Speech, Language, and Hearing Sciences
NEWSLETTER

May 21, 2024

Laryngoscopy Patient Experience

So I'm Getting a Laryngoscopy… What should I expect?

Authors: Rachel Olmstead, Lauren Petrides, Samantha Meador, Charis Ivey

Receiving any type of medical procedure can be daunting, especially when you're not familiar with what it entails. A medical examination that often falls into this category is laryngoscopy.

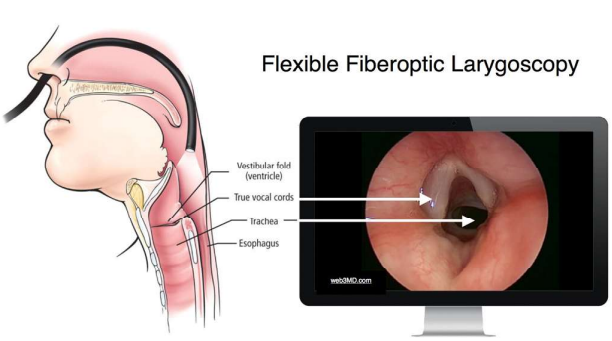
A laryngoscopy is a medical procedure that allows a speech-language pathologist (SLP) or otolaryngologist (ENT) to view your larynx, or voice box. This is most commonly done with different types of cameras, or scopes.

There are several reasons why an ENT or SLP might want to look at your larynx. These include but are not limited to:

- Changes in the structure or function of the vocal folds
- Significant voice changes
- Head and neck cancer
- Vocal polyps
- Vocal fold paralysis
- Trauma to the neck/larynx
- Throat pain
- Biopsy of tissues

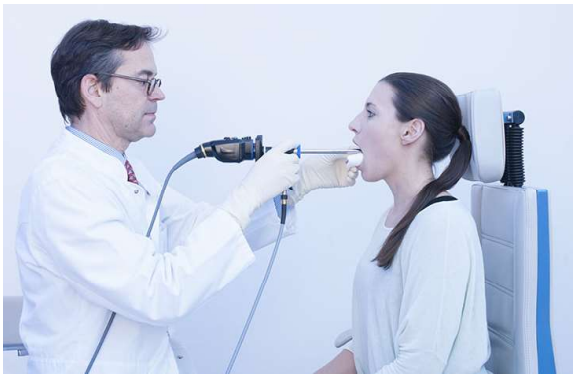
There are four types of laryngoscopy: indirect (flexible, rigid, mirror) and direct. These all serve their own purpose to examine the larynx.

A **flexible laryngoscopy** is an exam used to view the larynx using a camera on a flexible wire routed through the nasal cavity. This procedure generally does not require any preparations beforehand. You may be offered a numbing agent such as lidocaine. This will be rubbed into the inner edges of your nose as you inhale deeply. The clinician may also put some lubricant gel on the flexible wire to allow for easy movement through the nasal cavity. Next, the clinician will insert the camera about an inch deep into both nostrils to see which is more open for the scope to pass through. Next, the scope is slowly inserted into the chosen nostril and passed through the nasal cavity towards the back of the throat, where it angles downward to view your larynx (Alvi, S. & Harsha, P., 2023). The insertion of the wire can cause slight discomfort and can be described as a slight pinching sensation. However, this varies by patient and some have no discomfort at all. Be sure to communicate negative sensations with your clinician. The clinician will look at the structures of the larynx and may ask you to perform particular tasks that may include: talking, making different pitches, or even swallowing. After the exam, the flexible wire is painlessly taken out by the clinician pulling out the device. Quick and easy! Most procedures are generally between 5-10 minutes (Healthwise Staff, 2023).

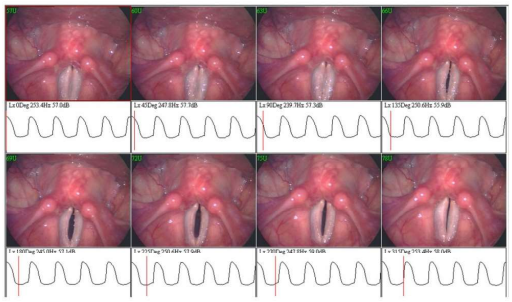


A **rigid laryngoscopy** is when the larynx is viewed through the use of a wider, non-flexible tube that is routed through the oral cavity. Like flexible laryngoscopy, the tube has a camera and a light attached

to the end to allow for a clear view of the larynx. Rigid laryngoscopy can be used to take a biopsy, which is a sample of tissue from part of the larynx, or to surgically remove a lesion (Healthwise Staff, 2023). Because the scope will be passed through the oral cavity, it may be difficult for you to complete tasks that require speaking. Therefore, the tasks that the clinician asks you to complete may be more limited than that of a flexible laryngoscopy. Additionally, this procedure will take longer than a flexible laryngoscopy. Generally, there usually isn't much preparation for this exam. However, depending on the reason you're receiving it, there may be specific instructions, so be sure to check with your provider beforehand.

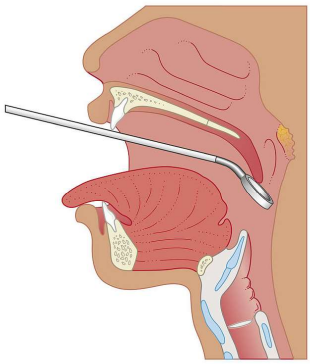


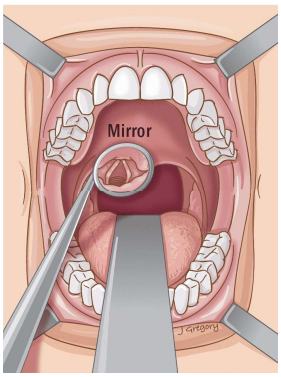
Some flexible/rigid laryngoscopes may include the use of a strobe light. This exam type, called a **laryngostroboscopy**, allows for more detailed information to be collected on vocal fold movement using periodic flashing light to make it appear as though they are moving in slow motion (Chao, 2022). If your examination includes a strobe, you may also be asked to hold a stethoscope-like object on your outer throat to help coordinate measurement timing.



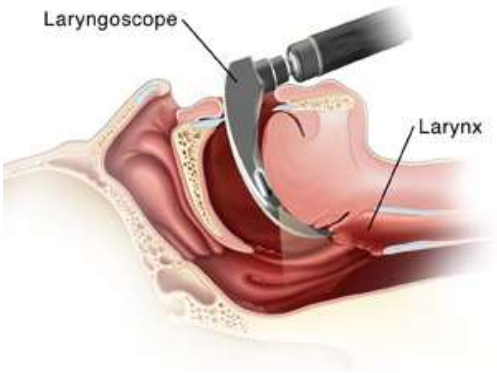
A **mirror laryngoscopy** is one of the most commonly used methods to image the larynx by ENTs (Lapeña, 2013). It is also one of the most simple procedures. The tools used in this procedure include a small mirror on a long rod that is similar to a dental mirror, a tongue depressor, and possibly a tool to help keep your mouth open. The clinician might also wear eye magnification and have a light source such as a pen light or head lamp. In this procedure, you can expect to open your mouth wide as the clinician puts the laryngeal mirror to the back of your mouth, where your soft palate is. You might be asked to adjust your positioning and the clinician might use a tongue depressor to get a better reflection of your vocal folds. Although uncommon, this exam may or may not use local anesthetic

such as lidocaine to reduce any discomfort or gag reflexes. The images below show the tools and the methods used for mirror laryngoscopy.





Another type of laryngoscopy is a **direct laryngoscopy.** Direct laryngoscopy allows the larynx to be directly visualized by the practitioner's own eyes (Pearson et al., 2023). This type is uncommon for laryngeal exams, but may be conducted prior to placing a breathing tube for intubation. It may also be used to abstract samples of tissues (biopsy), which is common in head and neck cancer patients. Direct laryngoscopy is typically conducted by an ENT or anesthesiologist . Patients are often sedated during this procedure or receive oral anesthetic and experience very minimal pain. During the procedure, the ENT or anesthesiologist will use a tool called a laryngoscope to suppress your tongue and angle your neck to view your larynx in a direct line of sight. The images below show the tool and method used in direct laryngoscopy.



Anticipated outcomes of this procedure include:

- Diagnosis of voice disorders from ENT
- Treatment plan for voice from SLP
- Video recordings of structures and functions of the larynx
- Biopsy of tissues

Possible exam interpretations include but are not limited to:

- Anatomical abnormalities
    - Polyps
    - Cysts
    - Nodules
    - Plaques
- Functional disorders
    - Impaired mucosal wave movement (disordered vibrations of the vocal folds)
    - Insufficient vocal fold closure/opening
    - Disordered vocal fold closure/opening
    - Vocal paresis (lack of movement)

If you are not sure what kind of laryngoscopy procedure you are receiving, you can always contact your provider and ask for a description of your exam. It is important to voice any concerns about laryngoscopy with your provider. We hope to have expanded your knowledge on what to expect and wish you good vibrations!

References

Alvi, S. & Harsha, P. (2023). Flexible nasopharyngoscopy. *StatPearls* [Internet]. StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK539740/

Chao, S. (2022). *Videostroboscopy*. *StatPearls* [Internet]. StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK567774/#:~:text=Stroboscopy%20is%20used%20to%20visually,fundamental%20frequency%20of%20the%20voice.

Healthwise Staff. (2023, September 27). *Laryngoscopy.* NorthShore. https://www.northshore.org/healthresources/encyclopedia/encyclopedia.aspx?DocumentHwid=hw232056

Lapeña, J. F. (2013). Mirrors and reflections: The evolution of indirect laryngoscopy. *Annals of Saudi Medicine, 33*(2), 177-181. https://doi.org/10.5144/0256-4947.2013.177

Peterson, K., Ginglen J. G., Desai, N. M., Guzman, N. (2023). Direct laryngoscopy. *StatPearls* [Internet]. StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK513224/