

Speech Therapy During Treatment: Head and Neck Cancer

Pharyngocise: Swallow Exercise Program

What? Pharyngocise is a preventative exercise program designed for individuals with head and neck cancer. We recommend beginning the program prior to radiation treatment to help prevent or reduce long-term swallowing problems that can occur. The best way to preserve swallowing function after treatment is to engage in proactive strengthening of the swallow muscles!

Why? Research shows that patients who completed “pharyngocise” exercises as prescribed were significantly less likely to develop swallowing problems or related complications compared to patients who completed no exercises at all.

The pharyngocise program consists of the following exercises, targeting several of the muscles most commonly affected during radiation:

1. Effortful Swallow (“Hard swallow”)

- Swallow hard with lips pressed together and tongue pressed against the roof of the mouth
- Think “swallow hard, swallow fast, swallow a golf ball”
- This exercise can be done with or without food and liquid. The added resistance of food/liquid = increased strengthening

2. Effortful Pitch Glide (“Falsetto”)

- Take a deep breath in, say “e” at your normal pitch then glide up to a comfortable high pitch
- Hold high pitched “e” for 3-5 seconds
- Avoid straining/forcing the voice and keep surrounding neck muscles relaxed

3. Tongue to Hard Palate Press

- Press your tongue behind your top front teeth as hard as you can for about 2 seconds

4. Open Jaw and Hold ☐ No resistance ☐ With resistance

- Open your mouth as wide as you are comfortably able to and hold for 7 seconds
- Use resistance as indicated; make sure it is comfortable (You can use a small, soft, squishy ball or a rolled up towel)

For best outcomes: complete each exercise at least 5 days a week, 4 times a day, with 10 repetitions in each set.



Stop the exercise immediately if you become dizzy, get a headache, and/or develop pain.
Mild fatigue and/or soreness can be expected from exercising your muscles.



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Swallow Function: It is important to keep swallowing during treatment as much as possible (try to swallow water/ice/your own saliva even if you can't swallow food). If you are unable to swallow and/or if swallowing is painful, a feeding tube may be placed to help maintain weight and nutrition.

Surgery: Your surgeon will explain the extent of the surgery and any possible associated complications. Surgery of the lips, jaw, tongue, throat, larynx (voice box), hard/soft palate, tonsils, vocal folds, and/or esophagus (food tube) can impact speech and swallow function.

Radiation Therapy: May be used, in addition to surgery, alongside chemo, or independently. The possible impacts of radiation therapy on swallow function can be broken-up into two categories: acute side effects (develop during treatment), and latent side effects (develop after treatment).

Acute side effects: Pain, swelling, and/or inflammation/sores (mucositis), dysgeusia (taste changes), xerostomia (dry mouth), fatigue, odynophagia (pain with swallowing).

Latent side effects: Fibrosis (stiffening/scar-like changes to tissue), decreased sensation, decreased efficiency, trismus (reduced jaw opening), lymphedema (collection of fluid/swelling).

Chemotherapy: May also be used in addition to radiation therapy to enhance the effects of the treatment. Certain chemo medications may result in increased nausea, taste changes, and/or dry mouth.

Swallowing Tests: May be completed for further evaluation as needed. This provides your medical team and your speech therapist with objective imaging of your swallowing function.

The Modified Barium Swallow Study (MBSS): Completed by watching you eating/drinking food and liquid mixed with barium (contrast material) under a moving x-ray (fluoroscopy).

The Fiberoptic Endoscopic Evaluation of Swallowing (FEES): Completed by inserting an endoscope (camera) through the nose, and watching you eat/drink food and liquid mixed with food dye; the camera is held at the top of the throat and does not go into the airway or esophagus.

Role of Exercise: Depending on the type of cancer, the treatment method, and the results of the swallow test, your SLP will recommend exercises designed to help strengthen/restore swallow function. You should follow-up with your SLP regularly to assess progress and make changes to the exercise plan as indicated. Regular exercise is recommended even after discharge to maintain swallowing muscle strength. Remember to keep swallowing-we use it or we lose it!

Practice Excellent Oral Care: Brush your teeth, tongue, and gums 2-4 times per day with a soft toothbrush and mild toothpaste. Use mouthwash as able (consider non-alcohol-based mouthwash for dry mouth). Maintaining good oral care is essential to reducing the risk of developing an aspiration related illness or infection. Follow up with your dentist regularly and as needed.