



Carolina Ear, Nose & Throat Head and Neck Surgery Center

General and Post-Operative Information about Laryngeal Insufficiency and its Surgical Treatment

What is laryngeal “insufficiency” and what causes it?

The vocal folds (vocal cords) are located in the larynx (LAIR-inks) or “voice box.” They sit in a V-like configuration and open and close depending upon the action of muscles to which they are attached. Sound that comes from the vibration of the vocal folds when they are in the closed position is the primary source of our speaking and singing voice.

Any condition that keeps the vocal folds from closing completely can be termed laryngeal “insufficiency” also known as “glottic insufficiency.” The most common cause of this condition is vocal fold paralysis usually from damage to the nerve supplying the voice box muscles. In this situation, one vocal fold typically does not move enough to approximate the other leaving a “gap” between the vocal folds so air escapes and vibration does not occur. A second condition called vocal fold “bowing” has a similar effect but occurs from weakened vocal fold muscles. Here, both vocal folds are weak and do not close completely. Vocal fold bowing usually occurs as a result of the aging process.

What are the symptoms of laryngeal insufficiency?

Patients with laryngeal insufficiency complain of hoarseness, typically a weak voice, sometimes a breathy sounding voice. You may also have shortness of breath or loss of breath while speaking. Difficulty swallowing or a choking sensation may occur but is much less common.

How is laryngeal insufficiency treated?

The treatment for vocal fold insufficiency depends upon the specific cause and the degree of voice change or hoarseness. Medication, voice therapy and laryngeal surgery are the more common types of treatment for these conditions, and may be used alone or in combination. Voice therapy is usually designed to eliminate poor vocal behaviors but this can actually make the voice worse.

Surgery is a mainstay for treatment of laryngeal insufficiency and can be temporary or permanent. The overall goal is to move the edge of the damaged or weakened fold closer to its usual position during closure. This effect can be obtained by injecting a substance (collagen, fat, etc.) into the fold to increase its “bulk” or by placing a shim next to the fold through a small incision in the neck. The final effect is a voice box where both vocal folds close together enough to so vibration and voice production occurs.

What are the risks of surgery?

The risks of surgery include but are not limited to: 1) Risks of anesthesia, which are usually quite small if you are in good health. Consult your anesthesiologist for further details. 2) Damage to structures in and around the mouth can occur because of placement of the breathing tube or the operating laryngoscope. This includes a bruised or cut lip or tongue; chipped, cracked or

dislodged tooth or a scratch in the back of the throat. A mild sore throat, sore tongue or temporary tongue numbness can occur due to pressure from the laryngoscope. 3) For procedures done under awake anesthesia, a flexible telescope may be used to see the voice box and it could cause trauma to the nose including a nosebleed. 4) Voice improvement after the operation cannot be guaranteed but is the goal of this type of surgery and is almost always accomplished.

What should I expect after the procedure?

As noted previously, a mild sore throat, mouth or tongue are common after surgery as is ear pain. Surgical laryngitis (inflammation of the larynx) will often make the voice temporarily more hoarse after the operation; voice improvement is gradual over several weeks. You also may spit up blood-tinged sputum (saliva) for the first 24 hours after surgery.

Nausea and a generalized “run-down” feeling are common after general anesthesia and usually resolve over a few days. A prescription for pain medicine and sometimes an antibiotic or anti-nausea will be prescribed for you; use these as directed. In general, you should plan to be off work until the first post-operative visit (7-10 days). A second post-operative visit is usually scheduled 4-6 weeks after surgery.

What about using my voice after the procedure?

After this type of surgery, there are generally no voice use restrictions. You can resume your normal speaking activities.

****Singing should be discussed with your physician.**

Remember to: 1) use and easy, natural voice; 2) avoid extreme vocal use [yelling, throat clearing, talking for long periods of time without a break, heavy lifting, strenuous exercise]; 3) drink lots of water with no caffeine or alcohol.

What things should I be concerned about after surgery?

If you develop any of the conditions listed below or have other post-operative concerns, please call our office at: (828) 322-2183 (Hickory), (704) 658-0720 (Mooresville) or (704) 948-6044 (Huntersville).

- Temperature above 101 degrees
- Persistent nausea or vomiting
- Persistent or bright red blood in saliva
- Difficulty with breathing or swallowing or an increase in throat pain