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# Nutrition Nuggets

Provided by Verna Groger, Registered Dietitian, Haven Hospice

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## Dysphagia – When Eating Is A Trial

Eating and drinking are basic pleasures and swallowing is almost automatic – we don’t even think about it. However, for many of the elderly and especially at end-of-life, the ability to swallow can greatly diminish and normal nourishment may become increasingly difficult. New ways of eating must then be explored to facilitate the swallowing reflex and minimize hazards that can result in choking, aspiration, or having food get caught somewhere in the esophagus.

Dysphagia is defined as difficulty or discomfort when swallowing. Problems arise due to medications, cancer treatment, and loss of control over the swallowing reflex caused by various other diseases.

### The Act of Swallowing

A swallow is a complex process, involving 4 phases with many different muscles and nerves. We have conscious control over the first two, as we put food or drink in the mouth, chew, and then move it back towards the throat by a lifting action of the tongue. The last two phases occur automatically once they are started. The final phases involve the bolus entering the esophagus and being carried down to the stomach by peristalsis, worm-like muscular contractions which occur in waves.

Once the food or drink has been directed downward toward the esophagus, muscles contract to close the larynx and the upper esophagus opens up to allow the bolus to enter. Most people who have difficulty swallowing, have problems with the involuntary phases.

### Causes and Incidence

Swallowing disorders affect 45% of people over age 65 and are seen in approximately 65% of those living in long-term-care facilities. The majority of individuals who have undergone surgery or radiation in the head and neck area, usually due to cancer, suffer nerve and/or muscle damage which results in dysphagia. Also, many stroke victims and those with neurodegenerative disorders such as MS, Alzheimer’s, or Parkinson’s have similar difficulties.

### Special Points of Interest:

- Learn the mechanics involved in swallowing.
- Leading causes of swallowing disorders
- Common complications
- Feeding strategies
- Specialized food and equipment

## Problem Areas

If the muscles in the upper part of the esophagus are weak, food can get stuck in the throat. This generally results in the food being regurgitated back into the throat.

If the lower esophageal muscles are weak, including the sphincter muscle which closes off the esophagus from the stomach, acid reflux and heartburn will result. A number of food components have a relaxation effect on this muscle and are therefore contraindicated, as they will increase the risk for reflux. These include caffeine, peppermint, fried food, spices, and chocolate.

If the airway to the lungs isn't closed off tightly, food or fluid can spill into the lungs. If they become infected, pneumonia can result. Many persons with dysphagia are prone to recurrent bronchitis and pneumonia as a result of aspirating food and drink. This is a serious, life threatening complication, which frequently requires the placement of a feeding tube to minimize further occurrences.

In patients who are at risk for aspiration, certain food components are especially irritating to the lining of the lungs. If acidic food or drink, caffeine, or hot spices get down into the lungs, they can become inflamed. This greatly increases the probability for infection and acute respiratory problems. Therefore all citrus, tomato, spicy, and caffeinated food and drink must be avoided.

## Signs and Symptoms

Many people do not realize the true nature or extent of their problem and will avoid seeking help nor admit there is anything wrong. They typically eat very slowly, cough and clear their throat frequently during meals, and are prone to choking.

These individuals often hold food in their mouths for long periods of time, pocketing it on one side, particularly when they have not had a chance to get rid of it unseen. The negative consequences experienced with eating diminish their interest in food and weight loss is a common result. Those with swallowing difficulties often suffer dehydration, malnutrition, and fatigue from low intake.

Here are some situations that indicate a physician should be seen:

- Food sticking in the throat or half way down
- Frequent heartburn
- Repeated problems with choking on food or drink
- Pain during swallowing
- Persistent cough or sore throat
- A hoarse or gurgly voice during or after eating
- Frequent sensation of a lump in the throat
- Wheezing without a history of asthma or lung problems



*Citrus and tomato products are contraindicated for those with aspiration risk.*



*A physician can determine the extent of the problem.*

## Feeding Time

Individuals with swallowing disorders take longer to eat largely because of weakened muscles. It's important to eat in a peaceful environment where there is no pressure to finish meals quickly. Also, eating when tired or agitated should be avoided.

- Sit up as straight as possible with shoulders level.
- Make sure dentures fit properly.
- Avoid eating less than 3 hours before bedtime.
- Serve smaller, more frequent meals – 5 to 6 per day.
- Eat soft, moist foods and avoid dry, crisp, and hard foods.
- Room temperature foods are less irritating to the throat than warmer foods.
- Foods that are a bit sour can help trigger the swallowing reflex.
- Allow a warm-up period where only very small bites (1/2 teaspoon) are given for the first 5 minutes or so and gradually increase to full teaspoon amounts.
- Place the spoon on the patient's tongue and press down gently.
- Allow plenty of time for chewing and swallowing. Make sure they've swallowed completely before giving another bite.
- If the patient quits chewing, a gentle touch on the chin can help.
- Allow for pauses throughout the meal. Feeding can be stressful and tiring. Check the patient's mouth at the end of the meal and clear out any remaining food particles.



*Good posture aids swallowing.*

Patients should always be seated in an upright position to receive meals and snacks. They need to remain in this posture for about 20 minutes afterwards to lessen the chance of aspirating fluid into the airways.

## Dietary Modifications

There are three levels of dysphagia diets. Level 3 is closest to a normal diet and Level 1 is a pureed diet. Each person is individual and food acceptability does not always fall along the lines of these dietary parameters. As the swallowing ability diminishes, the diet becomes closer to liquid as thinner foods require less propulsive force to clear them through the pharynx.

On the Level 3, advanced diet, most normal foods are allowed with the exception of things that are typically problematic. These may include:

- Breads that are chewy or sticky – bagels, freshly baked breads and rolls
- Meats that are chewy such as hot dogs and any meat that is tough or dry
- Chewy candies such as taffy or caramels
- Chunky peanut butter, seeds, nuts, and coconut
- Hard, raw fruits and vegetables unless grated
- Crisp, dry foods like bacon, chips, and popcorn
- Dried fruit
- Foods that are stringy or fibrous such as fresh pineapple, corn, and celery



*Chewy breads can get stuck in the throat.*

## Dietary Modifications

Level 2 is a mechanical diet which emphasizes soft, moist foods. The Level 1, pureed diet precedes a full liquid diet. When patients are no longer able to swallow, they can receive nourishment via tube feeding.

Liquids often need to be thickened as this slows and increases control over the flow. Thick-It and Thik & Clear are two powdered thickeners that can be stirred into liquids to change their consistency. Additionally, fruit juices, milk, coffee, tea, and water are available in various size containers and degrees of thickness. It's also easier to control the flow of liquids through a straw or sippy cup. There is specialized equipment available specifically for those with dysphagia.

Making your own frozen foods and side dishes is an economical way to provide convenient meals ahead of time. Just make family-sized portions and freeze the leftovers in separate plastic containers, freezer bags, or ice cube trays. These are so handy when time is short, you don't feel like cooking, or the meal the rest of the family is eating is not appropriate.

With careful attention to color, flavor, and consistency, eating can remain enjoyable and satisfying as well as nutritionally adequate for patients with dysphagia. Many cookbooks are now available which provide numerous recipe ideas to keep the diet varied and interesting.

## For Further Information:

Achilles, E. (2004). The Dysphagia Cookbook. Nashville: Cumberland House.

Weihofen, D., Robbins, J. & Sullivan, P. (2002). Easy-to-Swallow Easy-to-Chew Cookbook. New York: John Wiley & Sons, Inc.

Tips for managing life with dysphagia, for you and for friends, family and carers. (2007). Novartis Medical Nutrition at [Dysphagiaonline.com](http://Dysphagiaonline.com). [On-line]. Available at:

[http://164.109.68.222/en/1patient/08\\_Tips\\_for\\_managing\\_life\\_with\\_dysphagia.jsp](http://164.109.68.222/en/1patient/08_Tips_for_managing_life_with_dysphagia.jsp)



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