

Instructor's Resource Manual and Test Bank

for

The Voice and Voice Therapy

Ninth Edition

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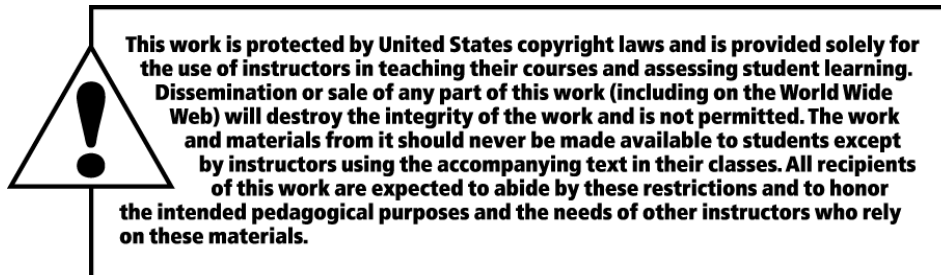
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Instructor's Resource Manual: Overview, Learning Objectives and Classroom Activities

Chapter 1: An Introduction to Voice Disorders and their Management

Chapter overview

In this chapter we look at voice and the larynx in the biologic viability of the individual, as a tool in emotional expression, and in its complicated and extensive role in spoken human communication. We review the prevalence of voice disorders in the general population and in specific subpopulations. We see that there appear to be three causal factors in the development and maintenance of voice disorders: functional, organic, and neurogenic. The child or adult with a voice problem is evaluated by the SLP who uses instrumental and non-instrumental approaches for various respiratory and acoustic measures in the attempt to identify causal factors and define aspects of voice production. "Diagnostic probes," the application of trial therapy approaches, are then used to determine the efficacy of a particular therapy technique for improving the patient's voice productions. The patient's self-perception of the handicapping impact of the voice disorder on his or her life is then recorded. If evaluation measures indicate that the patient can profit from therapy, the SLP then provides needed voice therapy. At the conclusion of voice therapy, therapy success is determined by comparing pre- and post-therapy measures, providing needed outcome data.

Learning objectives:

After reading this chapter, the student should be able to:

1. List and describe the biological, emotional and linguistic functions of the larynx.
2. List and describe the kinds of voice disorders.
3. Describe the incidence and prevalence of voice disorders in the general population.
4. Describe the incidence and prevalence of voice disorders in specific populations.
5. Describe the types of intervention for voice disorders.

Classroom activities

1. To appreciate biological action of the larynx, place your index finger gently on your thyroid cartilage and swallow. Note the ascension and forward movement. Now, describe how this movement can interrupt the emotional and linguistic functions of the larynx. Turn to Chapter 7, Voice Facilitating Approaches, and identify three approaches that may lower the larynx for improved voicing and speaking.
2. To appreciate the emotional function of the larynx, select three classmates. Write different emotion states on single slips of paper and place in a cup. Emotional states can be happy, sad, angry, excited, etc. As each student selects a piece of paper, the student speaks a neutral phrase, such as, “I had eggs for breakfast.” However, the student speaks the phrase with the emotional overlay as specified on the piece of paper. How many of your peers are able to identify the emotional state just from the changes in your voice and prosodic intent?
3. To develop a solid understanding of incidence and prevalence, turn to Chapter 4, Organic Voice Disorders, or Chapter 5, Neurogenic Voice Disorders. Select a pathology, and then look up the pathology’s incidence and prevalence on a peer-reviewed website. One example of a peer reviewed website is PubMed. Investigate and then share your findings with your peers in class.
4. Provide three reasons why you think that the majority of children who require voice intervention in the schools are not receiving it. You may need to look in other chapters to complete this question.
5. Review the chapter section on voice disorders in teacher and student teachers. Then investigate Elimination of Abuses in Chapter 7. Generate an “Elimination of vocal abuses” chart that can be distributed to teachers and student teachers. Compare your chart with those generated by your peers. How are they the same? Different?

Page keys to Classroom activities

- | | |
|--------------------------------|-------------------------|
| 1. Page 2 and Chapter 7 | 4. Page 7 and Chapter 8 |
| 2. Page 3 | 5. Page 8 and chapter 7 |
| 3. Page 5 and Chapters 4 and 5 | |

Chapter 2: Normal Voice Anatomy and Physiology Throughout The Lifespan

Chapter overview

In this chapter we learn about the respiratory, phonatory, and resonance aspects of voice, and discuss the five aspects of voice (loudness, hygiene, pleasantness, flexibility, and representation). We find that the outgoing airstream is the primary driving force of voice. A description of the physiology of respiration introduces the structures and mechanisms of normal breathing for speech. The efficient user of voice develops good expiratory control. The value and magnitude of respiratory volumes are discussed. A description of the physiology of phonation outlines the structures and mechanisms of normal phonation, including frequency, intensity, and quality shaping mechanisms. Supraglottal structures and functions specific to quality and resonance are discussed. The entire vocal tract contributes to the amplification and filtering of the fundamental frequency into the final unique voice of any speaker. The understanding of these processes provides the underpinning for effective voice therapy for patients with dysphonia.

Learning objectives

After reading this chapter, the students should be able to:

1. List and define the five aspects of the normal voice.
2. List and describe the three processes of normal voice production.
3. Identify the structures of respiration.
4. Describe the mechanics of respiration.
5. List and describe the lung volumes and capacities in reference to resting expiratory level.
6. Understand the differences between breathing for life and breathing for speech.
7. Describe the effects of aging on the respiratory system and speech breathing.
8. Identify the structures of phonation.
9. Describe the effects of aging on the laryngeal system.
10. Understand the myoelastic aerodynamic theory of vocal fold vibration.
11. Describe the factors involved in changing vocal pitch, loudness, and quality.
12. Identify the structures of resonance.
13. Describe the mechanics of resonance.

Classroom activities

1. Select four classmates so that you equal five. Sit at a round table so each student is equidistant from a digital recorder in the middle of the table. Turn on the recorder and have a brief conversation so that all voices are recorded. Now, play back the conversation and identify each of the five aspects of voice. Are they interrelated? Does anyone have more of one aspect or attribute than another student? Discuss.
2. Deconstruct the term myoelastic-aerodynamic theory of phonation using a balloon. Blow up the balloon and note that the body of the balloon represents the lungs and the valve the vocal folds. Now, release the air by stretching the valve tight. What is the sound quality like? High or low? As you release the air, describe the dynamics that create the vibration. Now, reduce the stretch by about 50%. Under which condition is more air exiting the “vocal folds?” What happens to the vibrational quality? Does it increase or decrease? Blow up the balloon again and simply release the valve. Note the non-periodic release of air. What type of laryngeal pathology might mimic this uncontrolled release of “subglottal” pressure?
3. Now, let’s look at the difference between quiet breathing and breathing for speech. This exercise is more meaningful if you use yourself or a classmate. First, sit quietly and count the number of breaths that you take for 1 minute. It should be within the range of 17 to 22 breaths per minute and the inhalation and exhalation phases should be about equal. Look up Figure 2.2 and identify the muscles that are primarily responsible for quiet breathing.
Now, orally read a four-paragraph passage. Make note of whether you take in air through your nose or your mouth. How is this different from quiet breathing? Are the inhalation and exhalation periods the same or different? Name the main muscles involved in breathing for speech.
4. Go outside and find a garden hose. Turn the water on at its source, but only one turn. Try to direct the water out several feet. What happens? Now, put your thumb over the end of the hose and describe what happens. Now, turn the water up at its source and describe what happens. If this hose is analogous to voice production whereby the end of the hose is the larynx and the source of the voice is the lungs, how would you counsel a voice client with vocal hyperfunction?
5. What factors determine fundamental frequency? Look around your house or apartment and try to find items that can easily represent vocal folds. Past students have constructed vocal fold configurations from empty tuna cans and rubber bands of varying widths, densities and lengths to represent men’s, women’s and children’s vocal folds. Construct, and then ask your classmates determine which set of vocal folds represents each fundamental frequency.

Page keys to Classroom activities

1. Page 19
2. Page 51
3. Pages 27-30
4. Page 29
5. Pages 53-54

Instructor's Resource Manual: Overview, Learning Objectives and Classroom Activities

Chapter 3: Functional Voice Disorders

Chapter overview

This chapter introduces functional voice disorders - those that have no organic or neurological cause. We describe voice disorders that result from excessive muscle tension, and the benign laryngeal pathology that may develop. We also describe voice disorders with a psycho-emotional basis or overlay. Numerous case studies are introduced that support the value of Voice Facilitating Approaches in treating most functional and psychogenic voice disorders.

Learning objectives

After reading this chapter, one should be able to:

1. Define the term functional voice disorders
2. Define the term psychogenic voice disorders
3. Describe the benign pathologies which may result from excessive laryngeal tension.
4. Describe the voice symptoms of muscle tension dysphonia (MTD).
5. Describe the treatment options for MTD.

Classroom activities

1. Draw the vocal folds and the ventricular folds. Now, illustrate how the ventricular folds might move toward the midline during voicing. Do the ventricular folds impinge on the true vocal folds? What type of vocal quality would you expect from this physiological action? Purchase or borrow an inexpensive tambourine. Tap it and note the frequency of vibration. Now place a wad of play dough on the tambourine's surface and tap again. How can this altered frequency be compared with ventricular phonation?
2. Draw the vocal folds in an adducted and abducted position. Now add vocal nodules. Note the hourglass configuration of the glottis during adduction. Do you think this would result in longer or shorter phrase lengths? Explain.
3. Draw the vocal folds and illustrate a sessile versus a pedunculated polyp. Why is it a good idea to consider voice therapy before surgical approaches to specific types of polyps? Read Chapter 7, and list three approaches that might be facilitative in reducing or eliminating a sessile polyp.
4. List three changes that may occur to the surface mucosa during a shouting event.
5. Describe three different voice quality behaviors that you would expect to be abnormal for an individual with Reinke's edema. Sketch a cross section of the vocal fold and illustrate how the thick, gelatinous fluid like material may interfere with the actions of the lamina propria.

Page keys to Classroom activities

1. Pages 67-68
2. Pages 69-70
3. Pages 72-73
4. Page 74
5. Page 73

Instructor’s Resource Manual: Overview, Learning Objectives and Classroom Activities

Chapter 4: Organic Voice Disorders

Chapter overview

Organic voice disorders may result from various laryngeal conditions, such as papilloma, granuloma, webbing, and reflux. For each of the various organic voice disorders, we discuss medical management and the role of the SLP in evaluation and therapy. It is the responsibility of the SLP to be familiar with each voice disorder, its sequelae (e.g., signs and symptoms) and management. By being familiar with the pathology of the voice disorder, we can better counsel our clients and provide efficacious behavioral intervention. In many cases, we are the first professional to detect an organic related voice disorder and the first professional to make the critical referral to the ENT physician.

Learning objectives

After reading this chapter, one should be able to:

1. Identify the major organic causes of voice disorders.
2. Explain the underlying pathologies that cause and maintain these disorders.
3. Explain the medical and pharmacologic approaches to these organic disorders.
4. Describe how behavioral voice therapy intervention and lifestyle change counseling can reduce the recurrence of these disorders.
5. List behavioral voice intervention techniques that may reduce some of the dysphonic characteristics that accompany these disorders.

Classroom activities

1. Refer to Granuloma 2 in the color insert. Describe the location of the contact granuloma. Would this location interfere with vocal fold vibration? Why? Why not? Describe why patients with contact ulcers/granulomas often describe a sense of “globus.”
2. Sketch an illustration of the aerodigestive tract as if you were illustrating it for a voice client diagnosed with laryngopharyngeal reflux disease. Label all of the structures of interest. Show how the reflux can invade the laryngeal aditus and how it can travel superiorly to the nasal cavities.
3. Visit three peer reviewed medical websites, such as Mayo Clinic, National Institutes of Health and Johns Hopkins. Review behavioral treatment for LPRD. Are the treatments at these sites consistent with treatment suggested on page 91? Generate your own Behavioral Reflux Reduction sheet to share with patients.
4. Sketch the vocal folds, illustrating cysts, polyps and vocal nodules. Explain why visual assessment alone --without stroboscopy (Chapter 6) -- might misinterpret these three different lesions. Describe the etiologies and subsequent approaches to each of these lesions.
5. Refer to the Anterior Web in the color insert. Describe what you would expect to perceive with respect to the pitch and amplitude of the voice. Would phrase lengths be short or long? Describe the various approaches to laryngeal webs.

Page keys to Classroom activities

1. Pages 92-93
2. Pages 89-92
3. Page 91
4. Page 94 and Chapter 3
5. Page 101-102

Instructor’s Resource Manual: Overview, Learning Objectives and Classroom Activities

Chapter 5: Neurogenic Voice Disorders

Chapter overview

At the beginning of this chapter, we look at the neurological bases of human laryngeal function. We introduce the latest research in behavioral, pharmacological, and surgical management of neurogenic voice disorders and describe a number of Voice Facilitating Approaches that have been effective for many patients presenting with dysarthria (see Chapter 7). The key to effective behavior-based intervention for patients presenting with static or progressive neurogenic dysphonia is an understanding the nature of the deficits in the subsystems of speech and knowing how to address them.

Learning objectives

After reviewing this chapter, one should be able to:

1. Describe the roles of the central and peripheral nervous systems in the innervation of the vocal mechanism.
2. Identify the major role of each cranial nerve involved with voice production.
3. Recognize the origin in the nervous systems(s) and typical course of those neurogenic disorders introduced.
4. Identify the latest in surgical, pharmacologic and behavioral management for each of the disorders.
5. Describe the various Voice Facilitating Approaches that might be instrumental in modifying select voice disorders of a neurogenic nature.

Classroom activities

1. Sketch the Vagus nerve using Figure 3 as a guide. Once that is complete, identify in writing the muscles that are innervated by the pharyngeal plexus, the superior laryngeal nerve and the recurrent laryngeal nerve. Using the CAPE-V (Chapter 6), describe the changes in voice and resonance that would accompany lesions to each of these branches of the Vagus.
2. Sketch the vocal folds, illustrating the typical configuration of a unilateral vocal fold paralysis. Describe how you would expect the voice to sound as measured by the CAPE-V? Next, see Chapter 7 for three behavioral voice facilitating approaches to unilateral vocal fold paralysis. Describe how each technique helps “normalize” the voice.
3. Collect two other students so that you form a group of three. Next, assign one student to produce the voicing characteristics of *essential tremor*, student 2 to *vocal hyperfunction* and student 3 to *adductor spasmodic dysphonia*. Record the voices and then play back and discuss the perceptual similarities and differences. Finally, refer to Table 2 and discuss the etiologies of each of these disorders.
4. Refer to Table 1 and review the type of dysarthria associated with Parkinson’s disease. List the typical voicing changes you would expect to perceive as measured by the CAPE-V. Are these voicing changes consistent with those vocal characteristics heard on the Parkinson’s disease video link on page 117? Next, describe the holistic approach to Parkinson’s disease advocated by the authors. What is meant by holistic?
5. Refer to Table 1 and review the types of dysarthrias that typically result from a CVA. Describe why a flaccid dysarthria is consistent with a breathy voice, and why a spastic dysarthria is consistent with a strained and strangled voice. Sketch the central and peripheral

nervous systems to illustrate your response. Then, describe three Voice Facilitating Approaches that would effectively address each type of voice disorder.

Page keys to Classroom activities

1. Pages 113 and Chapters 2 and 6.
2. Pages 117-118.
3. Pages 120-127.
4. Pages 127-129

Instructor's Resource Manual: Overview, Learning Objectives and Classroom Activities

Chapter 6: Evaluation of the Voice

Chapter overview

We begin this chapter with a brief discussion about screening individuals for voice disorders. An overview of the laryngologist's evaluation of the larynx follows. We then present detailed information about the comprehensive voice evaluation, emphasizing the role of the SLP clinician. The evaluation begins when the patient is observed in the waiting room and continues as part of each therapy session, particularly as the clinician continually searches with the patient for new vocal behaviors. The clinician must continue to evaluate and observe the patient's respiratory, phonatory, and resonance functions. Whenever possible, these functions should be quantified with instrumentation. Auditory-perceptual judgments are also extremely valuable in describing the patient's voice disorder and the manner in which it is produced. The patient's perception of voice handicap is also important to assess. The patient's voice data are used for comparison purposes, to quantify vocal changes between the first visit, subsequent therapy sessions, and the final outcome session. Patient performance, both as observed and as measured, is offered to the patient as continuing feedback, helping the patient become aware of voice performance. The evaluation enables the voice clinician to decide on which management steps to take for the patient, and to refer to additional disciplines when necessary.

Learning objectives

Upon reviewing this chapter, one should be able to:

1. Define the terms *assessment*, *evaluation* and *diagnosis*.
2. Describe the screening process for voice disorders.
3. List the major components of the voice assessment.
4. Describe the non-instrumental assessment of voice.
5. Describe the instrumental assessment of voice.

Classroom activities

1. Review the child voice screen instruments introduced in the text on pages 135-136. Generate a booklet that contains stories or rhymes or songs (or all 3) that will elicit the voice behaviors outlined in the two screening instruments. Your task is to generate materials that will engage children and encourage them to produce sustained vowels, short phrases, and pitch slides. All behaviors should be elicited in approximately 5 minutes or less.
2. Describe why it is important to ask a voice client about the onset, duration and variation of the voice problem. Investigate and describe 3 etiologies that might underlie a sudden change in voice and describe 3 etiologies that might underlie a gradual change in voice.
3. Go the ASHA website and locate the technical report on Vocal Tract Visualization and Imaging. Select a subhead under table of contents and report your findings in class.
4. Find a family member or friend who has a disordered voice. Administer the CAPE-V and the VHI. Do the results of the perceptual instrument match the individual's self perception of his/her voice? In other words, are the documented attributes of voice as measured by the CAPE-V consistent with the individual's self analysis of voice? In a summary paragraph, document whether these scores are consistent with one another or whether there is a discrepancy and why. Do you feel this individual requires a medical examination of voice?
5. Review the vocal dosage instruments introduced on pages 171-172. Describe how these instruments capture voice use throughout the day. Now, create a general vocal hygiene chart that you could distribute to voice clients to help them reduce vocal overuse and abuse, and increase vocal health.

Page keys to classroom activities

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|------------------|------------------|
| 1. Pages 135-136 | 5. Pages 171-172 |
| 2. Pages 143-143 | |
| 3. Pages 151-152 | |
| 4. Pages 146-148 | |

Instructor’s Resource Manual: Overview, Learning Objectives and Classroom Activities

Chapter 7: Voice Facilitating Approaches

Chapter overview

In this chapter, we introduce and describe 25 Voice Facilitating Approaches that can be used in symptomatic voice therapy. We provide the reader with extensive documentation of peer-reviewed evidence to support each approach. In addition, each approach is demonstrated with patients in linked videos. Most Voice Facilitating Approaches can be used individually; however, there is clinical advantage to combining certain approaches together with particular patients. For example, a typical voice therapy session might include counseling, use of the confidential voice, head positioning, visual feedback, and the yawn–sigh, combined or used sequentially. Voice therapy for most voice problems requires continuous assessment of what the patient is able to do vocally. The selection of which therapy approach to use is highly individualized for the particular patient, and no one approach is helpful for the same voice problem with every patient.

Learning objectives

After reading this chapter, one should be able to:

1. Describe the reasoning for the suggestion that there is no one voice approach or program that is facilitative for all patients with the same voice problem.
2. Define the concept of “diagnostic probe” and explain its importance in voice therapy.
3. Identify the rationales and procedural approaches for the Voice Facilitating Approaches.
4. Identify at least one evidence based practice article that supports the target Voice Facilitating Approach.
5. Identify emerging technologies in voice intervention that appear to be promising tools when applied in conjunction with the guidance of the voice clinician.

Classroom activities

1. Select a Voice Facilitating Approach from the master list of 25. Write a summary paragraph on the rationale for the technique and describe how it alters anatomy and physiology. Investigate at least one peer-reviewed journal article not already in the text that supports the approach. Present in class.
2. Studies have suggested that voice clients are more likely to adhere to their homework if it is in video format rather than written format alone. Select a student partner and select 3 Voice Facilitating Approaches in the chapter. Each student will assume the role of the voice client. Capture the techniques on video and play back. Do you agree that the video format is more motivating than written homework alone?
3. Identify the Voice Facilitating Approaches that could be used for treating children with vocal hyperfunction. Which approaches do you think children are most likely to incorporate into their daily lives?
4. Describe why experienced voice clinicians avoid establishing *pre-programmed* therapy sequences to various voice disorders. Defend your response in a summary paragraph.
5. Review the section for yawn-sigh in the text. Place your fingers lightly on your thyroid cartilage. Does the larynx rise or descend for the yawn-sigh? What happens to the diameter of the throat? How does this alter the resonance of the voice? Practice with a student partner so you feel comfortable with this approach.

Page keys to classroom activities

1. Page 188
2. Pages 186-187
3. Page 188
4. Page 187-188
5. Pages 240-241

Instructor's Resource Manual: Overview, Learning Objectives and Classroom Activities

Chapter 8: Therapy for Special Patient Populations

Chapter overview

In this chapter we present voice disorders in children and adolescents, in older adults, in those with hearing impairment, in those wishing to make the MtF or FtM gender conversion, and in those with a variety of respiratory-based conditions. We also discuss the professional voice user and the management of dysphonia in this increasing population of patients. While patients from the aforementioned groups may also have primary or concomitant functional, organic, or neurogenic contributors to their dysphonia, they each present unique management challenges.

Learning objectives

After reading this chapter, one should be able to:

1. Understand the laryngeal and voice characteristics of the aging voice and describe its management
2. Understand the laryngeal and voice characteristics of pediatric dysphonia, and describe its management
3. List the professional voice use populations who are at risk for dysphonia, and describe the management of dysphonia in these populations
4. Describe the speech and voice characteristics of the Deaf and Hard of Hearing populations and approaches to these behaviors
5. Discuss the speech and voice management approaches to the TG populations
6. Describe respiratory based voice problems and management
7. Describe paradoxical vocal fold movement and its management

Classroom activities

1. Review the section on aging and describe why elderly individuals with hoarse vocal quality should receive a medical evaluation. Next, access a sports club, independent senior living community or adult community center and interview two individuals over 65. Questions may be pulled from Chapter 6. Write a summary paragraph that captures the individuals' vocal health history and perceptions of voice. Share in class.
2. Review the section on child voice and then watch the video that illustrates sniff-swallow and silent cough. Why are these two techniques so critical to share with children? Generate a child-friendly vocal hygiene schedule and kit (personalized water bottle, stickers, chart) and share in class.
3. In the section on professional voice users, we read that excessive noise may compromise respiratory function, pitch changes, voice quality, and overall stability of the voice. Access a sound level meter and visit one club or restaurant, and one day care center or elementary school classroom in your area. If the sound levels are greater than 60dB SPL, what does this suggest about how vocal users need to alter their pitch and loudness to be heard over the noise? Is this considered vocally healthy? Investigate and share 3 approaches to increasing vocal health in these challenging environments.
4. Generate 10 high predictability phrases that would be used by a person who is deaf or hard of hearing and map the prosodic contours as outlined on page 254. Do your classmates agree with the contours you generated?
5. Review the section on Transgender. Next, identify and record two female and two male media personalities that you admire. Plot the voice and speech characteristics on the scale

provided in Figure 8.1. Do your classmates agree with your perceptual interpretations? If not, why?

Page keys to classroom activities

1. Pages 243-247
2. Pages 247-248
3. Pages 250-251
4. Pages 253-254
5. Pages 255-256

Instructor's Resource Manual: Overview, Learning Objectives and Classroom Activities
Chapter 9: Management and Therapy Following Laryngeal Cancer

Chapter overview

Chapter 9 introduces the types or modes of cancer treatment (radiation, surgery, and chemotherapy) and their effect on the voice. Some case examples that demonstrate the voice treatment approach used with patients undergoing each method of treatment are considered. Such factors as vocal fold dryness and stiffness as well as absence of tissue post-treatment are discussed. Voice Facilitating Approaches, which have been successful in producing vocal improvement in patients who have been treated for laryngeal cancer, are introduced in detail. The importance of such topics as vocal hygiene and pre-operative teaching for patients who have been diagnosed with laryngeal cancer are presented. The treatment approaches for patients who undergo total laryngectomy are provided as well. The methods used and references for further information on these approaches are covered. Tracheoesophageal speech, esophageal speech and artificial larynx communication options are described in detail.

Learning objectives

After reading this chapter, one should be able to:

1. Define TNM staging.
2. Define the modes of head and neck cancer treatment.
3. Define the inclusions important in pre-operative counseling.
4. Define post-operative methods of communication and advantages and disadvantages of each.
5. Define the pharyngoesophageal (PE) segment and its role in both esophageal and tracheoesophageal speech.

Classroom activities

1. Sketch a sagittal view of the head and neck showing normal vocal tract anatomy and altered tract anatomy after total laryngectomy. Write a patient-friendly summary paragraph on the changes and present in class.
2. Using modeling clay, build a model of the trachea and esophagus, including the upper esophageal sphincter. Place a puncture where the TE puncture would be placed. Now, describe how tracheoesophageal speech is produced.
3. Visit the website for the International Association of Laryngectomees. Find an IAL club near you and ask if you can come to a meeting. If there is no IAL club near you, consider collaborating with your classmates to begin one.
4. Select three classmates so that you equal four. Using the text and the IAL website, create a pre-counseling laryngectomy in-service that can be used in any in-patient or outpatient medical setting. Contact your local hospital and identify physicians who perform laryngectomy surgeries in the area. Offer your in-service to these surgeons.
5. List two advantages and two drawbacks of the three primary communication modes after laryngectomy. Are these modes of communication mutually exclusive? Explain.

Page key to Classroom activities

1. Pages 272-273
2. Pages 272-273, pages 283-284
3. Pages 275-276
4. Page 275-276
5. Pages 276-277

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Chapter 10: Resonance Disorders

Chapter overview

In chapter 10, we learn that resonance deviations of the voice are often produced by physical problems of structure or function at various sites within the upper airway. Primary efforts must be given to identifying any structural abnormalities and correcting these problems by dental, medical, or surgical intervention. SLPs play an important role in the early evaluation and diagnosis of a resonance problem, as well as in providing needed voice therapy to correct the problem. Voice therapy is often necessary and very effective following surgical and dental prosthetic treatments. For both organic and functional resonance problems, specific facilitating approaches are listed to help patients develop better nasal and oral resonance.

Learning objectives

After reading this chapter one should be able to:

1. Describe the differences between hyper-, hypo-, and assimilative nasality. Why do you think that these resonance disturbances are considered as “nasal” by non-trained listeners?
2. Define two clinical probes that can be used to assess hypernasality. Explain physiologically what is occurring during these probes.
3. Discuss why stimulability testing is so important.
4. Explain what can be determined regarding velopharyngeal function during an oral examination.
5. Describe the various instrumental assessments of velopharyngeal function. Cite their advantages and disadvantages.
6. Explain what testing can differentiate between hyper- and hyponasality.
7. Explain why the Voice Facilitating Approach of yawn-sigh is effective for reducing stridency.

Classroom activities

1. Generate your own simple clinical assessment of resonance. Include in the kit a fogging mirror, flashlight, straw, and age appropriate articulation screen. Pay close attention to the stimuli that help differentiate hypernasality from hyponasality from assimilative nasality.
2. Now, identify a friend, classmate or acquaintance who presents with unusual resonance. Evaluate this individual using the kit and additional probes described in Chapters 6 and 10. Audio record the voice and speech and determine whether this individual presents with a hyper-, hypo-, or assimilative nasality. What are the next steps you might take?
3. Sketch a sagittal section of the head and neck, including the nasal and oral cavities, and naso and oral pharynges. Now sketch how the flexible fiberoptic endoscope is advanced through the nasal cavity for an evaluation of VP port anatomy and physiology.
4. Using the same sketch generated for activity 3, identify whether an obturator or a palatal lift would be appropriate for a child presenting with VP insufficiency. What about a client with acquired spastic dysarthria? Defend your decisions in a summary paragraph.
5. Explain the rational and procedural aspects of glottal fry. Audiotape yourself producing gottal fry and describe why it is a powerful approach for reducing stridency.

Page key for classroom activities

1. Page 292-298

2. Pages 291-293
3. Pages 301-302
4. Pages 291 and 307-308
5. Page 314