Dysphagia: Swallowing or Choking?

for the Certified Nursing Assistant, Home Health Aide, and Patient Care Assistant

This self-administered tutorial is equal to
One (1) Hour of CNA/HHA Inservice
Passing grade on exam is 75%

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Dysphagia: Swallowing or Choking?
for the CNA, HHA, and PCA

Objectives

By the end of this tutorial, the aide will be able to:
1. Tell the definition of dysphagia.
2. Discuss what may cause dysphagia.
3. Discuss how hard life can be to live with dysphagia.
4. List some signs and symptoms of dysphagia.
5. Detail some steps in helping the patient with their diet to swallow safely.
6. Discuss new advances in medicine to re-grow the human esophagus.

WHAT EXACTLY IS DYSPHAGIA? (Pronounced dis´ fā za)

Dysphagia is a difficulty managing food in the mouth, inability to chew, or difficulty
swallowing thin liquids or regular food textures, which causes coughing or choking.
Dysphagia is evaluated and treated by a speech-language pathologist, who is specially
trained in this area. The speech-language pathologist is the newer term for a speech
therapist.

It is important to understand some very basic anatomy: The trachea (windpipe) sits
directly in front of the esophagus (where food travels to enter the stomach). The
pharynx is the area from the nasal cavity to the esophagus. See the picture below to obtain a clear
view:

Dysphagia occurs when there is a problem with any part of the swallowing process. Persons with weak
tongue, jaw, or cheek muscles have a difficult time chewing and manipulating food. (Cerebral)

Other problems include not being able to initiate the swallowing reflex (a stimulus that allows food and
liquids to move safely through the pharynx). Thus, a person cannot start the muscle movements that
carry the food from the mouth to the stomach. Another common problem may be weak throat
(pharynx) muscles, which cannot “squeeze” the food toward the stomach. Here, portions of food or liquid
may fall into the trachea (windpipe), causing infection.

Dysphagia is not to be confused with Dysphasia, which is a partial or complete
impairment of the ability to communicate resulting from brain injury.

CAUSES OF DYSPHAGIA?
Dysphagia can occur in children and adults. It may affect the elderly in a more severe manner if the symptoms allow food/liquids to get into the lungs.

**Common etiologies (causes) of dysphagia include the following:**

- Head and neck cancer
- Parkinson’s Disease
- Stroke
- Traumatic brain injury
- ALS
- Cerebellar degeneration
- Cerebral palsy
- Guillian-Barre Syndrome
- Multiple sclerosis
- Chronic obstructive pulmonary disease

The common factor in these above diseases is some degree of neurological impairment, which in a variety of ways prohibits the oral/pharyngeal musculature to function properly for feeding. Dysphagia can also occur in children with autism, where a hyperactive gag reflex may cause, at worst, projectile vomiting from various types of food. Additionally, oral-tactile sensitivities may cause a variety of food aversions, where the child may only allow a certain texture or temperature of food in his mouth. These difficulties greatly limit the child’s diet and potential for adequate nutrition. Dysphagia is also commonly seen in the elderly. Although a defined neurological impairment may not be evident, the chewing and swallowing function weakens, causing some degree of dysphagia. The elderly with decreased mental status or dementia may also experience dysphagia, as they forget that they have food in their mouth, or forget to complete the actual act of chewing and swallowing food.

**WHAT DOES A PERSON WITH DYSPHAGIA EXPERIENCE?**

**The most serious consequence is illness or death.** This can be due to silent aspiration or aspiration of food matter into the lungs, malnutrition, weight loss, and/or dehydration. A **common illness as a result of dysphagia is aspiration pneumonia**, which occurs when food enters the lungs. It is not actual food particles that cause pneumonia, but rather the bacteria attached to the food particles. Those with severe dysphagia may constantly choke on food and liquids and may give up eating or drinking due to such difficulty. You will frequently see and hear them choking while eating. This will directly cause malnutrition and dehydration. **Most clients with dysphagia will demonstrate denial or lack of awareness of the degree of the problem.** Many times we have asked clients if they experience any difficulties eating or drinking. **Ninety percent of the time the response is, “Oh, no. I have no problems at all,” but we find some dysphagia after completing a full evaluation.**
Another side effect of dysphagia is a compromised quality of life caused by food limitations. How frustrating it is not to be able to drink a cold glass of water safely or eat a nice, juicy steak! The quality of life becomes an important issue when a person is already experiencing the limitations of being disabled, elderly, and/or residing in a skilled nursing facility. Don’t we all enjoy eating what we want, when we want, without a thought except how many pounds it may put on? The social pleasure of dining with family and friends may also be compromised in those with dysphagia. If we think about it, almost all social events revolve around food. It can be very difficult for someone on a puree diet to order in a restaurant or go to a dinner party. Loss of independence is another consequence of dysphagia. Many times the clients are unable to feed themselves or may need a caregiver to implement specific feeding strategies. This can be especially frustrating for people who suddenly lose dependence in a variety of areas due to stroke or accident. Dysphagia clients are commonly seen in hospitals and skilled nursing facilities. We may tend to think of them as aspiration or choking risks. We should all try to understand the limitations they experience which can really impair their overall well-being.

WHEN DOES A PERSON NEED A SWALLOWING EVALUATION?

Many caregivers or healthcare professionals just look for coughing as a symptom of dysphagia. However, coughing is only one of many symptoms! Many dysphagia clients are “silent aspirators,” meaning they cannot feel food entering the airway, or they demonstrate the absence of cough or other respiratory symptoms during aspiration. We will discuss a variety of signs and symptoms of potential dysphagia. One or many of these signs and symptoms should prompt a referral to a speech-language pathologist for a complete swallowing evaluation.

WHAT ARE THE HIGH-RISK SYMPTOMS?

Coughing or choking after taking a bite of food or a drink of water: This is a clear indicator that food has entered the airway or the lungs. If you witness this occurrence, it is wise to contact your nurse supervisor to let the speech-language pathologist immediately (if one is available) know to conduct a screening, at least.

Wet, gurgly voice: Pay attention to a person’s voice after eating or drinking. If it sounds wet or gurgly, this is cause for concern. This may indicate that there is still some residual food or drink sitting in the area around the airway, which poses an aspiration risk. Many of us may experience a slight gurgle after eating or drinking on rare occasions, but this can be resolved with a throat clear or cough followed by a swallow.

Absent or weak cough reflex: Many of us have choked or had food fall into our airway, but we were able to cough it out. Coughing is our biggest protective mechanism when this happens. Those who are too weak to cough or even clear their throat do not have this protective mechanism and are at great risk for aspiration.
**Breathy or hoarse voice:** This may indicate inadequate vocal chord closure. The closure of our vocal chords while we swallow is another protective mechanism to prevent food from entering our airway. This mechanism may be reduced or non-existent if there is poor vocal chord closure.

**Breathing:** Poor respiratory control during eating or drinking is a high-risk symptom of dysphagia. The patient may exhibit labored breathing, become out of breath, or have to take a moment to catch his breath.

**GENERAL SIGNS AND SYMPTOMS INCLUDE THE FOLLOWING:**

**Difficulty monitoring rate and/or amount of intake:** People may stuff their mouths with food or chew on one piece of food for an extended period of time. As a case study, there was a nursing home resident who was unable to handle typical feeding utensils. This resident resolved the matter by shoving handfuls of food into her mouth and pouring cups of fruit salad and vegetables into her mouth. Obviously she was unable to manage the large amounts of food in her mouth, which resulted in choking. Simply implementing adaptive feeding utensils quickly resolved the problem.

**Refusal to eat** is a common behavior seen in the elderly. However, some refuse to eat because it is just plain difficult to handle the current diet they are on.

**Weight loss and dehydration with unsuccessful dietary intervention** are other indicators of potential dysphagia.

**Fatigue when eating/drinking, the presence of a tracheostomy tube, involuntary movements of the body, head, and mouth, or neck hyperextension** may also interfere with eating and/or swallowing may also impair the swallowing mechanism.

**Look for oral signs and symptoms of possible dysphagia:**

When a patient exhibits *slurred speech or drooling*, there is usually some oral muscle weakness or oral-motor weakness. This weakness that impairs speech clarity may also impair the ability to chew, manipulate food into a bolus, and/or push the food towards the back of the mouth to swallow. The same goes for properly controlling and manipulating liquids, resulting in dysphagia.

While watching or feeding a patient during a meal, look for *food residue remaining on the lips or tongue after eating, inability to keep lips closed while eating, and food or liquid leakage through the lips.*

*Difficulty chewing, pocketing of food in the cheek cavity, and over-chewing* should also alert you to possible dysphagia.
You may also observe the patient “tongue pumping,” which is a repeated effort to move the food to the back of the mouth and into the throat. Tongue pumping indicates that the tongue may be too weak to initiate a swallow.

Dysphagia of the pharynx (throat area from the nasal cavity to top of larynx and esophagus) is the most common form. Here the muscles of the pharynx cannot properly “squeeze” the food down into the esophagus. Signs include the following:

**Nasal regurgitation of food or drink after swallowing.**

Watch for repeated swallows to clear all food from mouth or throat. It is very easy to watch a swallow: when the Adam’s apple rises and falls back to the original position, a swallow has been completed. Feel your own Adam’s apple rise and fall when you swallow. Again, many of the high-risk symptoms previously discussed also indicate pharyngeal dysphagia.

**Regurgitation of food and liquids, complaints of fullness, chest pain or discomfort, and food or pills stuck in the throat** may also indicate an esophageal or pharyngeal component dysphagia.

**HOW CAN I HELP IN THE MANAGEMENT OF DYSPHAGIA?**

Although the speech-language pathologist is responsible for evaluating and treating a swallowing disorder, anyone else involved in the patient’s care should have knowledge of the disorder and understand the diet recommendations and any possible feeding strategies. By supporting and implementing these recommendations and strategies, the patient’s risk of aspiration and other consequences are greatly reduced.

The speech-language pathologist, in most cases, will recommend diet modifications to facilitate safe swallowing. The more severe the dysphagia, the more restrictive the patient’s diet may become. Obviously a regular diet is the most non-restrictive. Examples of dysphagia diets include mechanical soft, chopped, ground (All meats are ground; all else remains the same.), and puree (the most restrictive solid diet). Depending on the severity of the dysphagia, these diet consistencies will facilitate better feeding and swallowing in those who experience poor oral motor strength and control or pharyngeal dysphagia. Types and consistencies of diets vary across facilities. Your facility may provide only some of the diet consistencies discussed.

Speech-language pathologists also commonly recommend liquid consistency modifications. From least restrictive to most restrictive, liquid consistencies include regular/thin, nectar, honey, and pudding. Although pudding may not be viewed as a liquid, one can receive hydration through puddings, yogurt, and ice cream.

These liquids can come pre-thickened, or they may need to be thickened with a thickener, such as Thick-It and Thicken Up brands. Thickeners consist of cornstarch powder, which is mixed into regular/thin drinks. It is important for caregivers to ensure...
that the patient receives the appropriate liquid consistency during and in between meals. When thickening a patient’s drink, there is a helpful guide on the thickener cans to assist you with measuring the right amount of thickener for many types of liquids. One thing to remember is to allow enough time for the thickener to take action. Many times we tend to add more thickener because we do not see the desired consistency right away. Then, a few minutes later, the liquid consistency is much too thick. If we walk away to let the patient feed himself before this occurs, the patient is left with a drink that is too thick and undesirable. Juices especially tend to thicken very easily.

**NPO** or “nothing by mouth” is by far the most restrictive recommendation. This usually occurs when the patient is severely aspirating on all diet and liquid consistencies and has not responded to therapy. It is important to understand the danger of feeding or sneaking in small amounts of food or drink to a patient who is NPO. It only takes one aspiration episode to cause serious illness, hospitalization, and even death. In these severe cases, one may need to receive nutrition and hydration via G-tube, which completely bypasses the swallowing mechanism. However, it is important to note that aspiration of saliva or reflux may still occur, and not having the pleasure to eat by mouth diminishes quality of life.

Caregivers may be responsible for implementing feeding strategies that the speech pathologist has deemed appropriate for safe feeding. It is important to implement these strategies, as some clients may only be able to tolerate the least restrictive diet or liquid consistency when utilizing these strategies. We will now discuss a variety of **compensatory strategies** that you may need to use when feeding or administering medications to a patient with dysphagia.

The **chin tuck** is probably the most common technique. When the patient swallows while tucking the chin, she can better push the tongue back while initiating a swallow. Additionally, the airway entrance is narrowed, further preventing aspiration.

Common strategies include having the patient **tilt his head toward the stronger side** while swallowing. This makes it easier to move the bolus of food toward the esophagus effectively, as well as improving closure of the vocal chords. Dysphagia clients with one-sided paralysis or weakness (including vocal chords) are good candidates for this strategy.

Other swallow maneuvers that might be helpful for you to use will be taught to you by the speech pathologist on a case-by-case basis.

Postural changes include having the patient **remain upright at ninety degrees while eating**. This utilizes gravity to direct the food flow without increasing the patient’s effort. Clients may also need to remain upright at ninety degrees for thirty minutes after feeding. This will assist directing any pharyngeal residue into the esophagus. As a case study, we once treated a ninety-year-old severely demented male with severe dysphagia. The safest way he could swallow a puree diet and pudding liquids was by sitting upright at ninety degrees, **swallowing multiple times per bite**, and remaining
upright for thirty minutes after his meal, as he displayed significant pooling in the pharynx after eating. Thus, lying down again after eating significantly increased his risk of aspirating the food or liquid. The nursing staff and aides were trained in this procedure, and without their support and compliance during meals, this man would have been at great risk for choking or may have even needed a G-tube. Like the gentleman in this case study, other clients may need to be prompted to swallow multiple times per bite in order to effectively clear the food from the pharynx. To also assist with this, you may have to allow extra time between swallows. For others, **tilting the head back** while swallowing may also use gravity to help clear the mouth of food. Some clients may need to **use a straw** to effectively move the liquid to the back of the mouth for initiation of the swallow.

**Taking a smaller bite at a slower rate** also reduces any risk of aspiration. Some clients may benefit from **oral motor exercises** to increase strength and range of motion for safer, more effective feeding. The speech pathologist may also use **techniques to improve oral sensory awareness**, where lemon glycerin swabs are commonly used. **Limited or no milk products** are commonly recommended to the dysphagia patient. Milk products tend to increase mucus production, thus making it difficult for the patient to manage and clear, which increases the risk of aspiration. Other strategies include **checking for pocketing between cheeks and gums after eating, alternating textures while feeding, and giving small bites**.

Caregivers who assist with feeding the patient may have to cue the patient to utilize some of these strategies discussed. Other common cues include telling the patient to close lips, push the tongue up and back, and to swallow. Having the patient clear her throat and swallow again will also help clear the food from the airway.

As you can see, simply modifying a person’s diet is not the only way to manage dysphagia. By using these strategies discussed, a patient may be able safely to eat a less restrictive diet than he would have been able to otherwise.

**NEW MEDICAL MIRACLES IN REGROWING THE HUMAN TRACHEA.**

On Nov. 19, 2008 -- Doctors in Europe performed the first trachea transplant from the patient’s own stem cells. The operation at Hospital Clinic in Barcelona, Spain, was successful. The patient was a 30-year-old woman whose left airway collapsed as a result of tuberculosis. She’d already had an unsuccessful stent implant. Her doctors got a trachea from an organ donor and stripped the donated trachea of cells. They then took adult stem cells and some other cells from the healthy right airway of the woman needing the trachea transplant. They grafted those cells onto the donated trachea, marinated the trachea in growth chemicals in a lab to coax it to rebuilding itself. When the trachea was ready, the doctors implanted it into the patient.

The procedure worked! Since the trachea was made up of the patient’s own stem cells, her body did not reject it. Even without immune-suppressing drugs. This was done by Paolo Macchiarini, MD, and colleagues.
Since then, Dr. Macchiarini has been on the TV show “60 Minutes.” He has performed this procedure many times throughout the world. Depending on the need of the patient, he has done this at no cost to the patient. This is considered not only a breakthrough in the regeneration of tissue, but an ethical use of cells for regeneration without using stem cells. Dr. Paolo Macchiarini is head and chairman of the Hospital Clínic de Barcelona, University of Barcelona in Barcelona, Spain, as well as professor of surgery at the University of Barcelona in Spain, and at the Hannover Medical School in Hannover, Germany.

CONCLUSION: YOUR ROLE IS IMPORTANT!

The role of the caregiver who has been trained in the specific strategies for each patient is very important, as the risk of aspiration is greatly minimized and quality of life is greatly maximized. Additionally, it is every caregiver’s responsibility to understand dysphagia and its symptoms. It is common for nursing staff or other therapists to observe initial signs of dysphagia before the speech-language pathologist does, and prompt referrals will significantly reduce risks associated with dysphagia.

References


Click the link below to go to the quiz: