

# Vocal Fold Paralysis

The vocal folds are located in your throat above your trachea or windpipe. The vocal folds play a critical role in speech, swallowing and breathing. When you speak the vocal folds come together and the tissue covering them vibrates. This vibration produces the sound of your voice. When you breathe the vocal folds open to allow for air to pass through.

Vocal fold paralysis is most commonly one sided or unilateral. The vocal folds do not meet in the middle when they close, leaving a gap. Patients with unilateral paralysis have symptoms of a weak or "breathy" voice. Speaking requires more effort and it is difficult to generate a loud voice. Patients may have trouble with swallowing because of incomplete closure of the vocal folds and may have coughing or choking when they eat or drink. The most common cause of unilateral paralysis is injury to the nerves that control the muscles in voice box or larynx. There are many things that can result in vocal fold paralysis and other tests are sometimes required to find the cause.

## ***TREATMENT***

The most common surgical treatments for unilateral vocal fold paralysis improve voice by moving the paralyzed fold to the middle. This allows the folds to meet in the middle and reduces the gap between the two folds. There are three surgical procedures that are commonly used:

1. Medialization Thyroplasty
2. Arytenoid Adduction
3. Vocal fold injection

### **Medialization Thyroplasty and Arytenoid Adduction**

The surgical procedure called thyroplasty is commonly performed with local anesthesia and sedation so that the surgeon can fine-tune the patient's voice. A small incision is made in the neck and an opening is created in the thyroid cartilage or the adam's apple. A block or prosthesis (usually made from silicone) is placed through this opening and pushes the paralyzed cord to the middle and reduces the gap between the two vocal folds. Your doctor may choose to use a stitch to reposition your vocal fold and the cartilage that it is attached to, this is called an arytenoid adduction.

### **Vocal Fold Injection**

Vocal fold injection is used to treat unilateral vocal fold paralysis by injecting material into the paralyzed vocal fold. This pushes the paralyzed fold to the middle so that when the normal fold closes there is no gap. For this procedure the patient is put to sleep with a general anesthetic and a special scope is put into the throat so that the injection can be

performed. There are several things that can be used for vocal fold injections, these include your own fat or synthetic materials. Some injections can be performed with local anesthesia.

### **BEFORE SURGERY:**

1. If you take any blood thinners like aspirin or coumadin tell your doctor at your pre-operative visit. You may need to stop these medications for a week before your surgery, make sure that you talk to your doctor first.
2. You will have a complete physical exam which may include blood tests, xrays or an EKG.
3. Ask any questions you have about your surgery.
4. You will be asked to sign a permission slip for surgery.
5. You will be given instructions about when to stop eating and drinking before surgery.

### ***SURGERY: THYROPLASTY***

#### **DURING SURGERY:**

1. You will be given medication to make you a little sleepy.
2. Your doctor will inject local anesthetic (medication to make the area numb) into your neck so you will not feel pain during surgery.
3. Your doctor may spray some medicine into your nose.
4. During surgery the anesthesiologist (the doctor that gives you medicine and monitors you during surgery) will be checking your comfort level.
5. When your doctor puts the block in your larynx (voice box) you will be asked to speak. At this time we may put a small camera in your nose to look at your throat. This allows your doctor to check that the paralyzed vocal fold is in a good position.
6. When surgery is done you will be taken to a recovery area. The procedure will take 1-2 hours.

#### **AFTER SURGERY:**

1. Do no heavy lifting or strenuous activity for one week.
2. Rest your voice by using it sparingly. Do not shout, yell or whisper.
3. Drink plenty of liquids.
4. You will be instructed on the care of your incision.
5. A follow-up appointment will be made with your doctor.
6. It may take 4-8 weeks for you to heal completely.

## **VOCAL FOLD INJECTION**

### **BEFORE SURGERY:**

1. If you take any blood thinners like aspirin or coumadin tell your doctor at your pre-operative visit. You may need to stop these medications for a week, make sure that you talk to your doctor first.
2. You will have a complete physical exam which may include blood tests, xrays or an EKG.
3. Ask any questions you have about your surgery.
4. You will be asked to sign a permission slip for surgery.
5. You will be given instructions about when to stop eating and drinking before surgery.

### **DURING SURGERY:**

1. You will be put to sleep for your surgery.
2. If your doctor is injecting fat, you will have a small incision on your abdomen. Your doctor will take a small amount of fat from that area.
3. Your doctor will use a special scope to look at your vocal folds and do your injection.

### **AFTER SURGERY:**

1. Do no heavy lifting or strenuous activity for one week.
2. Rest your voice by using it sparingly. Do not shout, yell or whisper.
3. Drink plenty of liquids.
4. You will be instructed on the care of your incision.
5. A follow-up appointment will be made with your doctor.
6. It may take 4-8 weeks for you to heal completely.