



Cancer Survivorship Patient Education on Post-Treatment Care

Dysphagia, Aspiration and Stricture

Andrew Coughlin MD, Aru Panwar MD,
Carla DeLassus Gress, Sc.D., MS, CCC-SLP, Elizabeth VanWinkle MS, CCC-SLP

What is it?

Dysphagia refers to difficulty swallowing. While dysphagia can have many causes, often it results from scar tissue formation contributing to a narrowing in the throat or esophagus. Such a narrowing is called a ‘stricture’. Patients who experience dysphagia may also experience ‘aspiration’ which is a condition where food, fluid or saliva unintentionally leaks into the windpipe.

How common is it among patients with head and neck cancer?

Dysphagia is fairly common in patients with head and neck cancer and survivors. In one study of head and neck cancer patients, 45.% noted dysphagia, 10.2% noted stricture, and 8.7% noted aspiration pneumonia. In another study, 1 in 2 patients reported a decrease in their quality of life due to dysphagia.

Patients may experience varying degrees of swallowing difficulty due to effects of the cancer, its treatment, and treatment related side effects. For example, tumors may prevent food or liquid from passing from the mouth and throat into the esophagus. Surgery that removes tumors may also remove or damage tissues that are important for swallowing function. Radiation or the combination of radiation and chemotherapy can cause significant inflammation and mouth sores (mucositis) during therapy causing painful swallowing (odynophagia). Surgery or radiation may cause swelling (edema or lymphedema) or scarring (fibrosis) of the lining of the mouth and throat causing decreased swallowing function. Scarring may become severe enough that a stricture develops (narrowing of the esophagus that blocks the passage of food to the stomach). Other common problems in head and neck cancer patients that may also cause swallowing problems including: dry mouth from radiation making food sticky, loss of teeth or poorly fitting dentures causing chewing problems, taste changes, and a loss or change of sensation which alters the way a patient eats.

What are the signs/symptoms?

Signs or symptoms of dysphagia are highly variable. A patient can experience:

1. Coughing or choking when eating or drinking
2. Sensation of food getting stuck
3. Food or liquid passing into or out of the nose with swallowing
4. Decreased ability to chew or swallow solids
5. Unintended weight loss
6. Increased time required to eat a meal
7. Effortful swallowing
8. Difficulty swallowing pills or tablets
9. Recurring pneumonias from aspiration



Cancer Survivorship Patient Education on Post-Treatment Care

Maintaining balanced nutrition and proper hydration is a top priority during and after cancer treatment in order to promote proper healing and recovery with minimal complications. Patients who have difficulty swallowing will often lose weight. If food enters the breathing tube (aspiration) pneumonia or obstruction can occur. If patients cannot maintain weight with nutrition by mouth or suffer aspiration, a feeding tube may be needed.

How is the condition diagnosed?

The presence of dysphagia can often be established through history of patient symptoms. To fully test swallowing function, additional tests may be ordered.

1. **Barium Esophagram:** This is an x-ray test that can be used to identify narrowing of the swallow tube. A radiologist conducts this exam. Patients are asked to swallow a radio-opaque dye (barium) while x-ray images are obtained to evaluate for narrow areas or abnormalities of swallow function.
2. **Modified Barium Swallow:** This is a test where the radiologist and speech pathologist assess your ability to swallow different food consistencies (thin liquids, thickened liquids, and solids) using x-rays like a movie. If you are found to have a swallowing abnormality, the speech pathologist will try to determine if there are ways to compensate for the functional loss (compensatory swallowing maneuvers). These maneuvers may improve your ability to swallow and prevent or reduce aspiration events.
3. **Fiberoptic Endoscopic Evaluation of Swallowing (FEES):** This is an office procedure where providers look directly at swallowing function using a flexible scope through the nose. It enables the clinician to directly identify where the food is going and where passage is difficult, while avoiding radiation exposure. Video recordings can be created, and these can also be used as a tool for providing interactive feedback to the patient regarding their ability or inability to swallow food and liquid.

How is the condition treated?

For patients treated with radiation or a combination of chemotherapy and radiation therapy, studies have shown that continuing to use the muscles and to stimulate the tissues of the throat during treatment results in improved swallowing function. It is critical that you continue to eat and drink, to the extent that you are able, throughout the duration of cancer therapy. Doing so will keep the muscles strong and the tissues healthier. Your treatment team, which typically includes a dietician and speech pathologist, will assist you in determining which foods will be easiest to swallow. If they feel that swallow function is poor, they may recommend the use of a feeding tube in order to get enough calories. Even if a feeding tube is required, continuing to swallow and performing swallowing exercises is of the utmost importance.

If you develop dysphagia it is recommended that you see a speech pathologist. These are individuals who are trained to test swallowing function, provide recommendations on a safe diet, and perform swallow therapy. Dysphagia therapy may involve a specific exercise program to regain strength and range of motion of swallowing structures, or training in the use of compensatory maneuvers to improve swallowing efficiency and prevent aspiration. Therapy may be short-term or require several months. Success is possible, and fortunately most patients are able to resume eating by mouth, though diet modifications may be required. Physical therapy and



Cancer Survivorship Patient Education on Post-Treatment Care

passive motion devices may help to alleviate a reduction in jaw opening (trismus) that is the result of radiation treatments. If a stricture develops, a camera examination of the food pipe and dilation in the operating room may provide significant improvement.

Long term, most patients do very well and resume a normal or near normal diet with appropriate therapy. However, some patients may experience long-term swallowing issues that impact the types of foods that can be eaten. A small percentage of patients have severe swallowing issues that necessitate the use of a permanent feeding tube. Scar tissue formation can affect swallowing function months to years after treatment is completed. Each patient is different and therefore diagnosis and therapy are determined on an individual basis.

When should I call my doctor?

Things that should lead you to call your doctor include:

1. Inability to eat things that you used to enjoy
2. Persistent coughing or choking on food
3. Recurrent pneumonias
4. New pain with eating
5. Unexplained weight loss
6. Unexplained change in the food consistencies that you can eat
7. Decreased pleasure in eating

Where can I Learn More?

Patient learning module on Dysphagia. Oral Cancer Foundation:
<https://oralcancerfoundation.org/complications/dysphagia/>

Swallowing Problems After Head and Neck Cancer. American Speech-Language- Hearing Association: <https://www.asha.org/public/speech/disorders/Swallowing-Problems-After-Head-and-Neck-Cancer/>

References

Hutcheson, K.A. et al. [2-Year Prevalence of Dysphagia and Related Outcomes in Head and Neck Cancer Survivors: An Updated SEER-Medicare Analysis. International Journal of Radiation Oncology, Biology and Physics](#) , Volume 99 , Issue 2 , E342

Garcia-Peris P, Paron L, Velasco C, et al. [Long-term prevalence of oropharyngeal dysphagia in head and neck cancer patients: Impact on quality of life. Clin Nutr.](#) 2007 Dec;26(6):710-7.

Rosenthal DI, Lewin JS, Eisbruch A. [Prevention and treatment of dysphagia and aspiration after chemoradiation for head and neck cancer. J Clin Oncol.](#) 2006;24(17):2636-2643