# Gender Affirming Voice Modification and Surgery

At the University of Washington Laryngology Clinic, our goal is to help our transgender non-binary patients achieve a voice that affirms their gender identity. Our interdisciplinary team of board-certified laryngologists and speech pathologists works closely with each patient to evaluate their options and work to achieve your voice goals in a safe and efficient way. Together, you and your team will make sure your voice is aligned with your gender identity and expression.

## Transgender Voice Evaluation

Your evaluation includes a combined visit with the laryngologist and the speech (voice) therapist. We will do our best to understand how your voice impacts your life and health. We will conduct a standard consultation including reviewing medical history, medications, and other issues related to your health. A laryngeal videostroboscopy will be completed to allow us to evaluate your vocal folds in vibration. This involves the use of a small scope that is placed in your mouth or through your nose to view the voice box. Audio perceptual and acoustic measurements of your voice will also be obtained. Together we will review the options and come up with the best plan for you going forward.

## Voice Feminization and Masculinization

Our voice and speech therapists can help you learn new voice techniques intended to signal a more “feminine” voice. This includes not only natural pitch elevation but many other important aspects of the voice such as resonance, breathiness, intonation, and even nonverbal communication patterns (i.e. eye contact, gestures). Many patients find that voice therapy alone is sufficient to achieve their target voice. However, consideration may be given to surgery to alter pitch following voice therapy if indicated. Pre-operative voice therapy is still necessary in these cases to develop increased vocal control and flexibility to maximize the success of any surgical interventions. It is important to note that voice therapy is our first line of treatment as surgery is destructive in nature. Gender affirming voice surgery is designed to remove the lowest pitch range and elevate the common speaking pitch closer to an average feminine range. While this may change the ‘natural’ pitch of the vocal folds, pitch alone is not the only aspect of voice that fully signals a more feminine voice and voice therapy can target the other feminizing communication patterns.

Voice masculinization is often achieved to a satisfactory level due to the effects of testosterone on the vocal fold mucosa. Most trans men develop a lower pitch; hence, further intervention is not always necessary. However, voice therapy may be helpful to adjust patterns of speaking, particularly to reduce vocal tension and fatigue. Surgical intervention by a laryngologist - should it be required - can also reduce the tension of the vocal folds in order to eliminate the higher pitch range of the voice.

## Wendler Glottoplasty/Pitch Raising Surgery

Pitch of vibrating vocal cords is determine by a number of factors including length, stiffness, mass and tension. One of the most successful procedures, shortens the vocal folds by removing the front 1/3 of

the vocal fold. This endoscopic ‘web’ creation at is called the Wendler glottoplasty. By connecting the anterior 1/3 of your vocal folds with sutures, the remaining cord is shorter and vibrates closer to female frequencies after healing. There is no scar in the neck as the entire procedure is done through the mouth while you are asleep under general anesthesia.

Most patients have minimal pain form the operation, often controlled with acetaminophen and ibuprofen. There is a 1 week of ***important*** complete voice rest and then slow steady incorporation of voicing and speaking based on healing during post-operative evaluation. If you are working where you need to use your voice for work, we typically recommend you take 4 weeks off of the vocal demands of work. Teachers, litigating lawyers and other high vocal demand users may want to consider longer time off from work.

It will be important to show up to frequent post-operative visits at 2,4, 6 weeks after the operation. But you do not need to stay in the area.

## **Who should get the Wendler glottoplasty?**

* Patients who have completed a course of gender affirming voice therapy AND either:
	+ Experience physical strain associated with their gender-aligned voice.

OR

* + Experience significant cognitive load to maintain their gender-aligned voice.

## **Who should have a frank discussion with their surgeon before a Wendler glottoplasty?**

* Professional Voice Users (Doctor, Lawyer, Teachers, Vocal Performers, Actors etc). Wendler glottoplasties decrease volume and ability to project of the voice while raising the pitch. Further vocal quality can be rough and strained secondary to scarring.
* Athletes and extreme endurance fitness buffs. The shortening of the vocal folds can also lead to narrowing of the airway. While more than adequate to most physical activity, these patients may notice limits during times of high aerobic demands.
* Any patient considering an elective operating procedure in the next 6 months. Breathing tubes needed for any operation under general anesthesia can disrupt the web.

## What to Expect of the Vocalization Process

Changing the way you make use of your voice can be difficult. Just like it takes a little time to adjust to new physical appearances, a new voice can seem strange at first. We help you through this process and guide you to a voice that reflects who you are and what you need to do with your voice. The therapy usually takes 4-6 sessions over 8-10 weeks, but this schedule can be accelerated. Many voice patients are happy with their voices after the initial therapy, and choose to not undergo the Wendler glottoplasty.

For those who opt for the procedure, you can expect to have an average of six months after surgery for healing of the tissue. You will need to be quiet for a week, and then return to the clinic so we can see how you are healing. Depending on your healing, we will start you on some gentle exercises to help the gradual reintroduction of your voice. If you elect to have the tracheal shave, this can be done at the same time as the Wendler glottoplasty. This would involve a small incision. After the glottoplasty, some additional therapy may be helpful in learning how to make use of your new vocal instrument.