other techniques include:

1. Put a bit of liquid in a straw, closing off the bottom of the straw with your fingertip. Have the individual attempt to suck the liquid from the straw. Make sure the individual maintains appropriate head, neck, jaw, and body alignment while seated upright.
2. Freeze liquid in straw. Ask the individual to suck on the straw as the liquid melts.
3. Make a lip sealer or lip bumper by sliding a drilled cork or a sponge rubber hair curler onto the end of the straw. Leave a small amount of the straw sticking out of the mouthed end so the client doesn't put his tongue under the straw.
4. Fill a plastic container that you can squeeze (e.g., bear-shaped honey container with a hole cut in the top) with liquid. Use a straw made of tubing. When the client sucks on the straw, compress the container so the liquid can reach the client's mouth.

Note: Sara Rosenfeld-Johnson has done extensive work with straw intervention. To contact her, see the Resources list, page 259.

Straight Tongue Stretch



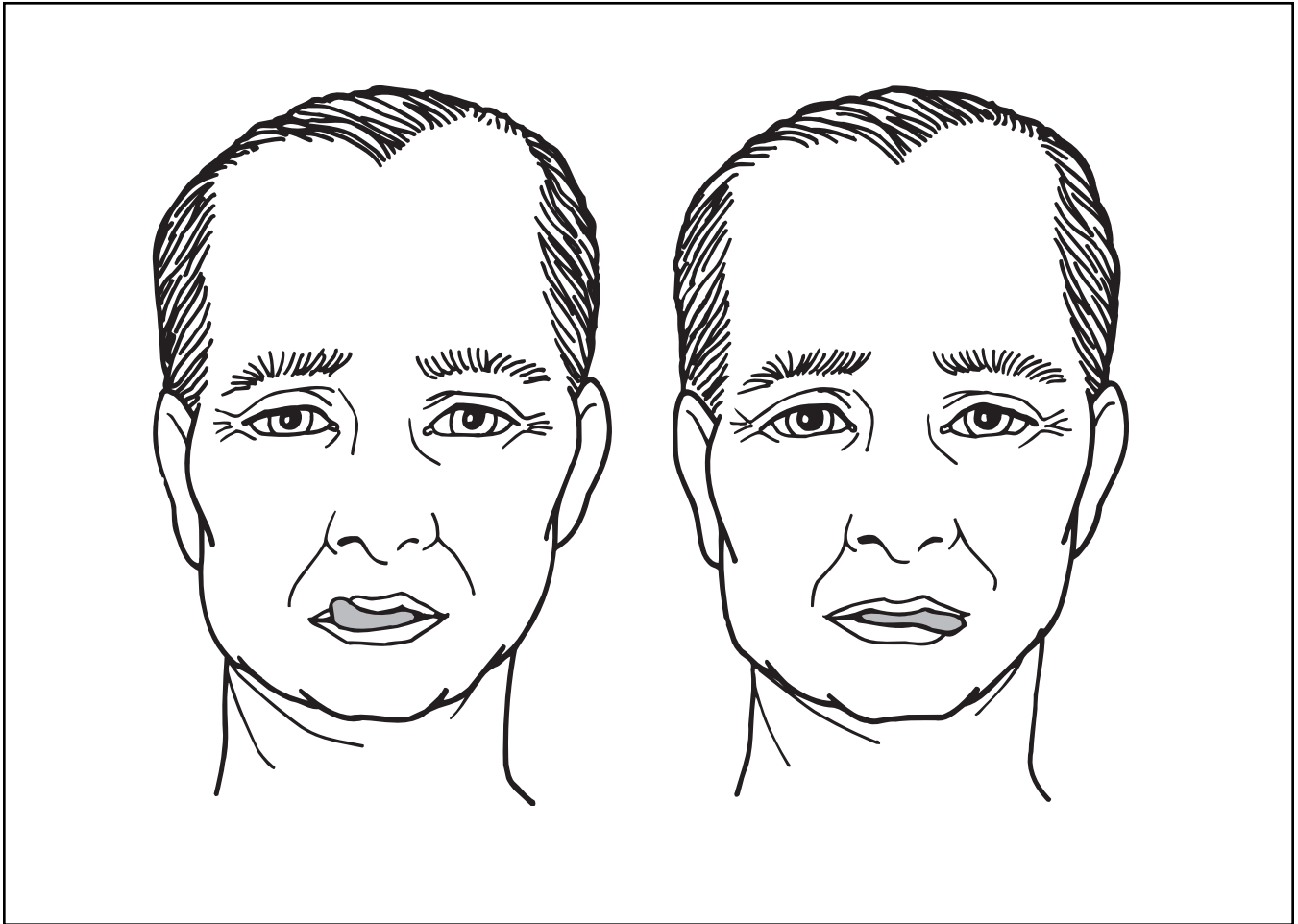
Stick tongue straight out as far as it will go with the mouth slightly open. Use full force when extending tongue.

Then stick the tongue straight out with the jaw open as wide as it will go. Hold tongue to full extension to stretch the bottom and back of tongue.

Benefit

- improves tongue extension and range of motion anteriorly

Tongue Tip Movement

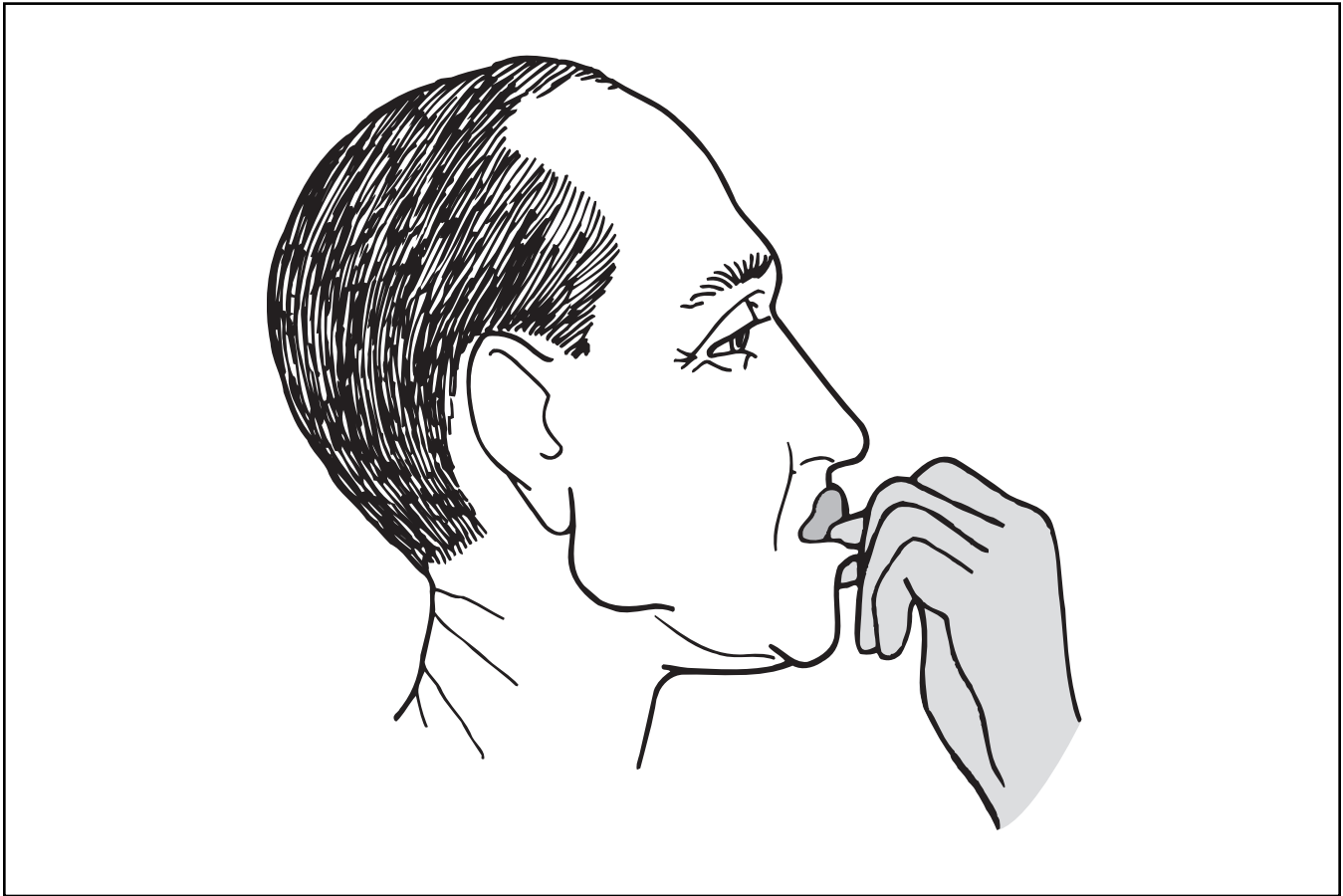


Protrude the tongue. Raise and lower the tongue as you lick your lips. Repeat. Gently bite on the blade of tongue to allow tongue tip movement only. If it helps, hold the lower lip down to ensure tongue tip movement only.

Benefit

- improves tongue tip awareness, agility, strength, and range of motion

Upper Tongue Tip Raise



Protrude the tongue. Curl the tip upward over the upper lip. Hold lower lip with the index finger and thumb clear of tongue to ensure tongue strengthening without lower lip assist. Gently bite on mid-portion of the tongue to isolate tip raising and increase complexity.

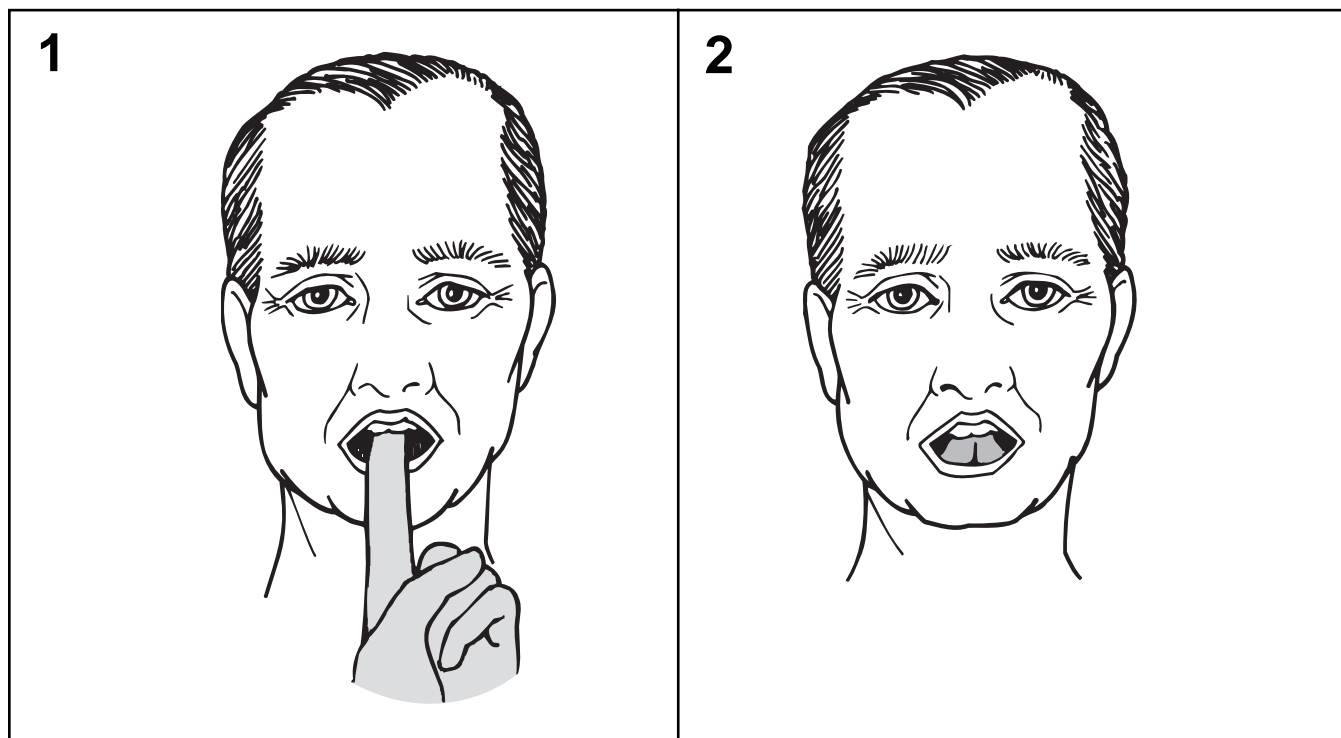
Try curling the tip up with a skinny tongue and then a wide tongue. If necessary, use a bite block to stabilize jaw.

Note: Use a mirror to improve accuracy.

Benefits

- stretches and strengthens tongue raise
- improves range of motion anteriorly
- assists in pre-speech formation of /th, l, t, d/

Tongue Tip Raise



Use a bite block to secure jaw opening. Place a finger on the gum ridge behind the upper front teeth as shown in picture 1. Touch the tip of the tongue to this spot as shown in picture 2.

Hold the tip of the tongue to the spot for at least five seconds or as long as possible. Increase time to 30 seconds, continuing to press tip onto the spot.

Touch the spot with the tongue tip using a metronome set to 30 beats per minute. If a metronome is not available, tap on the desk or clap while raising and lowering the tongue tip to the beat for 30 seconds. Increase to 90 beats per minute as skill improves.

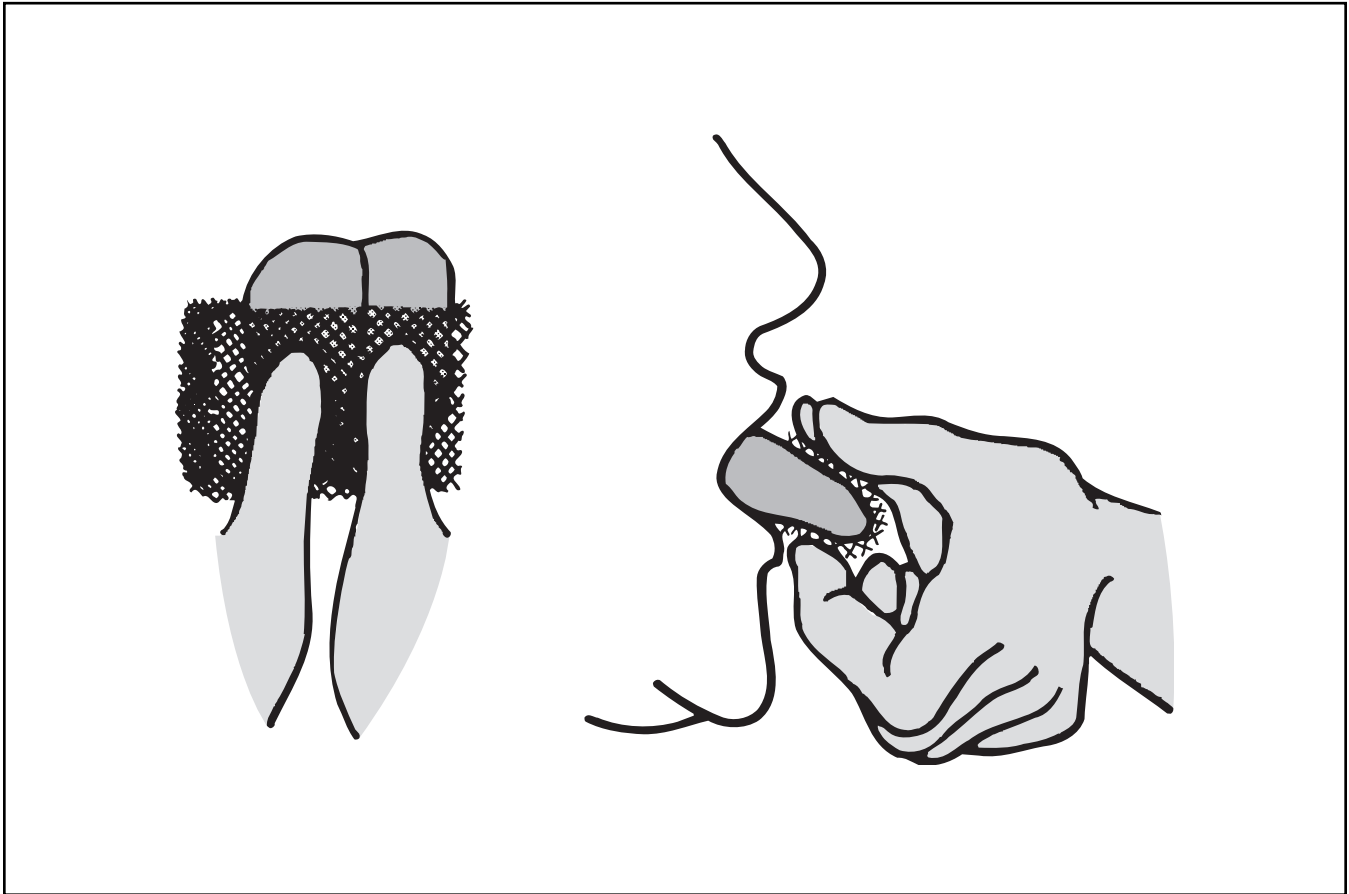
Touch the tongue tip to the spot and say, “tee . . . tee . . . tee . . . tee . . .”
“lee . . . lee . . . lee . . . lee . . .”
“dit . . . dit . . . dit . . . dit . . .”

For continued practice for tongue tip raise, practice the sounds /t, l, d/ in words and sentences on pages 209 – 212.

Benefit

- strengthens tongue tip

Assisted Tongue Stretch Anteriorly



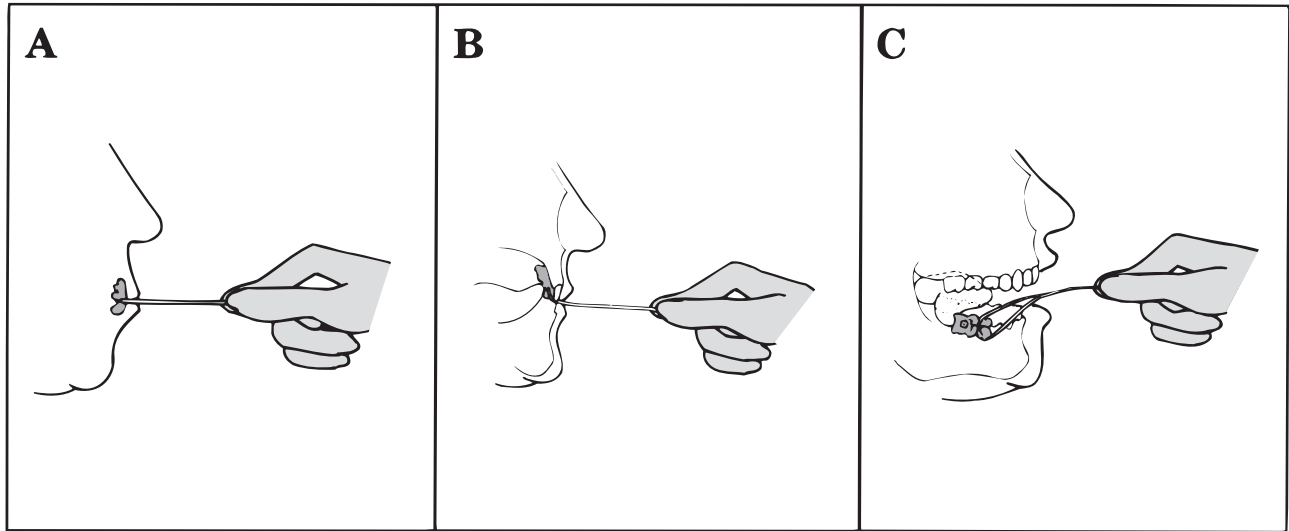
Extend tongue out as much as possible. Wrap the tongue in gauze and grasp it gently but firmly using the index finger and thumb of each hand.

Breathe and relax. Slowly stretch tongue out in graded steps over successive sessions. Initially only stretch slightly past strong resistance. Repeat 3 times, holding for 10 seconds each time. Stretch tongue slowly to avoid tearing the frenulum.

Benefit

- reduces overall hypertonicity of the tongue by flattening and extending it

Lip and Tongue Tip Strengthenener



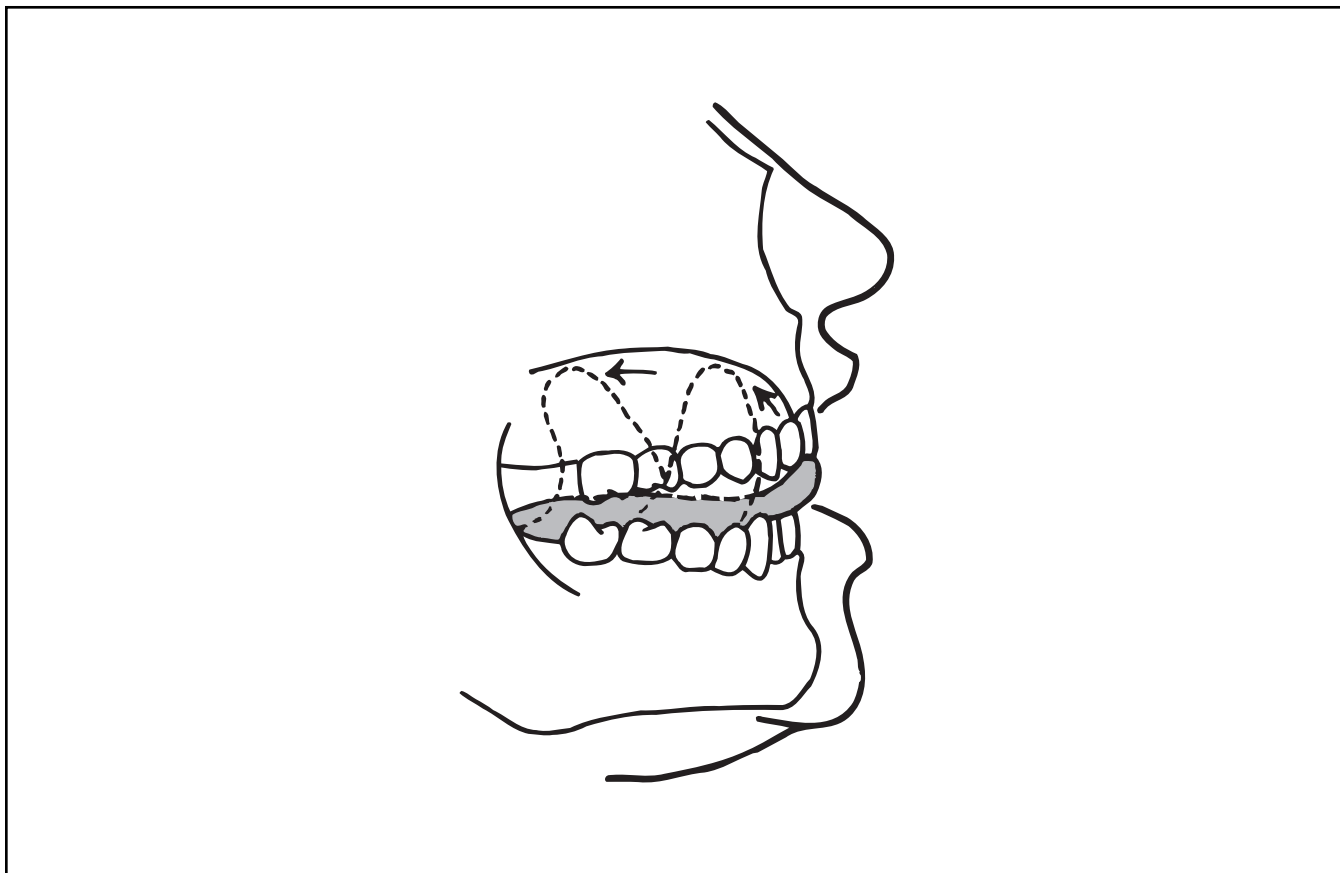
Thread dental floss through a needle and string it through a Gummy Bear. Tie a knot at one end of the dental floss. Be sure to remove the needle.

- A. Put the Gummy Bear in the mouth behind the lips. Then pull gently on the string, pursing lips to hold Gummy Bear in place. Do not bite the Gummy Bear. Squeeze lips and hold for 30 seconds. Gradually increase the time.
- B. Place the Gummy Bear behind the front teeth. Hold the Gummy Bear in place with tongue tip. As someone pulls on the string, press tongue against the Gummy Bear to hold it in place. Do not bite the Gummy Bear. Hold for 30 seconds. Gradually increase the time.
- C. Move the Gummy Bear from the back to the front on one side of the mouth in the space between the teeth and gums. Then, with the tongue, move the Gummy Bear to the opposite side. Again, move it from front to back and back to front. Switch sides again and repeat.

Benefits

- strengthens lips
- improves tongue mobility for buccal (inner cheek) clearing

Posterior Tongue Tip Sweep



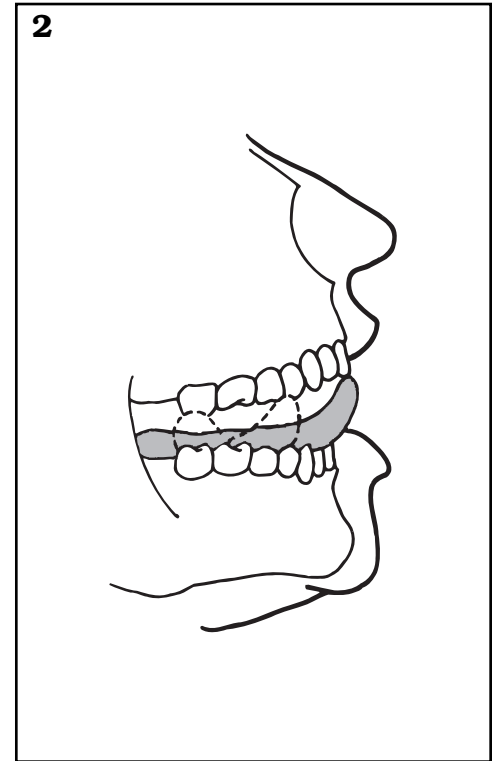
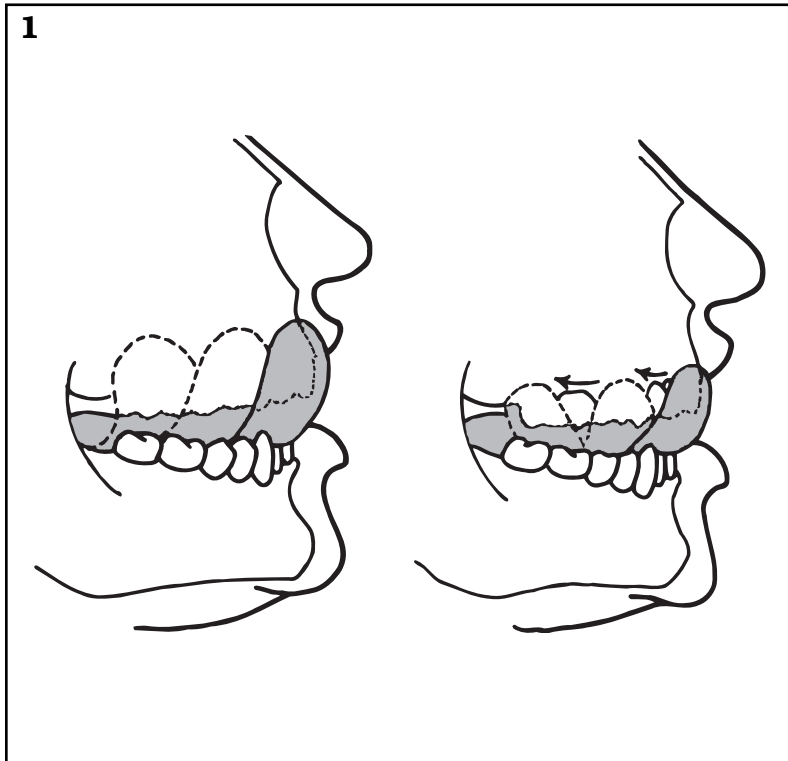
Touch tongue tip on the bottom of the upper front teeth. Slide tongue tip directly back along the roof of the mouth to the soft palate. Be sure to always touch the roof of the mouth. Stretch the tongue backward to full extension.

Practice with a skinny tongue using the tongue tip only. Then practice with a flat, wide tongue tip.

Benefits

- stretches and strengthens the tongue tip for improved range of motion for raising and retraction of the tongue
- assists in the formation of /l/ and /r/
- assists in bolus formation

Lateral Cheek/Tongue Sweep

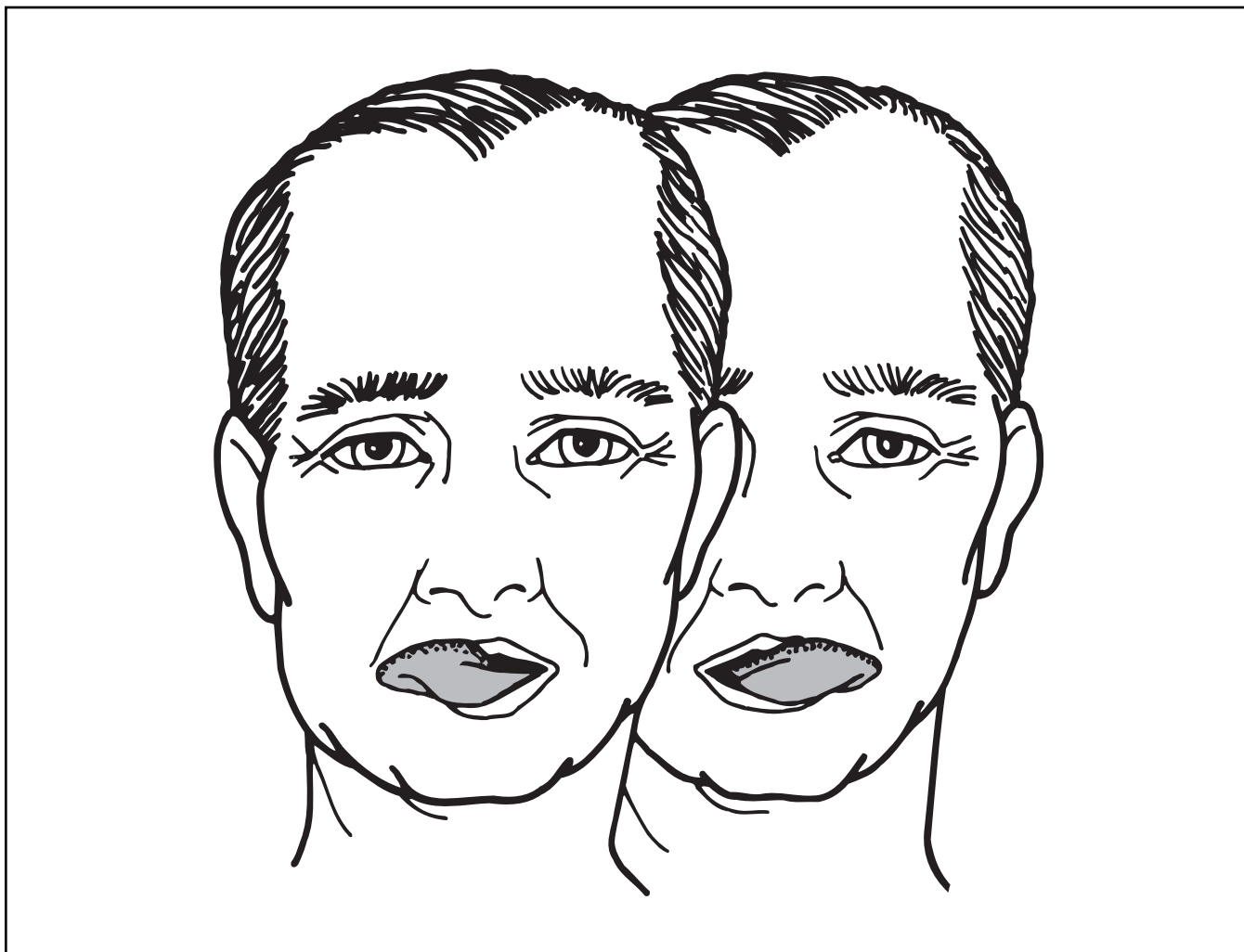


1. Place the tip of the tongue on the inside of the upper lip. Apply pressure to the tongue tip and move the tongue along the inner upper cheek all the way back to the right as shown in picture 1. Bring the tongue back along the inner cheek around to the left side. Repeat on the lower lip and cheek.
2. For more practice, move the tongue tip along the lower surface of the teeth all the way back to the last tooth on the right as shown in picture 2. Return using full motion as you glide the tongue tip to the last tooth on the left.

Benefits

- stretches and strengthens the tongue
- improves and increases range of motion
- assists in buccal (inner cheek) clearing

Lateral Tongue Stretch



Protrude tongue to the right corner of the mouth. Hold to far right corner for 10 seconds. Switch to left corner of mouth, protruding tongue to full extension on the left side. Hold for 10 seconds.

For more practice, do the exercise with the jaw open wide.

Benefits

- stretches and strengthens the back and lateral portions of the tongue
- improves range of motion anteriorly

Exercises for Improved Lingual Control in Deglutition

Note: Assess your client's swallowing competency and determine if client is able to have a safe swallow before performing any of these exercises. Liquids and/or food particles can be spit out if the client is unable to tolerate.

If any aspiration occurs, have the client cough and spit to clear his air passageway. Have suctioning equipment ready, and discontinue the exercise if aspiration is suspected.

1. Textured Foods

Encourage the client to chew textured, hard foods in addition to soft and pureed foods. Have the client avoid liquid consumption during meals to encourage lingual management of the bolus rather than a suck swallow or gulping swallow of foods when washed down with liquids.

2. Dry Swallows

After the client is able to hold the tongue tip to alveolar ridge for approximately 30 seconds, have him perform dry swallows as follows:

- part lips in a smile
- close teeth tightly
- put tongue tip on alveolar ridge
- pretend tongue tip is a straw, sucking in saliva
- immediately swallow, maintaining tongue tip position on alveolar ridge

Remind the client to keep his tongue on the ridge, teeth clenched, and lips parted during the entire exercise. Any movement of the tongue from the ridge or lip quivering and/or lip closure are incorrect and must be stabilized for the development of a normal swallow.

3. Tongue Bowl

To develop the bowl-like positioning of the tongue necessary for bolus formation, gently tap on the front portion of the top of the client's tongue blade. This will encourage an indent or depression in the tongue. Place a Cheerio on the spot, cueing the client by saying, "Make your tongue like a bowl to hold the Cheerio." Then the client can chew and swallow the Cheerio.

Next take a Cheerio, pretzel, tongue depressor, or toothbrush and gently scrape the sides of the tongue while again cueing, “Make your tongue look like a bowl.” Stimulation to the sides/edges of the tongue will encourage awareness of the lateral edges of the tongue and provide tactile sensory stimulation. Then place the Cheerio or pretzel piece inside the bowl. Have the client hold this position momentarily before chewing and swallowing.

4. Tongue Depressor Groove

To further develop the bowl formation of the tongue, have the client attempt to groove his tongue by sliding a tongue depressor down the middle. You might ask the client to fold up the sides of his tongue. Stimulation to lateral edges as described above will identify target musculature and encourage lateral tongue raise and curl. Then ask the client to blow air while slowly lifting the tongue tip. The end result should produce a bowl-like formation.

5. “K” Tongue Stimulation

Have the client open his mouth wide. Stabilize his jaw with a two-finger wide block if tolerated. Have him say “kkkkkkkkkk” to stimulate sensation in the soft palate and to raise the back of the tongue for swallow formation.

6. Dry Gauze Chew

Roll a piece of gauze and hold one end securely as you place it in the client’s mouth. Put it on one side of the tongue for the client to push up onto his teeth for chewing. Have the client chew for 15 seconds. Next place the gauze strip closer to the midline of the tongue and repeat the exercise. Then encourage the client to transfer the gauze to the other side of his mouth using tongue lateralization. Have the client chew for 15 seconds.

7. Licorice Stick Transfer

Firmly hold one end of a licorice stick as you place it about 1½ – 2 inches into the client’s oral cavity. Be careful to avoid placing the licorice stick so far back as to cause a gag reflex. This exercise will increase oral sensation, range of motion of the tongue, and speed of tongue movement. Have the client follow verbal commands to move the licorice stick to target locations in his mouth. If the client is at risk for aspiration, remind him to spit out saliva or food particles. This exercise helps to develop lateral tongue movement necessary in bolus formation, buccal clearing, and bolus transfer.

8. Moist Gauze Suck

To improve lingual raise and bolus formation, moisten a 1½ inch gauze strip with juice and place it on the client's tongue. Hold onto the gauze strip as the client raises his tongue to his alveolar ridge and sucks the gauze into a ball. The client needs to hold his tongue up and keep the juice in place without spillage. Increase the holding time to 5 seconds.

Perform this exercise with the head tilted slightly downward to avoid aspiration. Have the client spit the liquid into a separate cup between each exercise. This exercise may also be performed with cold Jell-O or pudding for thicker consistency and increased oral sensation. The Jell-O or pudding can be moved around to form a bolus.

9. Moist Gauze Swallow

This exercise is the same as #8, with the addition of lingual movement of the tongue from front to back, anterior to posterior. Remind the client to keep his tongue tip on his alveolar ridge. Encourage the client to hold the bolus of liquid in position as described in exercise 8. Then have him squeeze the liquid backward and swallow. Have the client keep his head tilted down. Then have him do a dry swallow.

Word Lists for *Tongue Tip Raise Exercise* (page 200)

/d/ Initial	/d/ Medial	/d/ Final	/d/ Recurring
deep	body	add	Dad
dance	cider	bread	dandelion
deck	Eddie	carved	dead
dish	feeding	could	deduction
dive	Friday	cried	deed
do	hiding	made	defend
doll	Judy	fed	did
done	lady	food	disorder
duke	pudding	good	dived
dump	soda	head	Donald
dinner	today	lemonade	doodle
dizzy	wedding	salad	dude

Word Lists for *Tongue Tip Raise Exercise* (page 200)

/l/ Initial	/l/ Medial	/l/ Final	/l/ Recurring
lamp	alarm	April	label
land	alike	cool	lamplight
lawn	allow	female	landlady
leap	ballet	goal	legal
learn	believe	meatball	lifeline
leg	belong	pale	lilac
leaf	caller	pool	local
lick	color	seashell	loll
limp	Dallas	toenail	lollipop
load	fallen	towel	lonely
look	gallon	wall	loyal
love	Jell-O	yell	skillfully

Word Lists for *Tongue Tip Raise Exercise* (page 200)

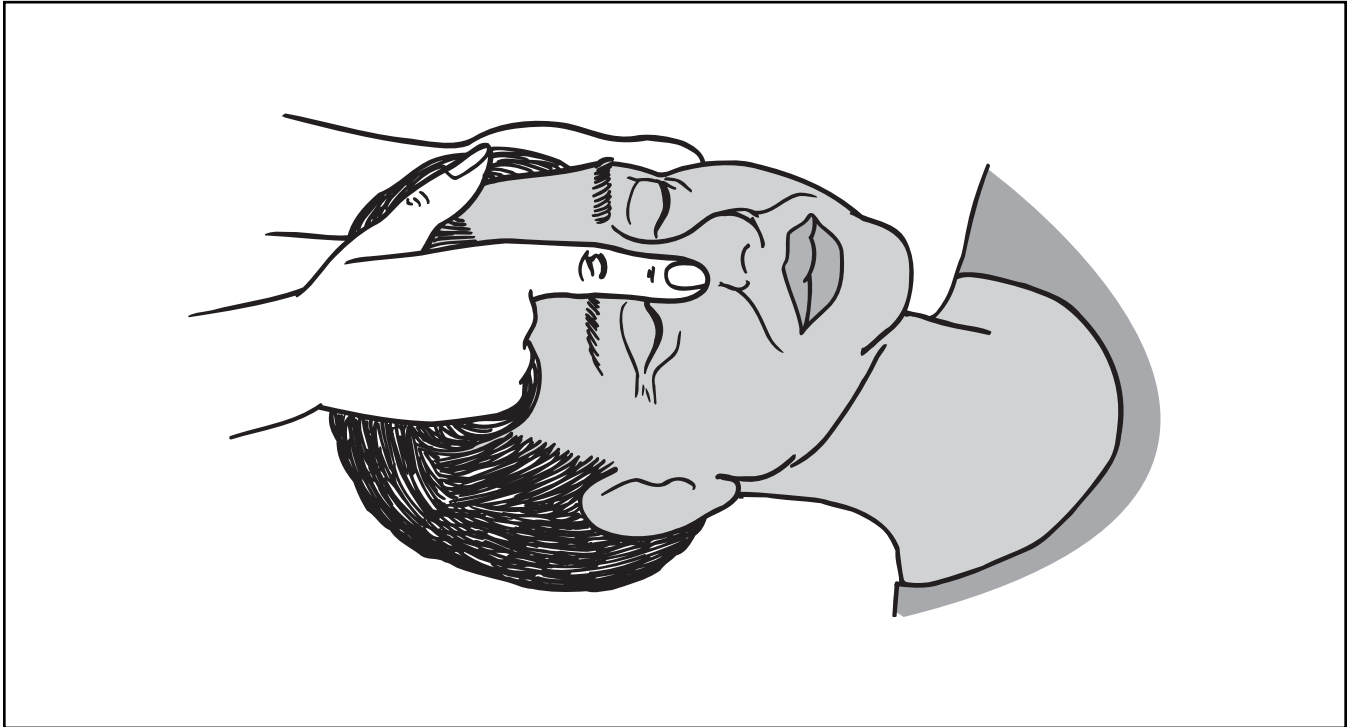
/t/ Initial	/t/ Medial	/t/ Final	/t/ Recurring
taco	biting	about	saltwater
tail	city	basket	tablet
tea	cotton	closet	tasty
teacher	daughter	doormat	tattoo
ten	detail	forget	taught
tiger	eating	meat	tight
tiny	fatter	pat	toaster
toe	heater	wet	tomato
took	hotter	nut	tot
toy	kitten	ate	total
tuna	petal	bite	turtle
turkey	sweeter	feet	tutor

Sentences for *Tongue Tip Raise Exercise* (page 200)

1. Let's have tea instead of coffee.
2. My daughter lives in Colorado.
3. He taught me how to make tacos Friday.
4. We love to eat lime Jell-O.
5. I saw the ballet in Dallas.
6. April is a good month to go to European cities.
7. Should I order cider or lemonade?
8. She collects dishes, dolls, and seashells.
9. Donald forgot to turn the heater down.
10. Pat brought me a lilac today.
11. The lawn is full of dandelions.
12. Eddie doodles turtles and kittens.
13. I like my cookies sweeter.
14. The teacher skillfully handled the debate.
15. The leaves have fallen early this year.
16. Donna adds bread to her meatballs.
17. Please give me a soda with dinner.
18. The groom felt dizzy before the wedding.
19. Do you get a tax deduction this year?
20. Helen carved the turkey for Judy.

Chapter 14: Nasal Exercises

Sinus-Nasal Pressure Point Release



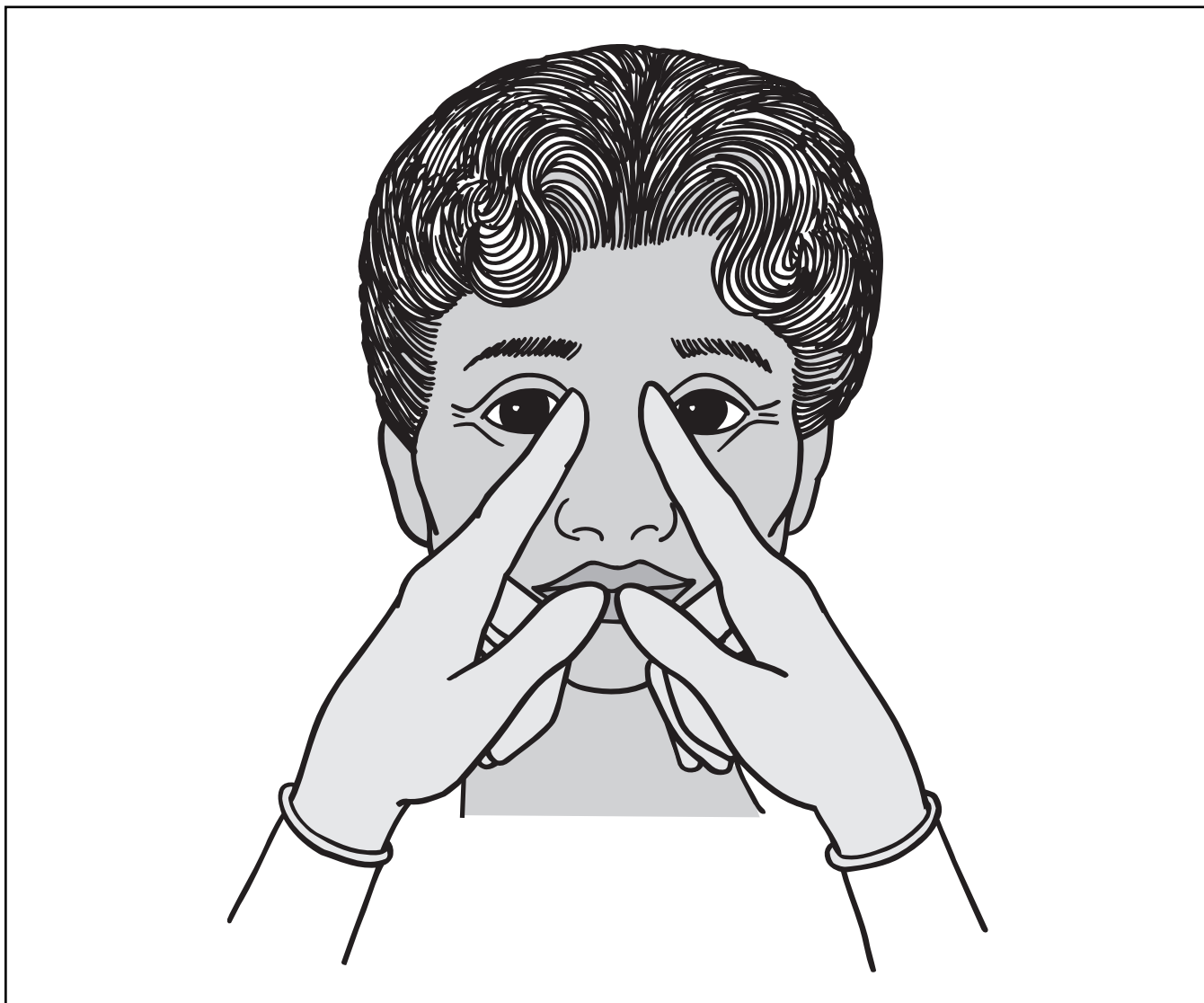
Hold the head with one hand and press against the side of the nose at adjacent spots from top to bottom with the other hand. Hold for 5 seconds at each spot. If you encounter a trigger point or place of muscle tension or discomfort, massage it in a little circle. Repeat on the other side.

To further stretch the muscles, extend fingers laterally down toward the cheek on each side of the nose.

Benefit

- helps clear sinuses

Nasal Pressure

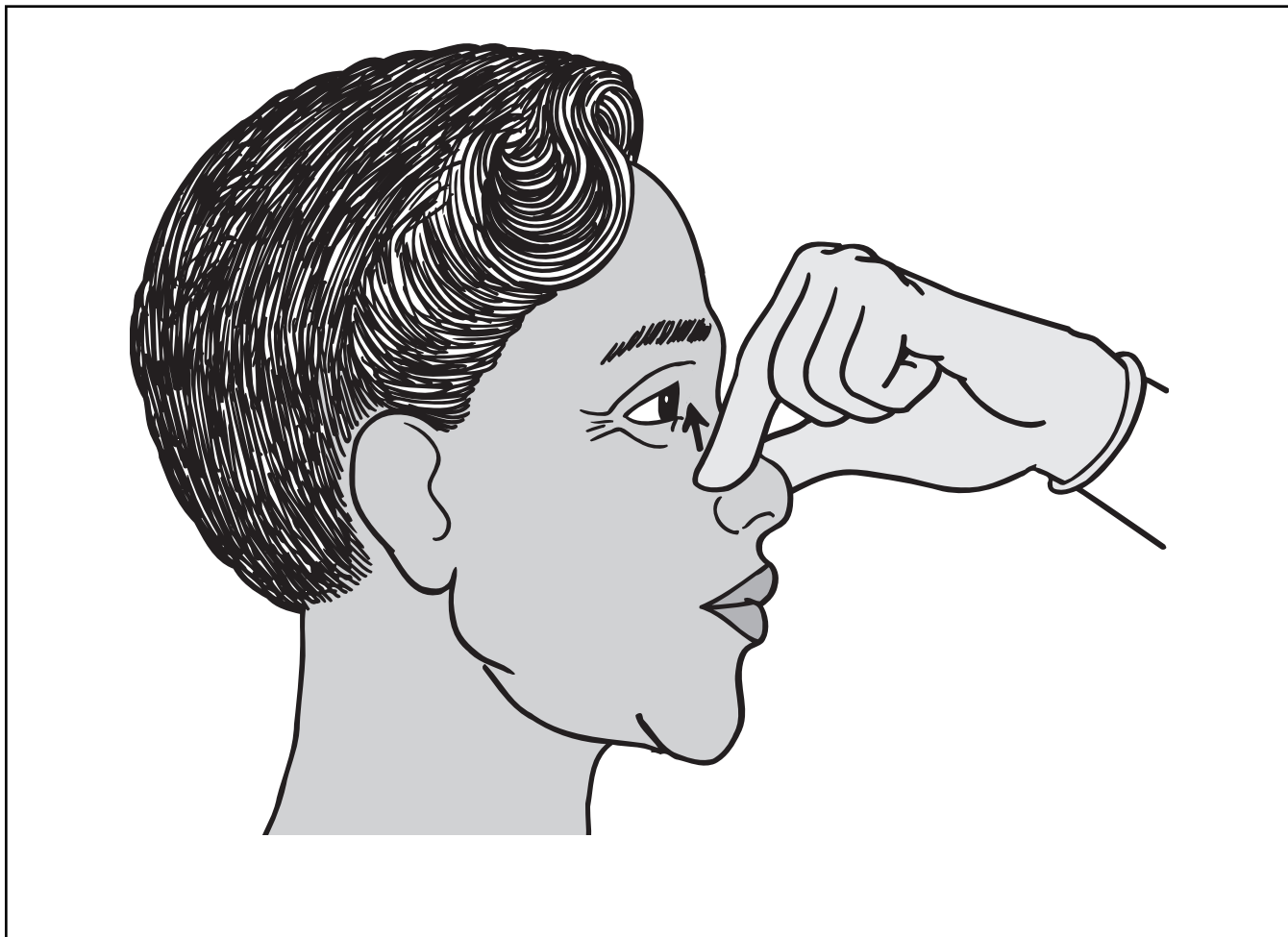


Use index fingers from each hand or use one hand in a “V” position. Apply pressure in toward the nose with fingers directly on either side of bridge of nose, slightly below eyebrows. Apply steady pressure, holding 10 to 15 seconds. Rest. Reapply pressure. Maintain relaxed brow, face, lips, neck, and jaw. Rest elbows on table for increased resistance.

Benefits

- reduces eye muscle strain
- reduces headache and sinus pain

Nasal Pinch 1



Apply pressure and pinch bridge of nose with thumb and forefinger. Squeeze and pull muscle upward and inward until fingers touch. Maintain relaxed brow, cheeks, neck, and jaw. Release after 10 to 15 seconds. Rest. Repeat.

Benefits

- reduces muscle tightness and strain associated with eyes and nose
- reduces facial strain and pain associated with sinus problems

Nose Rub



Bend the nasal cartilage from the tip of the nose with the middle and/or index finger. Attempt to flatten the nose to the left and hold for 15 seconds. Then do it to the right side. Take a deep breath either through the nose or mouth during the exercise to release tension. Repeat twice on both sides.

Benefit

- stretches musculature

Note: If a caretaker or therapist is performing the exercise on the individual, it is highly recommended that she perform the exercise on herself to feel the effect of the stretch to the sinuses, the forehead, ocular, cheek, and jaw musculature to better sense the impact of the exercise.

Sneeze Stopper



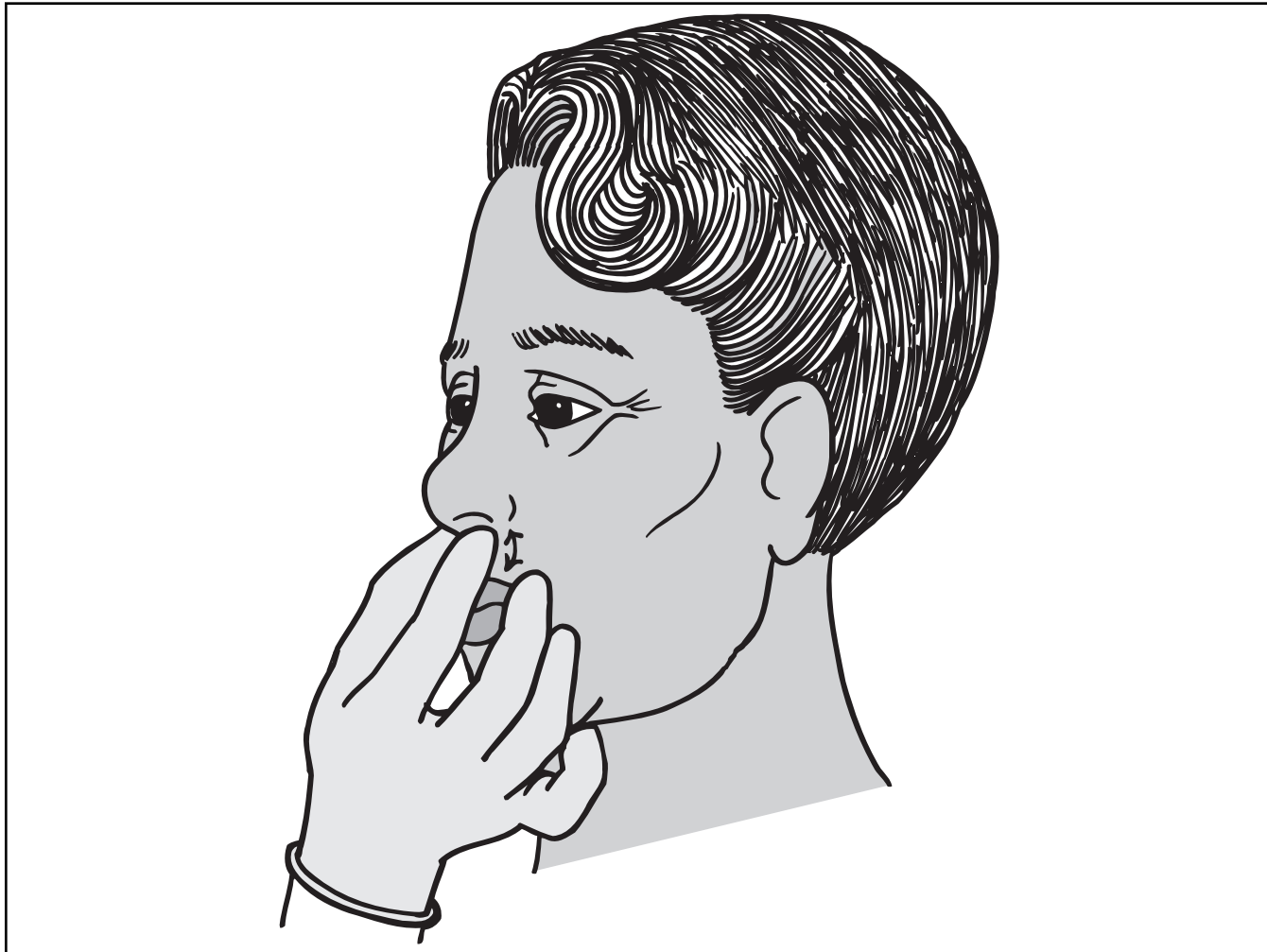
To reduce and/or stop a sneezing episode, rub index finger vigorously under the nose to the left and right. Move the cartilage freely back and forth rapidly. Surprisingly, this works well.

If the sneezing continues, investigate the food or air that might be causing the agitation. Common allergens are dust; dust mites in pillows, bedding, or cloth furniture; scents in laundry detergent; mold; pet dander; cleaning chemicals; dairy; wheat; or corn. Contact physician to report symptoms.

Benefit

- attempts to interrupt excessive sneezing response

Nasal Pinch 2



Pinch the flesh under the nose vertically with the thumb and index finger. Then twist from side to side. Repeat the twisting motion 3 times. Breathe in deeply, holding the breath at first and then exhale effortlessly.

Benefit

- provides acupressure stimulation to pressure points that regulate energy flow for digestive tract (aids in constipation, indigestion, relief of flatulence)

Chapter 15:

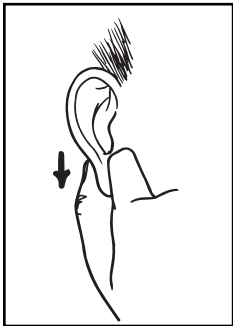
Ears, Eyes, and Brow Exercises

Attending to the Musculature of the Ears

Over 100 body regulating points are in the ears. Stretching the ear relieves tension in the head, especially the temporomandibular joint and surrounding musculature. Deep massage of the ear contributes to good energy flow and corresponding alertness in the individual.

Both ears can be moved at the same time or you can do one ear at a time.

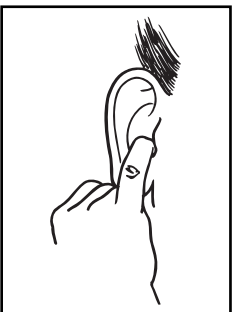
1. Brush the ear forward, flattening it against the head. Repeat the motion 5 times.



2. Pull the earlobe down with the index finger and thumb.

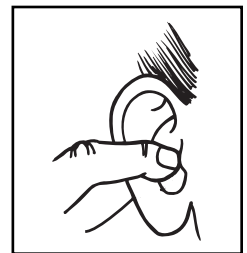
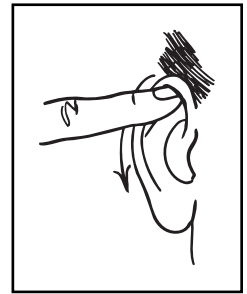
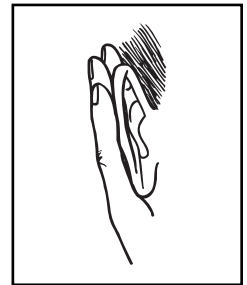


3. Trace the spiral curve of the ear with an index finger. Rub all around the spiral channel 2 to 3 times.



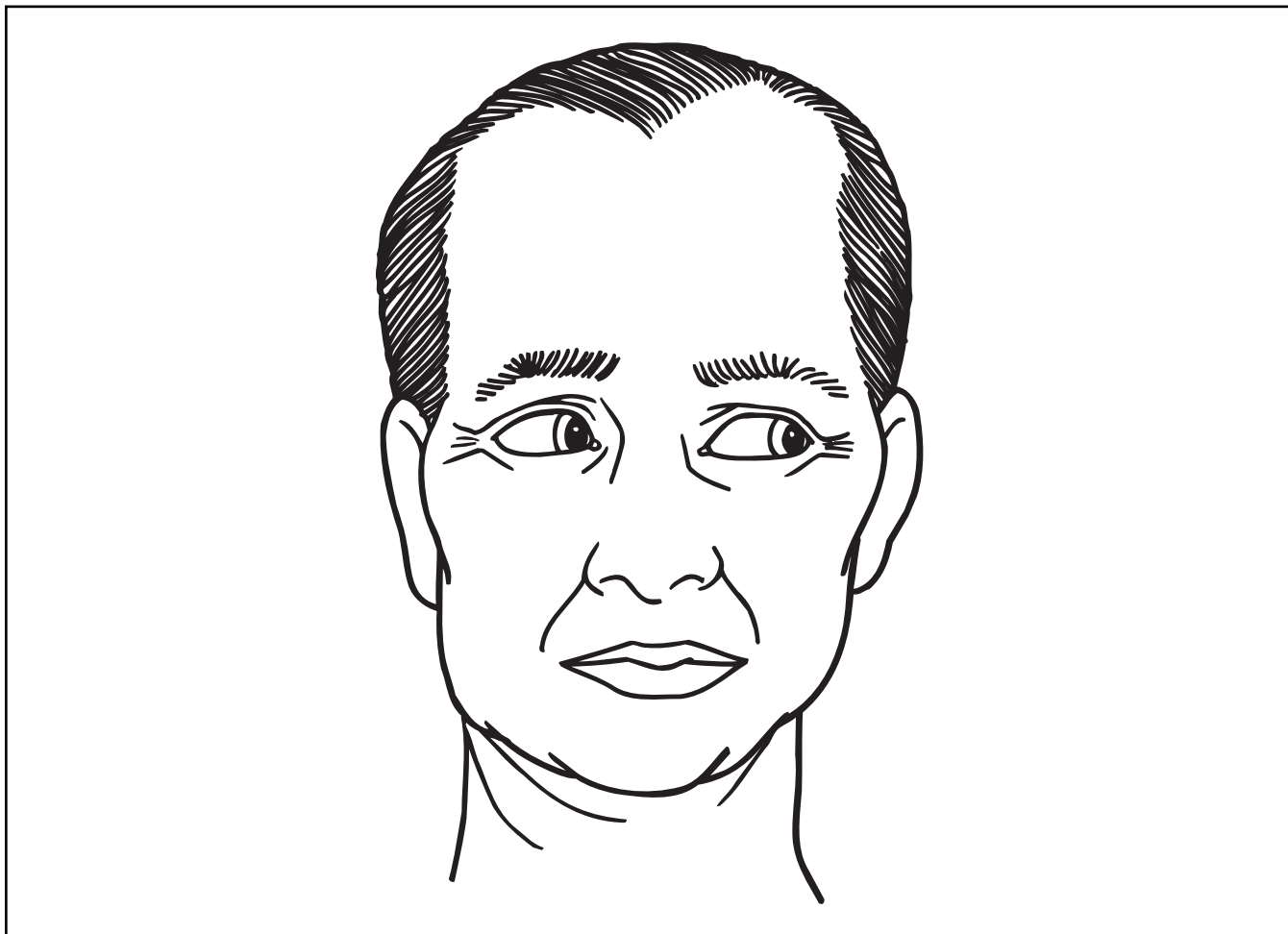
4. Put little finger into the ear opening only and press down. Then push up, push back, and then push forward. Hold each position for 5 seconds.

5. Grab the ridge of the ear close to the ear canal with index finger and thumb. Squeeze inner ridge of earlobe.



Note: After performing these exercises, ask the client, “Do you feel any pain or tension elsewhere in your head, face, or neck?” If the client indicates the back of the neck, for example, continue with interventions that address that area. Releasing blockages, tension, and imbalances in the head, face, oral cavity, and neck may allow the client better control of fine motor musculature for speech, voicing, and swallowing.

Eye Socket Stretch



Keep head upright and stable. Hold something to the client's extreme left within his visual range. Have the client look at it, moving his eyes only. Then hold something on the client's right side. Repeat on each side.

Then have the client look up and then down as much as possible while keeping the head stable.

Remind the client to breathe during this exercise.

Benefit

- stretches the entire ocular and sinus area

Brow Squeeze



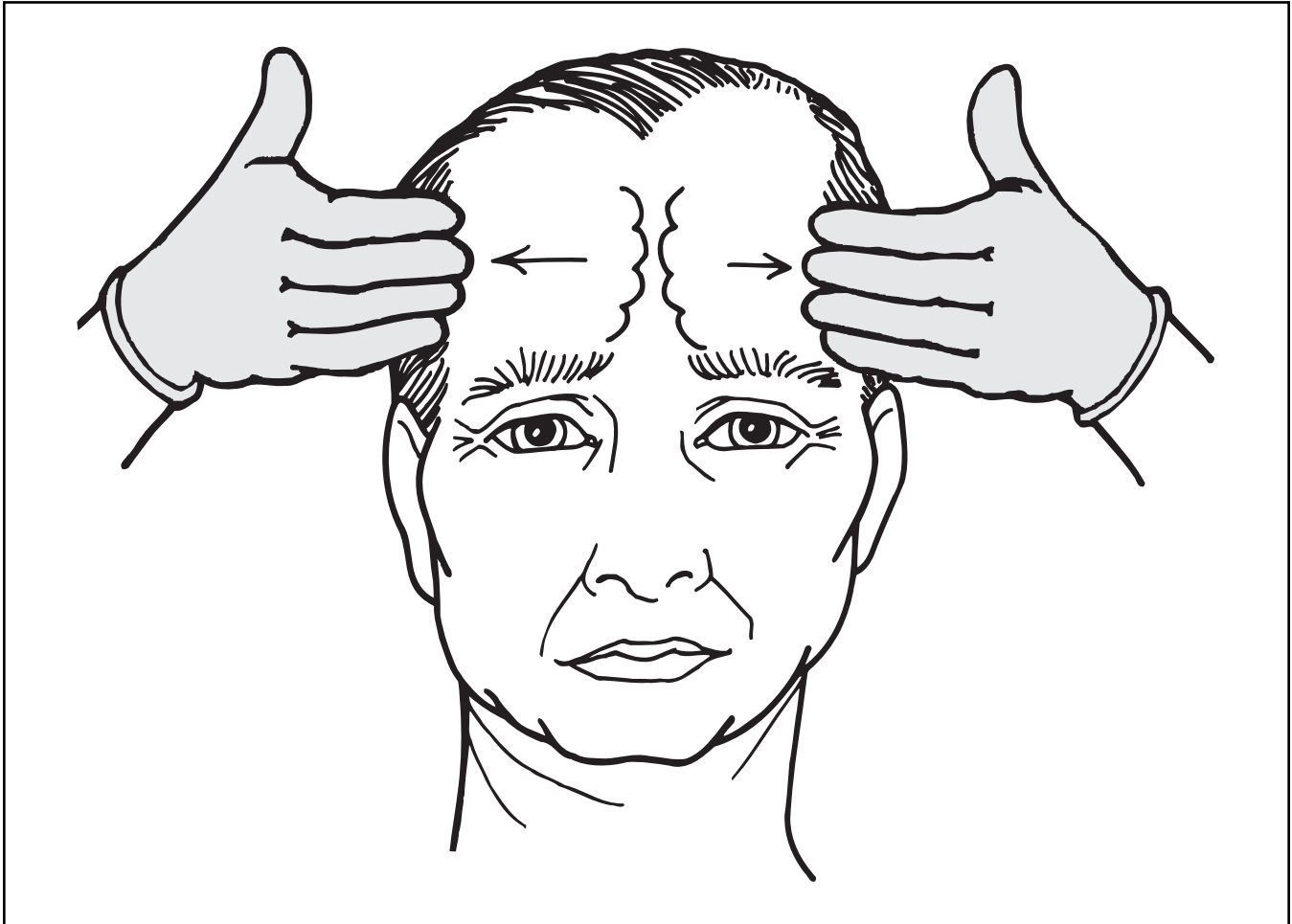
Pinch the eyebrows and pull the fleshy part of the eyebrows out. Begin at the bridge of the nose and work to the outer corner of the eyes. Apply light pressure at first, then stronger pressure on the second pass.

Note: Always address both sides of the body, even if there is severe weakness or paralysis.

Benefit

- releases brow and ocular hypertonicity

Forehead Massage

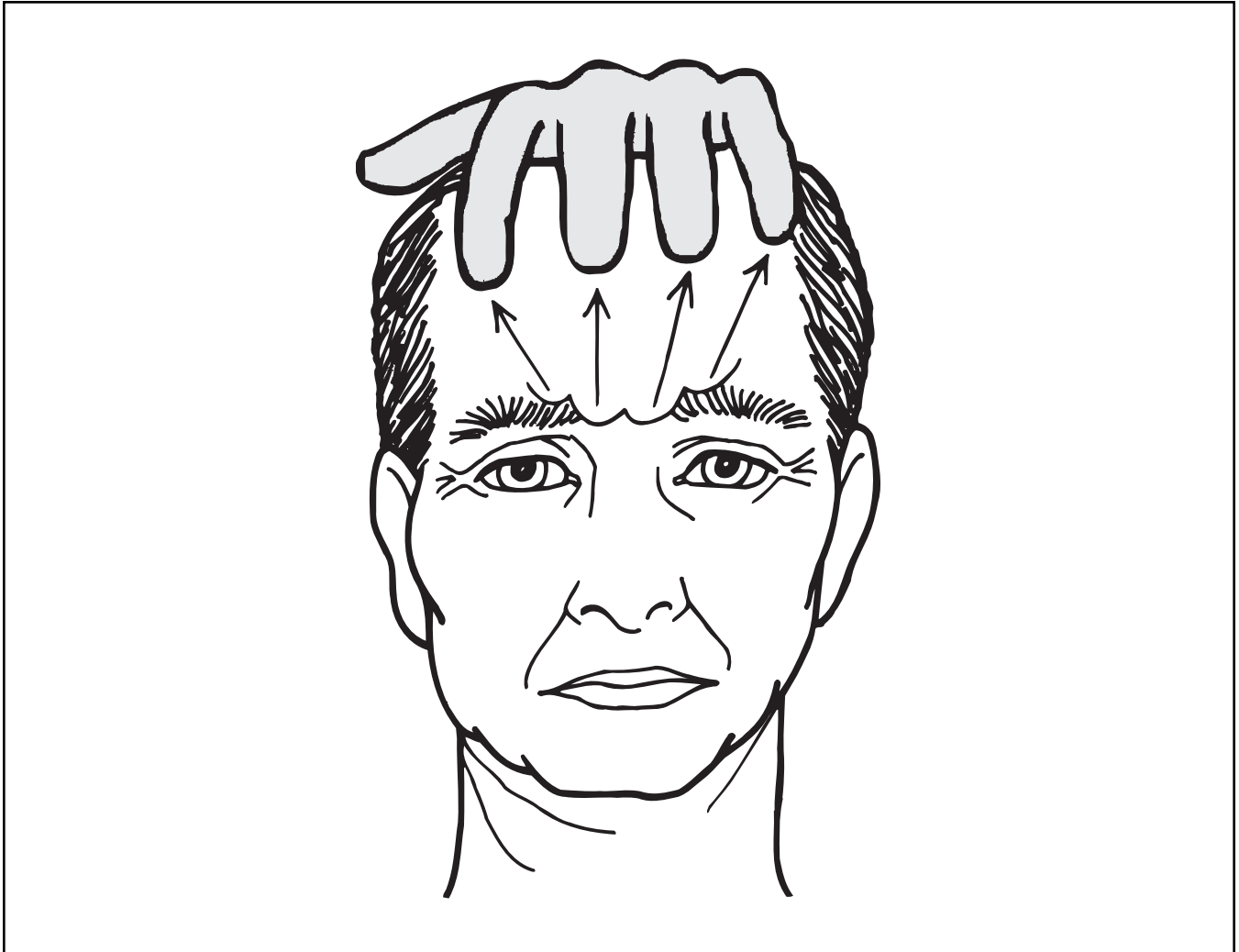


Put all fingers over eyebrows, touching vertically. Apply pressure and pull hands outward toward temples, straight across to right and left. Sustain pressure with fingertips. Repeat.

Benefits

- relaxes and tones head musculature
- reduces muscular strain associated with squinting
- reduces temple pain associated with headaches

Brow and Forehead Stretch



Place fingertips between eyes and above eyebrows with fingers close together. Move fingers upward, fanning fingers with steady pressure into and through hairline. Repeat. Relax all facial musculature.

Benefits

- stretches and tones brow and forehead
- reduces eye and forehead strain, frowning, and squinting

Chapter 16: Assessments, Evaluations, and Forms ---

The evaluations and forms on the following pages will aid you in evaluating and assisting clients with oral-facial disorders.

- Referral Sheet (page 226)
- Request for Release of Medical Records (page 227)
- Oral-Facial Swallowing Evaluation and Rating Scale (pages 228-235)
- Oral-Facial Function Evaluation (page 233)
- Visual Facial Charting (pages 236 and 237)
- Client Care Plan (page 238)
- Neurological Daily Status Update (pages 239-241)
- Speech-Language Pathology Status Update (page 242)

Referral Sheet

Referral Date _____ Agency _____

Client Name _____ Date of Birth _____

Client Number _____ Age _____

Address _____

Start of Care _____

Physician _____ Phone _____

Caregiver/Contact _____

Primary Diagnosis _____

Secondary Diagnosis _____

Medications _____

Are client and family aware of diagnosis? _____

Physical Limitations _____

Food Allergies _____

Reports of Other Testing _____

Other Services the Client Is Receiving _____

Clinician's Name _____

Date and Time of Scheduled Evaluation _____

Notes _____

Request for Release of Medical Records

To _____

Physician

Street Address

City

State

Zip

I hereby request that my medical records be released to:

Physician

Street Address

City

State

Zip

Client (Print name)

Client Signature

Street Address

City

State

Zip

Birthdate

Social Security Number

Oral-Facial Swallowing Evaluation and Rating Scale

Client Name _____ Evaluation Date _____

Date of Birth _____ Clinician _____

Primary Diagnosis _____ Date of Onset _____

Secondary Diagnosis _____ Date of Onset _____

Medical History (past/present): _____

Medication (past/present): _____

Allergies (past/present): _____

Surgeries or Medical Intervention _____

Respiratory status respiratory therapy

tracheostomy tube status (history of pneumonia) _____

General physical status (e.g., weak, dehydrated) _____

Orientation Test to Determine Accurate Yes/No Responses

Check all that apply.

- | | |
|--|--|
| <input type="checkbox"/> Are you a man or a woman? | <input type="checkbox"/> Is your name Bob? |
| <input type="checkbox"/> Are you tall? | <input type="checkbox"/> Are you wearing gloves? |
| <input type="checkbox"/> Are you eating? | <input type="checkbox"/> Do you have a hand? |
| <input type="checkbox"/> Are you standing? | <input type="checkbox"/> Is there a glass on the table? |
| <input type="checkbox"/> Is it nighttime? | <input type="checkbox"/> Look to the left. Is there a glass there?
(Place glass on left or right and ask
yes/no question.) |

___/10 Total Correct ___% Average response time per question _____

Comments: _____

Sensory Processing

Check all that apply.

- overreacts to touch or physical contact. (Individual may hit, withdraw, or crave touch)
- fearful of movements (e.g., taking a drive in the car, movement in the wheelchair)
- avoids crowded areas (e.g., mall, gym, grocery store, theater)
- tends to touch everything he/she sees
- avoids textures (e.g., sticky, rough, textured, wet, cold)
- overly sensitive to sounds, dislikes loud sounds
- distractible/impulsive/hyperactive
- tends to repeat to self
- marked mood variations: outburst, tantrums, silliness, excuses
- self-stimulatory behavior (e.g., hitting head, scratching) List: _____

- attention to task

Describe the task: _____

Additional Observations: _____

Cognitive Function

Check all that apply.

- | | | |
|---|--------------------------------------|-----------------------------------|
| <input type="checkbox"/> alert | <input type="checkbox"/> disoriented | <input type="checkbox"/> agitated |
| <input type="checkbox"/> follows commands | <input type="checkbox"/> aphasic | <input type="checkbox"/> apraxic |
| <input type="checkbox"/> lethargic | <input type="checkbox"/> dysarthric | |

Cognitive Function: _____

Memory/Attention: _____

Vision: _____

Hearing: _____

Other: _____

Gross Motor/Fine Motor Skills

Resting Posture: _____

Feeding Posture: _____

Food Transfer Skills: _____

Handedness: _____

Assisted by: _____

Adaptive Feeding Equipment: _____

Description of Swallowing

Current Nutritional Inventory

Date of Transfer to Each

- | | |
|---|-------|
| <input type="checkbox"/> oral | _____ |
| <input type="checkbox"/> nasogastric tube | _____ |
| <input type="checkbox"/> intravenous | _____ |
| <input type="checkbox"/> gastrostomy | _____ |
| <input type="checkbox"/> other _____ | _____ |

Weight ____ (gain or loss) Hydration needs: _____

Special Dietary Concerns: (e.g., sodium, albumin, total protein levels, sugar, potassium)

Oral Transit Time and Motion of Tongue: _____

Description of Swallowing, *continued*

Swallow Reflex:

- immediate to under one second
- under two seconds
- several second delay
- double swallow observed before bolus cleared

Reported time taken for a typical meal: _____

Check all that apply during or after swallowing:

- | | |
|---|---|
| <input type="checkbox"/> choking | <input type="checkbox"/> watery eyes |
| <input type="checkbox"/> increase in heart rate | <input type="checkbox"/> nasal regurgitation |
| <input type="checkbox"/> coughing | <input type="checkbox"/> taste change |
| <input type="checkbox"/> appetite change | <input type="checkbox"/> dry mouth |
| <input type="checkbox"/> heartburn | <input type="checkbox"/> pain |
| <input type="checkbox"/> difficulty catching breath | <input type="checkbox"/> increased congestion |
| <input type="checkbox"/> change in ability to smell | <input type="checkbox"/> voice change (e.g., wet voice quality) |
| <input type="checkbox"/> mouth odor | <input type="checkbox"/> drooling or spillage of food or liquid |
| <input type="checkbox"/> pocketing of food between the cheek and gum or anywhere else | <input type="checkbox"/> sensation of food getting “stuck” |

Check all techniques client currently uses to compensate:

- | | |
|--|--|
| <input type="checkbox"/> double swallow | <input type="checkbox"/> separates consistencies |
| <input type="checkbox"/> head down | <input type="checkbox"/> decreases bolus size |
| <input type="checkbox"/> turns head toward weaker side | <input type="checkbox"/> slows feeding |
| <input type="checkbox"/> coughs | <input type="checkbox"/> expectorates |
| <input type="checkbox"/> holds breath | |

List tolerances with food consistencies and food preferences (as observed by family, caregivers, nursing staff, and food testing)

Describe type and amount of food and liquid consumed in 48-hour period (include number of meals)

Description of Swallowing, *continued*

Describe changes in oral sensation (change in temperature awareness, change in taste awareness)

- no swallowing difficulties observed and/or reported
- possible swallowing difficulties observed and/or reported
- swallowing difficulties observed and/or reported

Notes: _____

Oral-Facial Structure Examination (Check if structure is present and within normal limits.

Note any changes, abnormalities, prosthesis and if oral-facial structure or deviation is possibly contributing to dysphagia)

- lips _____
- teeth _____
- tongue _____
- floor of mouth _____
- cheeks _____
- faucial arches _____
- tonsils _____
- hard palate _____
- soft palate _____
- uvula _____
- posterior pharyngeal wall _____
- maxilla _____
- mandible _____

Oral-Facial Function Evaluation

Rating Scale Key

(Circle more than one number if needed.)

- | | |
|---|--|
| <p>1 - Appropriate range of motion, strength of musculature, and rate</p> <p>2 - Slowed rate (range of motion and tone normal)</p> <p>3 - Reduced range of motion</p> <p>4 - Abnormal or atypical movement patterns</p> | <p>5 - Mild to moderate muscle weakness</p> <p>6 - Severe muscle weakness</p> <p>7 - Paresis</p> <p>NA - Not applicable or not age appropriate</p> |
|---|--|

Musculature	Rating	Observations
	Normal ————— Paresis	(Note asymmetry, hypotonicity, hypertonicity, or compensating musculature)
Lip Closure resting position bilabial repetition during oral phase/swallow	1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA	
Lateralization Purse	1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA	
Tongue Elevation of Tip slight jaw opening wide jaw opening sweep front to back on hard to soft palate placement during repetition of /ti/ placement /t/ or /d/ in sentence ("I eat at Tammy's house tonight" or "Dig down under the dirt, Diane.")	1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA	
Tongue Elevation of Back slight jaw opening wide jaw opening placement during repetition of /ki/ placement /k/ or /g/ in sentence ("Can I cook corn on the cob, Mickey?" or "Goggles are good for swimming.")	1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA	
Tongue Retraction Tongue Widening	1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA	
Tongue Lateralization front left back left front right back right left buccal sweep right buccal sweep	1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA	
Mandible left right open	1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA	
Neck head to left head to right head down front	1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA 1 2 3 4 5 6 7 NA	

Pharyngeal/Gag Reflex (Tell client you are going to gag him/her to note pharyngeal musculature. Describe strong sphincter contraction of pharyngeal wall, elevation of soft palate, bilateral uniform movement, or weakness unilaterally or bilaterally.)

Ability to chew (appropriate, restricted, weak) _____

Ability to cough (on command, estimated strength of cough) _____

Ability to clear throat (on command, estimated strength of throat clear) _____

Phonation (Circle applicable characteristics.)

- | | | |
|--|--------------------|-----------------------------|
| hoarse | breathy | harsh |
| glottal fry | diplophonia | tremor |
| pitch breaks | aphonia | whisper |
| monotone | hypernasal | hyponasal |
| pharyngeal fricatives | nares constriction | situational or intermittent |
| strained | phonation breaks | hard glottal attack |
| cul-de-sac (obstructed, closed back sound) | | |

Intelligibility _____

Vocal quality _____

Loudness _____

Pitch _____

Rate _____

Intonation _____

Resonance _____

Maximum phonation time for /a/: _____ seconds (average adult 15-20 seconds)

Maximum phonation time for /i/: _____ seconds (average adult 15-22 seconds)

Check if observed:

- | | |
|--|--|
| <input type="checkbox"/> congestion | <input type="checkbox"/> audible inhalations |
| <input type="checkbox"/> mouth breathing | <input type="checkbox"/> enlarged tonsils/adenoids |
| <input type="checkbox"/> current upper respiratory infection | <input type="checkbox"/> nasal emission of air |
| <input type="checkbox"/> facial grimacing | <input type="checkbox"/> neck/laryngeal tension |
| <input type="checkbox"/> excessive mucosa/saliva | |

Phonation, *continued*

Check if reported:

- habitual throat clearing
- habitual coughing
- screaming
- loud crying
- loud sound and voice imitations
- smoking (past or present) _____
- alcohol consumption (past or present) _____
- other _____

Interpersonal Considerations (Check if indicated and elaborate.)

- | | |
|--|---|
| <input type="checkbox"/> inappropriate actions or responses | <input type="checkbox"/> anxiety |
| <input type="checkbox"/> poor motivation | <input type="checkbox"/> anger |
| <input type="checkbox"/> depression | <input type="checkbox"/> lacking listening skills |
| <input type="checkbox"/> stress | <input type="checkbox"/> aggressive behavior |
| <input type="checkbox"/> denial associated with abilities and recovery | <input type="checkbox"/> verbally abusive |

Comments _____

Describe living situation (Note how client best communicates or relates to hobbies, interests, favorite TV shows, music, etc.): _____

Impressions: _____

Recommendations: _____

Referrals: _____

Evaluator Signature

Date

Physician Signature

Date

Sample Visual Facial Charting (Pre/Post Therapeutic Intervention)

Client Name _____ Evaluation Date _____

Diagnosis right side weakness and left side compensating tension

Initial Evaluation Re-evaluation

(Mark as if you're looking directly at the client.)

R
L

Key _____

<p>X hypertonic (tense)</p> <p>blank . . . normal</p> <p>P pain</p>	<p>lightly shaded hypotonic (flaccid)</p> <p>darkly shaded paresis</p> <p>O → (See notes to side of diagram.)</p>
--	--

Suggested Re-evaluation Date

Evaluator

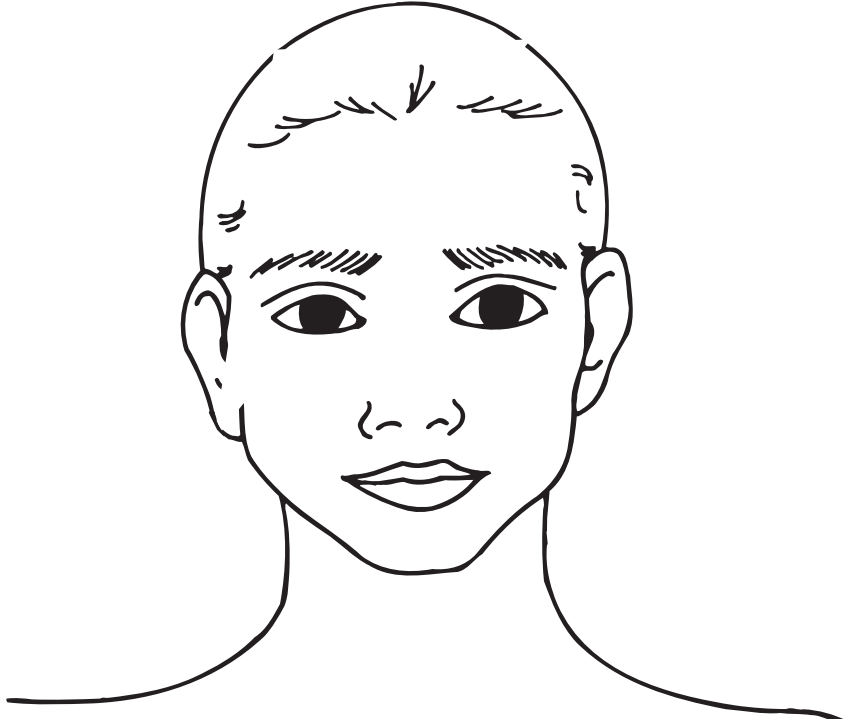
Visual Facial Charting (Pre/Post Therapeutic Intervention)

Client Name _____ Evaluation Date _____

Diagnosis _____

Initial Evaluation Re-evaluation

(Mark as if you're looking directly at the client.)

R	L						
							
<p>Key _____</p> <table style="width: 100%; border: none;"><tr><td style="width: 50%; border: none;">X hypertonic</td><td style="width: 50%; border: none;">lightly shaded hypotonic</td></tr><tr><td style="border: none;">blank normal</td><td style="border: none;">darkly shaded paresis</td></tr><tr><td style="border: none;">P pain</td><td style="border: none;">O → (See notes to side of diagram.)</td></tr></table>		X hypertonic	lightly shaded hypotonic	blank normal	darkly shaded paresis	P pain	O → (See notes to side of diagram.)
X hypertonic	lightly shaded hypotonic						
blank normal	darkly shaded paresis						
P pain	O → (See notes to side of diagram.)						

Suggested Re-evaluation Date

Evaluator

Client Care Plan

Client Name _____

Start of Care _____

Client Number _____

Discharge _____

Clinician _____

Date	Problem	Goal	Intervention Strategy	Date Achieved	Updated Information

Neurological Daily Status Update

Client _____

Time																			
Date																			
Initials																			
Nutrition Intake Method	Oral																		
	PEG tube																		
	N-G tube																		
	Combination																		
Food Consistency Type	Liquids																		
	Pureed																		
	Mechanical soft																		
	Hard foods																		
Rancho Levels of Cognitive Functioning*	No response																		
	Generalized response																		
	Localized response																		
	Confused-Agitated																		
	Confused-Inappropriate																		
	Confused-Appropriate																		
	Automatic-Appropriate																		
Purposeful-Appropriate																			

* See Appendix A, page 243.

Appendix A:

Rancho Levels of Cognitive Functioning

It is imperative to know the cognitive functioning level of the client to determine the type of therapeutic intervention. The following scale can augment observation and testing in determining cognitive functioning and initiation of therapeutic intervention.

Level One: No Response

- No response to pain, touch, sound, or sight
- Appears to be in a deep sleep

Level Two: Generalized Response

- Responses inconsistent independent of stimuli presented
- Delayed responses characterized by gross body movements and/or vocalizations
- Response to deep pain

Level Three: Localized Response

- Responses are directly related to stimulus presented. For example, turning head toward sound.
- Follows commands inconsistently in delayed manner
- Shows vague body awareness such as pulling at N-G tube or resisting restraints
- Shows a bias by responding to one individual over another, such as family, but not clinician

Level Four: Confused-Agitated

- Alert, very active, aggressive, or bizarre behaviors
- Performs motor activities, but behavior is non-purposeful
- Extremely short attention span
- Unaware of present events and responds to past events
- Unable to perform hygiene or self-care

Level Five: Confused-Inappropriate

- Gross attention to environment
- Highly distractible
- Requires continual redirection
- Difficulty learning new tasks
- Agitated by too much stimulation

- May engage in social conversation, but with inappropriate verbalizations
- Responds to simple command fairly consistently
- Performs self-care with assistance
- Inappropriate use of objects without outside direction

Level Six: Confused-Appropriate

- Goal directed behavior with external output
- Able to tolerate unpleasant stimuli (e.g., N-G tube)
- Inconsistent orientation to time and place
- Retention span/recent memory impaired
- Begins to recall past
- Consistently follows simple directions
- Goal-directed behavior with assistance

Level Seven: Automatic-Appropriate

- Performs daily routine in highly familiar environment in a non-confused but automatic robot-like manner
- Skills noticeably deteriorate in unfamiliar environment
- Lacks realistic planning for own future
- Shows increased awareness of self, family, food, and environment
- Unable to drive a car
- Pre-vocational skill assessment indicated at this point

Level Eight: Purposeful and Appropriate

- Alert and able to integrate past, recent, and present events
- Requires no supervision and is independent based on physical capabilities
- Social, emotional, and intellectual abilities may be reduced, but client is functional for society

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Appendix B: Standardized Speech Samples

It is helpful to have a standardized speech sample. Have the individual read the entire first paragraph but do not measure the first and last sentences. The remaining four sentences provide a 55-word (76-syllable) sample. The entire Rainbow Passage is included for further sample material.

The Rainbow Passage

When sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.

Throughout the centuries men have explained the rainbow in various ways. Some have accepted it as a miracle without physical explanation. To the Hebrews it was a token that there would be no more universal floods.

The Greeks used to imagine that it was a sign from the gods to foretell war or heavy rain. The Norsemen considered the rainbow as a bridge over which the gods passed from the earth to their home in the sky. Other men have tried to explain the phenomenon physically. Aristotle thought that the rainbow was caused by reflection of the sun's rays by the rain. Since then physicists have found that it is not the reflection, but refraction by the raindrops which causes the rainbow. Many complicated ideas about the rainbow have been formed. The difference in the rainbow depends considerably upon the size of the water drops, and the width of the colored band increases as the size of the drops increases.

The actual primary rainbow observed is said to be the effect of superposition of a number of bows. If the red of the second bow falls upon the green of the first, the result is to give a bow with an abnormally wide yellow band, since red and green light when mixed form yellow. This is a very common type of bow, one showing mainly red and yellow, with little or no green or blue.

Grandfather Passage

You wish to know all about my grandfather. Well, he is nearly 93 years old, yet he still thinks as swiftly as ever. He dresses himself in an old black frock coat, usually several buttons missing. A long beard clings to his chin, giving those who observe him a pronounced feeling of the utmost respect. When he speaks, his voice is just a bit cracked and quivers a bit. Twice each day he plays skillfully and with zest upon a small organ. Except in the winter when the snow or ice prevents, he slowly takes a short walk in the open air each day. We have often urged him to walk more and smoke less, but he always answers, "Banana oil!" Grandfather likes to be modern in his language.

The Wish

May you always find serenity and tranquility in a world you may not understand.

May the pain you have known and the conflict you have experienced give you the strength to walk through life facing each new situation with courage and optimism. Always know that those who love and understand will be there, even when you feel most alone. May you discover enough goodness in others to believe in a world of peace. May a kind word, a reassuring touch, and a warm smile be yours every day of your life, and may you give these gifts as well as receive them. Remember the sunshine when the storm seems unending. Teach love to those who know hate and let that love embrace you as you go into the world.

May the teachings of those you admire become part of you so that you may call upon them. Remember that those whose lives you have touched and who have touched yours are always a part of you, even if the encounters were less than you would have wished. It is the content of the encounter that is more important than the form. May you not become too concerned with material matters, but instead place immeasurable value on the goodness in your heart. Find time in each day to see beauty and love in the world around you.

Realize that each person has limitless abilities, but each of us is different in our own way. What you may feel you lack in one regard may be more than compensated for in another. What you feel you lack in the present may become one of your strengths in the future. May you see your future as one filled with promise and possibility. Learn to view everything as a worthwhile experience. May you find enough inner strength to determine your own worth by yourself, and not be dependent on another's judgment of your accomplishments.

May you always feel loved.

Affirmation for Composure and Harmony

Composed and peaceful, I enter a meaningful and productive day. In the course of the day beginning, I shall welcome difficulties with composure, remembering that hardships are there to challenge my fortitude and develop my strength. I will make everyone I meet today a better person; every act of mine will be a sign of peace and of the voice of nature.

(de Langre 1989)

Appendix C: Vitamins and Minerals

Taking supplements such as vitamins and minerals has been shown to raise resistance to disease, increase energy, and improve overall well-being. Taking supplements is not the only way to achieve absorption of vital nutrients. Eating a healthy, balanced diet can provide the minerals, vitamins, and fiber we need. The lists on pages 249 and 250 show the vitamins and minerals found in most foods.

It is best to contact an SLP if you have difficulty with swallowing to determine what consistencies are tolerated. Many foods can be ground or blended to meet your swallowing program.

Contact your physician for a referral to a knowledgeable nutritionist. A nutritionist can educate you further about food combining, adequate protein, and carbohydrate and fat consumption to maintain vitality, memory, and appropriate cellular functioning. Some diets restrict sodium and/or potassium. Other diets require you to eat more vitamin B rich foods. The lists of vitamins and minerals will help you identify foods to include or eliminate.

Remember, recovery takes place on many levels throughout the whole body. It requires patience and perseverance. Eating a balanced diet, including a balance of vitamins and minerals, can provide energy to help your body regain function. If you are having trouble getting all the vitamins and minerals you need through food, products like Ensure can help you. It is a liquid that can be included with all meals. Ensure can be purchased at most grocery and drug stores.

For optimal performance during recovery, all areas need to be addressed.

- diet
- ample rest
- emotional release and education
- muscle rehabilitation
- appropriate and timely medical care
- support and recovery through therapy, caregiving, and community services

Note: Most of the items listed on pages 249 and 250 can be found at the grocery store. Less common items can be found at a natural or health food store.

Vitamins

- A** milk, eggs, butter, yellow fruits & vegetables, dark green fruits & vegetables, liver
- C** citrus fruits, cabbage family, chili peppers, any kind of berries, melons, asparagus, rose hips (e.g., used in soups or as a tea)
- D** salmon, sardines, herring, milk, egg yolks, liver, sprouted seeds (clover, radishes, etc.)
- E** cold-pressed oils, eggs, wheat germ, liver, molasses, sweet potatoes, any kind of nuts
- F** vegetable oils, butter
- K** green leafy vegetables, egg yolks, safflower oil, blackstrap molasses, cauliflower
- P** fruits, black currants, buckwheat
- Q** pinto beans, legumes, soybeans
- T** butter, egg yolks
- U** raw cabbage, sauerkraut, leafy vegetables (romaine lettuce, kale, bok choy, etc.)
- B-1** Brewer's yeast, whole grains, blackstrap molasses, brown rice, liver, egg yolks
- B-2** Brewer's yeast, whole grains, legumes, any kind of nuts, liver, blackstrap molasses
- B-3** lean meats, poultry, fish, Brewer's yeast, peanuts, milk, rice bran, potatoes
- B-4** egg yolks, liver, Brewer's yeast, wheat germ, soybeans, fish, legumes
- B-5** liver, egg yolks, legumes, whole grains, wheat germ, salmon, Brewer's yeast
- B-6** meats, whole grains, liver, Brewer's yeast, blackstrap molasses, wheat germ
- B-7** egg yolks, liver, brown rice, Brewer's yeast, sardines, legumes, whole grains
- B-8** whole grains, citrus fruits, molasses, any kind of meat, milk, any kind of nuts, vegetables, Brewer's yeast
- B-9** dark, green leafy vegetables, liver, root vegetables (rutabagas, potatoes, turnips, beets, etc.), oysters, salmon, milk
- B-12** liver, fish, pork, eggs, cheese, milk, lamb, bananas, kelp, peanuts
- B-13** liquid whey, beets, carrots, celery root, garlic, horseradish, onions, parsnips, potatoes, radishes, sweet potatoes, turnips, yams
- B-15** Brewer's yeast, rare steaks, brown rice
- B-17** any kind of beans, lentils, legumes, any kind of nuts
- PABA** liver, wheat germ, yogurt, molasses, green leafy vegetables

Minerals

arsenic	asparagus, celery, quail, salmon
bromine	melons, cucumbers, alfalfa, turnips, seafood
calcium	shellfish, milk, cheese, greens (collard greens, kale, etc.), apricots, figs, cabbage, bran
chlorine	goat and cow milk, salt, fish, cheese, coconut, beets, radishes, avocados, kelp
chromium	corn oil, clams, whole grain cereals, Brewer's yeast
cobalt	liver, oysters, clams, poultry, milk, green leafy vegetables, fruit
copper	liver, seafood, any kind of nuts, legumes, molasses, raisins, whole grain cereals
fluorine	cauliflower, cabbage, cheese, brussels sprouts
fluoride	tea, seafood, fluoridated water
iodine	sea lettuce, kelp, seafood, carrots, pears, onions, tomatoes, pineapples, pears
iron	liver, eggs, fish, poultry, blackstrap molasses, apricots, potato peelings
magnesium	nuts, figs, green vegetables, seafood, molasses, yellow corn, coconuts, apples
manganese	beets, peas, citrus fruits, bran, green vegetables, kelp, egg yolks, nuts, pineapples
molybdenum	legumes, whole grain cereals, milk, liver, dark green vegetables
nickel	all vegetables
phosphorous	milk, cheese, meat, fish, fowl, grains, nuts, egg yolks, any kind of beans, lentils, peas
potassium	lean meats (pork, chicken, turkey), dried fruits, legumes, vegetables, cereals, nuts, seeds
selenium	tuna, herring, Brewer's yeast, wheat germ, bran, broccoli, whole grains
silicon	apples, kelp, grapes, beets, onions, almonds, seeds, parsnips, grains, tomatoes
sodium	watermelon, romaine lettuce, celery, kelp, sea salt, asparagus, okra, carrots, coconuts
sulphur	eggs, meat, fish, cabbage, brussels sprouts, horseradish, shrimp, chestnuts
tin	red meat, poultry, spinach, kale, cauliflower, asparagus
vanadium	herring, sardines, vegetables grown in vanadium-rich soil
zinc	seafood, liver, mushrooms, soybeans, Brewer's yeast

Appendix D: Client Goals

Positioning

Client will achieve appropriate head positioning for improved eye contact and stabilization of head and neck in midline through any of the following interventions: lateral pillow supports; lateral and/or back towel supports; reclining of chair; raising visual material and/or work table area; ongoing head and neck exercise program for toning, strengthening, and control. These efforts for improved positioning increase the client's ability to reduce head and neck strain and improve vocal loudness and quality.

Posturing and Body Stretch

Client will demonstrate appropriate, stable posture to include lumbar support and head and neck support during eating, non-speech, and speech activities.

Client will perform daily stretch program to maintain appropriate posture and overall flexibility.

Vocal Quality and Respiration

Client will perform vocal cord adduction exercises to promote improved vocal quality and glottal closure necessary for airway protection during deglutition.

Client will perform yawn-sigh oral pharyngeal stretch to reduce vocal strain, to improve vocal quality, and to stretch pharynx for improved deglutition in the pharyngeal phase.

Client will perform circular breathing exercise practicing inhalation and exhalation during non-speech for improved respiratory support and overall body relaxation.

Client will practice circular breathing exercise during hum for improved respiratory support for voicing and relaxation of the vocal mechanism.

Client will practice circular breathing exercises during words and short phrases for improved respiratory support in phrasing.

Client will demonstrate box speech for improved phrasing at the 3 to 5 phrase level through conversational levels.

Articulation

Client will show appropriate placement and production of ___ phoneme and/or vowel at the isolation, syllable, phrase, sentence, extended sentence, paragraph, role playing, or conversational levels as designated by the clinician. (Circle appropriate level.)

Communication Boards

Client will attempt communication with family caregiver, nursing, and/or clinician using a communication board.

Pragmatics (Communicating with the clinician, family, caregiver, nursing staff)

Client will use appropriate turn-taking skills in a social communication setting to express needs, health concerns, emotions, and observations.

Client will use reduced rate of responding acknowledging that longer response time is necessary to complete expression of thoughts using expressive speech productions, signing, gestures, and/or communication board.

Client will use pointing, writing, or any other means to express wants and needs to family, nursing staff, caregiver, and/or clinician.

Client will be aware of caregiver, family, and clinician's needs to assist in optimal care.

Arousal and Learning Activities

Client will tolerate various types of stimulation performed by family, caregiver, nursing staff, and/or clinician, including: auditory stimulation, tactile stimulation, olfactory stimulation, gustatory stimulation, visual stimulation, vestibular stimulation. (Circle type of stimulation applicable.)

Client will show the following responses to stimulation activities. (List observable behaviors as a result of stimulation.)

Drooling

Client will demonstrate understanding of possible causes of drooling as a result of clinician instruction for improved deglutition and mouth care.

Client will demonstrate understanding and usage of helpful strategies for the remediation of drooling as taught by clinician.

Client will perform lip and cheek exercises to strengthen lip closure in an effort to reduce drooling.

Oral-Motor Head-Neck-Facial Exercises

Client will demonstrate understanding of reason for each exercise as it applies to client's oral-motor head-neck-facial deficit and remediation process.

Client will assist in performing exercises accurately and regularly as recommended by clinician.

Client will feel free to recommend changes to the program and report observations as a result of independent practice to clinician for modification to the program.

Client will perform ____ exercise ____ times and/or minutes as designated by clinician. (Include exercise name and number of repetitions or minutes to be performed.)

Resources

Alternative Medicine

American Reiki Master Association
P.O. Box 130
Lake City, FL 32056-0130
904-755-9638
www.atlantic.net/~arma

- ✓ provides information about healing physical ailments naturally through touch therapy

Curties-Overzet Publications
1633 Mountain Road, Suite 12-179
Moncton, New Brunswick, Canada E1G 1A5
888-649-5411
Fax: 506-785-1908
www.sutherland-chan.com/copi/welcome.htm

- ✓ publishes *Massage Therapy and Cancer* by Debra Curties, R.M.T.

International Society for the Study of Subtle Energies and Energy Medicine (ISSSEEM)
11005 Ralston Rd., #100 D
Arvada, CO 80004
303-425-4625
Fax: 303-425-4685
www.issseem.org

- ✓ provides workshops and seminars on the spiritual and scientific basis for energy medicine and subtle energy healing

National Center for Complementary and Alternative Medicine
NCCAM Clearinghouse
P.O. Box 8218
Silver Spring, MD 20907-8218
888-644-6226
Fax: 301-495-4957
<http://altmed.od.nih.gov/nccam>

- ✓ develops and supports research on contemporary and alternative medicine

Reiki Alliance
P.O. Box 41
Cataldo, ID 83810
www.reikialliance.org

- ✓ provides information about healing physical ailments naturally through touch therapy

The Upledger Institute, Inc.
11211 Prosperity Farms Road
Palm Beach Gardens, FL 33410
800-233-5880
Fax: 561-622-4771
www.upledger.com

- ✓ supports the work of the CranioSacral Therapy profession through a hands-on method of evaluating and enhancing the function of the craniosacral system

Augmentative Communication

The American Speech-Language-Hearing Association (ASHA)
10801 Rockville Pike
Rockville, MD 20852
301-897-5700
www.asha.org

- ✓ provides information about augmentative communication

Crestwood Communication Aids, Inc.
6625 North Sidney Place
Milwaukee, WI 53209-3259
414-352-5678
Fax: 414-352-5679
www.communicationaids.com

- ✓ sells a variety of augmentative communication devices and supplies

Imaginart
307 Arizona St.
Bisbee, AZ 85603
800-828-1376
www.imaginarionline.com

- ✓ sells a variety of augmentative communication devices and equipment

Mayer-Johnson, Inc.
P.O. Box 1579
Solana Beach, CA 92075
800-588-4548
Fax: 858-550-0449

- ✓ sells a variety of augmentative communication devices and equipment, including *Boardmaker Picture Communication Symbols*

Prentke Romich
1022 Heyl Rd.
Wooster, OH 44691
800-262-1984
www.prentrom.com

- ✓ sells a variety of augmentative communication devices and equipment

Biofeedback

The Biofeedback Network
125 Prospect St.
Phoenixville, PA 19460
610-933-8145
Fax: 610-983-9162
www.biofeedback.net

- ✓ provides quality on-line biofeedback resources

Bio-Medical Instruments, Inc. (BMI)
2387 East Eight Mile Rd.
Warren, MI 48091-2486
810-756-5070
Fax: 810-756-9891
www.bio-medical.com

- ✓ sells medical instruments specialized in biofeedback/neurofeedback

Cora Rehabilitation Clinics
1110 Shawnee Rd., Box 150
Lima, OH 45802
419-221-3004
Fax: 419-221-3070
www.corahealth.com

- ✓ provides comprehensive outpatient rehabilitation services to individuals with neurological and neuromuscular conditions

Stroke Recovery Systems, Inc.
4 West Dry Creek Circle, Suite 260
Denver, CO 80120
800-845-1771
Fax: 800-495-6695
www.strokerecoverysystems.com

- ✓ offers information on AutoMove therapy (uses biofeedback devices to teach healthy regions of the brain to take over lost motor functionality)

Continuing Education/ On-line Courses

Care2Learn
3301 Bayshore Blvd., Suite 2107
Tampa, FL 33629
866-242-8451 (toll-free)
Fax: 941-795-3721
www.care2learn.com

- ✓ offers on-line continuing education programs for registered nurses, occupational therapy, speech-language pathology, and physical therapy

HealthCare Professions Seminars, Inc.
P.O. Box 7482
Leawood, KS 66207-0482
913-681-3014
www.healthcareseminars.com

- ✓ dedicated to delivering multidisciplinary, scientifically-based, continuing education

Speech Paths.com
Professional Marketing Seminars
250 Newport Center Drive, Suite 202
Newport Beach, CA 92660
949-729-0670
Fax: 949-729-0676
www.speechpaths.com

- ✓ offers on-line courses certified by ASHA for Continuing Education Units including *Acupressure Techniques for Speech Pathologists* by Debra Gangale, M.A., CCC-SLP

Guided Relaxation

Stress Pain and Management Education
1017 Irededell St.
Durham, NC 27705
919-286-1207
www.managestressnow.com/videotapes.html

- ✓ sells relaxation videotapes and audiotapes
- ✓ provides information about stress and pain management

Holistic Medicine

American Holistic Medical Association
6728 McLean Village Dr.
McLean, VA 22101-8729
703-556-9728
Fax: 703-556-8729
www.holisticmedicine.org

- ✓ educates and teaches physicians about holistic medicine

American Holistic Nurses Association
P.O. Box 2130
Flagstaff, AZ 86003-2130
800-278-2462
www.ahna.org

- ✓ educates and teaches nurses about holistic medicine and healthcare

*The Source for Oral-Facial Exercises:
Updated and Expanded*

Insight Publishing
P.O. Box 18476
Anaheim Hills, CA 92817
800-787-2600
Fax: 714-779-1798
www.qi-journal.com

- ✓ publishes *Qi: The Journal of Traditional Eastern Health and Fitness*

Massage

American Manual Medicine Association
P.O. Box 272
Gainesville, VA 20156-0272
540-351-0807
Fax: 540-351-0041
www.americanmedicalmassage.com

- ✓ strives to establish medical massage as a valid therapy in healthcare facilities

American Massage Therapy Association (AMTA)
820 Davis St.
Evanston, IL 60201
847-864-0123
www.amtamassage.org

- ✓ trains volunteers in the field of massage therapy

Body Logic
11613 N. Central Expressway, Suite 117
Dallas, TX 75243
800-662-3306
Fax: 214-378-6101
www.ebodylogic.com

- ✓ sells massage equipment (e.g., tables, chairs, accessories)

Compassionate Touch
Attn: Gary Holmes
3829 W. Frier Drive
Phoenix, AZ 85051-6480
888-700-8002
www.compassionatetouch.com

- ✓ sells massage equipment (e.g., tables, chairs, accessories)

Day-Break Geriatric Massage Project
216 Pleasant Hill Avenue North
Sebastopol, CA 95472
707-829-2798
www.daybreak-massage.com

- ✓ provides information and workshops on using massage to make life more enjoyable for the elderly

Duke Pain and Palliative Care Program
932 Morreene Road
Durham, NC 27705
919-684-7246
www.pain.mc.duke.edu

- ✓ provides information needed to begin guided progressive muscle relaxation with touch therapy

Hospital-Based Massage Network
Attn: Laura Koch
612 South College Ave.
Fort Collins, CO 80524
970-407-9232
www.hbmn.com

- ✓ provides support to massage and touch therapists

National Association of Nurse Massage Therapists
2203 Woodridge Court
Grand Island, NE 68801
800-262-4017
www.members.aol.com/nanmt1/

- ✓ aims to advance nurse massage therapy as a specialty nursing practice

*The Source for Oral-Facial Exercises:
Updated and Expanded*

Real Bodywork
43 Cedar Lane
Santa Barbara, CA 93103
888-505-5511
www.deeptissue.com

- ✓ sells videos on deep tissue massage and neuromuscular therapy

Skilled Touch for the Elderly, Ill, and Dying
c/o Irene Smith
41 Carl St., Apt C
San Francisco, CA 94117
415-564-1750
touchfortheill@juno.com

- ✓ offers educational resources and multi-level training programs

Touch Research Institute
University of Miami School of Medicine
P.O. Box 016820
Miami, FL 33101
305-243-6790
Fax: 305-243-6488
www.miami.edu/touch-research/home.html

- ✓ This organization attempts to scientifically demonstrate the medical benefits of touch therapy.

Medical Suppliers and Medical Instruments

ABOVO
D C & D, Inc.
42 Skinner Rd.
East Windsor, CT 06016
860-623-7364
Fax: 860-623-2941
www.dcdinc.com/abovo.html

- ✓ sells personal communication device

Acumed
44 Royal York Rd.
Toronto, Ontario M8V 2T4
800-567-7246
Fax: 416-253-1911
www.acumedmedical.com

- ✓ sells STIM-Pro and other products that combat pain naturally

Comfortliving.com
2924 Telstar Court
Falls Church, VA 22040
877-378-4411
Fax: 703-645-8812
www.comfortliving.com

- ✓ sells products designed to help with pain management and improving posture

Interactive Metronome
2500 Weston Road, Suite 403
Weston, FL 33331
954-385-4660
Fax: 954-385-4674
www.interactivemetronome.com

- ✓ sells Interactive Metronome to improve motor planning and sequencing

Park Surgical Co., Inc.
5001 New Utrecht Ave.
Brooklyn, NY 11219
800-633-7878
www.parksurgical.com

- ✓ sells speech amplifiers

Seimens
16 E. Piper Lane, Suite 127
Prospect Heights, IL 60070
800-333-9083

- ✓ sells hearing instruments such as the Portable Voice Amplification System which is designed to elevate vocal output of people with temporary or permanent voice impairments

The Speech Team, Inc.
5110 Longboat Blvd.
East Tampa, FL 33615
813-855-4947
Fax: 813-854-3983
www.speechteam.com

- ✓ provides information and workshops for treating people with neurologically-impairing diseases

Music and Music Therapy

American Music Therapy Association (AMTA)
8455 Colesville Rd., Suite 1000
Silver Spring, MD 20910
301-589-3330
Fax: 301-589-5175
www.namt.com

- ✓ strives to increase awareness of the benefits of music therapy
- ✓ sells videos, CDs, and CD-Roms which provide music therapy and/or explain its clinical use and effects

Bard Press
2140 Newmarket Parkway, Suite 122
Marietta, GA 30067
800-927-1488
Fax: 770-859-9894
www.bardpress.com

- ✓ publishes *Owner's Manual for the Brain: Everyday Application from Mind-Brain Research* by Pierce J. Howard, Ph.D.

National Healing Institute and Center for Music Meditation
www.harmonyland.com

- ✓ uses energy music meditation to promote healing and health maintenance

Pacific Moon Records
www.pacificmoon.com

- ✓ *Bali* CD by Jalan Jalan

REI Institute, Inc.
HC 75, Box 420
Lamy, NM 87540
505-466-6334
800-659-6644
Fax: 505-466-4992
www.reiinstitute.com

- ✓ This MusicMedicine research organization focuses on the effects of musical rhythm on the central nervous system

Walkmate
P.O. Box 241
Whitby, Ontario, Canada L1N 5S1
800-269-2585
www.mywalkmate.com

- ✓ sells audiotapes with invigorating music and encouraging messages for walking

White Cloud's World of Music
www.whitecloudmusic.com

- ✓ *The Healing Lake* CD by Rudy Adrian

Myofascial Release

MFR Seminars
John F. Barnes, P.T.
800-FASCIAL (327-2425)
www.myofascialrelease.com

- ✓ provides instruction in Myofascial Release (a hands-on therapeutic treatment designed to eliminate pain and restore motion)

Real Bodywork
43 Cedar Lane
Santa Barbara, CA 93103
888-505-5511
www.deeptissue.com

- ✓ sells videos on myofascial release, deep tissue massage, and neuromuscular therapy

Oral-Motor Supplies

Facial Concepts, Inc.
P.O. Box 99
Blue Bell, PA 19422-0099
800-469-FLEX (3539)
Fax: 610-539-9430
www.facialconcepts.com

- ✓ sells Facial-Flex and other products for facial rehabilitation and muscle fitness

Innovative Therapists International
(Sara Rosenfeld-Johnson's Oral-Motor Speech Therapy)
East Coast Address:
210 Oakridge Commons
South Salem, NY 10590
914-533-5010
Fax: 914-533-5012

Southwest Address:
3434 E. Kleindale Road, Suite F
Tucson, AZ 85716
888-529-2879
Fax: 520-795-8559
www.romotorsp.com

- ✓ provides information and products that address oral-motor and feeding deficits

Interactive Therapeutics, Inc.
P.O. Box 1805
Stow, OH 44224-0805
800-253-5111
Fax: 330-923-3030
www.interactivetherapy.com

- ✓ sells products for speech and hearing disorders, thinking skills, swallowing problems, corporate speech-language pathology, and career development

LinguiSystems, Inc.
3100 4th Ave.
East Moline, IL 61244
800-776-4332
Fax: 800-577-4555
www.linguisystems.com

- ✓ sells materials for speech-language therapy, thinking skills, swallowing disorders, and oral-motor therapy

New Visions
1124 Roberts Mountain Rd.
Faber, VA 22938
800-606-3665
Fax: 804-361-1807
www.new-vis.com

- ✓ sells oral-motor supplies (e.g., Chewy Tubes, toothettes, straws, oral massagers, etc.)

Speech Dynamics, Inc.
41715 Enterprise Circle North, Suite 107
Temecula, CA 92590
800-337-9049
Fax: 909-296-5740
www.speechdynamics.com

- ✓ offers programs, publications, audiotapes, and CDs on oral-motor analysis and remediation techniques, autism, sensory-motor deficits, and stages and steps in feeding

Super Duper Publications
P.O. Box 24997
Greenville, SC 29616
800-227-8737
Fax: 864-288-3380
www.superduperinc.com

- ✓ sells oral-motor supplies (e.g., straws, bite blocks, etc.) and materials for speech-language therapy, swallowing disorders, and oral-motor therapy

Theraproducts (TheraPro)
225 Arlington St.
Framingham, MA 01702-8723
800-257-5376
Fax: 888-860-6254
www.theraproducts.com

- ✓ sells rehabilitation products, ADL (Activities of Daily Living) equipment, specialty books, hand therapy products, and Chewy Tubes

Posture

Alexander Technique International
P.O. Box 60008
Florence, MA 01062
800-473-0620
Fax: 413-584-2359
www.alexandertechnique.com

- ✓ provides information on ways to improve posture using the Alexander Technique

Comfortliving.com
2924 Telstar Court
Falls Church, VA 22040
877-378-4411
Fax: 703-645-8812
www.comfortliving.com

- ✓ sells products designed to help with pain management and improving posture

Feldenkrais at Home
429 N. Doheny Dr., #G
Beverly Hills, CA 90210
310-285-0523
www.feldenkraisathome.com

- ✓ sells audiotapes that introduce you to a natural and efficient way of moving well through body alignment

Feldenkrais Guild of North America (FGNA)
3611 SW Hood Ave., Suite 100
Portland, OR 97201
800-775-2118
Fax: 503-221-6616
www.feldenkrais.com

- ✓ offers information on the Feldenkrais Method (uses relaxing movement for optimal posture and sensory motor learning)

Miscellaneous Associations and Companies

Alzheimer's Association
919 North Michigan Ave., Suite 1100
Chicago, IL 60611-1676
800-272-3900
FaAx: 312-335-1110
www.alz.org

- ✓ organization committed to finding a cure for Alzheimer's and helping those affected by the disease

Discovery Communications, Inc.
(The Discovery Channel)
7700 Wisconsin Ave.
Bethesda, MD 20814-3579
312-946-0909
www.discoveryhealth.com

- ✓ On the Website, you can search under Alternative Therapies/Treatment Options for information on biofeedback, massage, relaxation techniques, touch therapy, etc.

Worldwide Aquatic Bodywork Association
P.O. Box 889
Middletown, CA 95461
707-987-3801
Fax: 707-987-9638
www.waba.edu

- ✓ offers classes in aquatic bodywork

References

- Abbott, V. and Brignoni, R. "Dysphagia Team Intervention: Evaluation Through Outcome." Seminar sponsored by Geriatric Research, Education, and Clinical Center, and the Veterans Affairs Medical Center, May 1992.
- Ad-Hoc Committee on Labial-Lingual Posturing Function (ASHA). "The Role of the Speech-Language Pathologist in Assessment and Management of Oral Myofunctional Disorders." *ASHA Supplement #5*, 1991, p. 7.
- Bahr, D. C. *Oral-Motor Assessment and Treatment: Ages and Stages*. Needham Heights, MA: Allyn and Bacon Publishing, 2001.
- Barnes, J. F. *Myofascial Release I*, Seminar Workbook, 1989. www.myofascialrelease.com
- Black, J. W. and Ausherman, M. *The Vocabulary of College Students in Classroom Speeches*. Columbus, OH: Bureau of Educational Research, Ohio State University, 1955.
- Blasco, P. et al. *Management of Saliva Overflow*, 1992. (Internet Publication)
<http://ins.airweb.net/management.htm>
- Boone, D. *The Voice and Voice Therapy*. Englewood Cliffs, NJ: Prentice-Hall, 1977.
- Burns, D. *The Feeling Good Handbook*. NYC: William Morrow and Company, 1989.
- Cohen, K. *The Way of Qigong: The Art and Science of Chinese Energy Healing*. NYC: Ballantine Books, 1997.
- Copeland, M. E. *The Worry Control Workbook*. Oakland, CA: New Harbinger Publications, Inc., 1998.
- Daniels, L. and Worthingham, C. *Muscle Testing*. Philadelphia, PA: W.B. Saunders Company, 1980.
- de Langre, J. *Do-in 2. The Ancient Art of Rejuvenation Through Self-Massage*. Magalia, CA: Happiness Press, 1989.
- Dworkin, J. P. *Motor Speech Disorders: A Treatment Guide*. St. Louis, MO: Mosby-Year Book, Inc., 1991.
- Fairbanks, G. *Voice and Articulation Drillbook*. NYC: Harper and Row, 1960.
- Ferrin, M. (instructor). "Pediatric Occupational Therapy Course." Palm Beach Community College, Lakeworth, FL, September 1992.
- Gach, M. R. *Acupressure's Potent Points: A Guide to Self-Care for Common Ailments*. NYC: Bantam Doubleday, Dell Publishing Group, 1990.

References, *continued*

- Gangale, D. "Acupressure Techniques for Speech Pathologists." (On-line course certified by the American Speech-Language-Hearing Association for Continuing Education Units) *Speechpaths.com*, Professional Marketing Seminars, Newport, CA, 1999
- Gangale, D. "Swallowing and the Parkinsonian." *American Parkinsonian Association, Inc., Educational Supplement #2*, 1992.
- Glanz, M. et al. "Functional Electrostimulation in Post Stroke Rehabilitation: A Meta-Analysis of the Randomized Controlled Trials." *Archives of Physical Medicine and Rehabilitation*, Vol. 77, June 1996, pp. 549-553.
- Howard, P. J. *Owner's Manual for the Brain*. Marietta, GA: Bard Press, 1994.
- Kagel, M. "Adult Dysphagia Seminar." Presented by Crozer-Chester Medical Center. Communication Symposia, Tampa, FL, October 1992.
- Kenyon, J. *Acupressure Techniques: A Self-Help Guide*. Rochester, VT: Inner Traditions International, Ltd., 1988.
- Koufman, J. A. "Laryngopharyngeal Reflux and Voice Disorders." *The Visible Voice*, a newsletter published by the Center for Voice Disorders at Wake Forest University, Vol. 3, 1994, pp 2-7. www.bgsm.edu/voice/reflux_voice.html
- Krieger, D. *The Therapeutic Touch: How to Use Your hands to Help or Heal*. NYC: Simon & Schuster, 1992.
- Langley, J. *Working with Swallowing Disorders*. Great Britain: Winslow Press, 1987.
- Lindaman, S. L. "Treatment Techniques for Adult Neurological Dysphagic Patients." Seminar sponsored by the Rehabilitation Institute of Chicago, Chicago, IL, September 11, 1992.
- Logemann, J. *Evaluation and Treatment of Swallowing Disorders*. San Diego, CA: College Hill Press, 1983.
- Logemann, J. *Normal Swallowing*. Brochure distributed by Menu Magic in cooperation with the American Speech-Language-Hearing Association.
- Marshalla, P. "Oral-Motor Techniques in Articulation Therapy." Seminar presented by Innovative Concepts, Inc., Gainesville, FL, 1992.
- Mattes, A. *Flexibility: Active and Assisted Stretching*. Sarasota, FL: Mattes, 1980.
- McClure, V. *Infant Massage: A Handbook for Loving Parents*. New York: Bantam Books, 1989.

References, *continued*

- Michels Jelm, J. *Oral-Motor/Feeding Rating Scale*. Tucson, AZ: Communication Skill Builders, Inc., a division of The Psychological Corporation, 1990.
- Myss, C. *Anatomy of the Spirit: The Seven Stages of Power and Healing*. NYC: Random House, Inc., 1997.
- Nicolosi, L. et al. *Terminology of Communication Disorders*. Baltimore, MD: Williams and Wilkins, 1983.
- Orloff, J. *Dr. Judith Orloff's Guide to Intuitive Healing: Five Steps to Physical, Emotional, and Sexual Wellness*. NYC: Random House, 2000.
- Painter, J. *Deep Bodywork and Personal Development, Harmonizing Our Bodies, Emotions, and Thoughts*. Olympia, WA: Bodymind Books, 1987.
- Prudden, B. *Pain Erasure, The Bonnie Prudden Way*. NYC: Ballentine, 1980.
- Swigert, N. B. *The Source for Dysarthria*. East Moline, IL: LinguiSystems, Inc., 1997.
- Tappen, F. *Healing Massage Techniques: Holistic, Classic, and Emerging Methods*. E. Norwalk, CT: Appleton and Lange, a division of Prentice Hall, 1990.
- Teegarden, I. M. *The Joy of Feeling: Bodymind Acupressure*. NYC: Japan Publications/Harper & Row, 1987.
- White, C. "Nasogastric Intubation-Oral and Perioral Care." *Special Care and Dentistry*. Vol. 4, No. 1, January-February 1984.
- Ylvisaker, M. *Head Injury Rehabilitation: Children and Adolescents*. San Diego, CA: College Press, 1985.