

- Voice therapy can also help singers develop control over pitch instability and the vocal dynamic.

The Singing Teacher/Voice Teacher is an essential member of the rehabilitation team when working with performers.

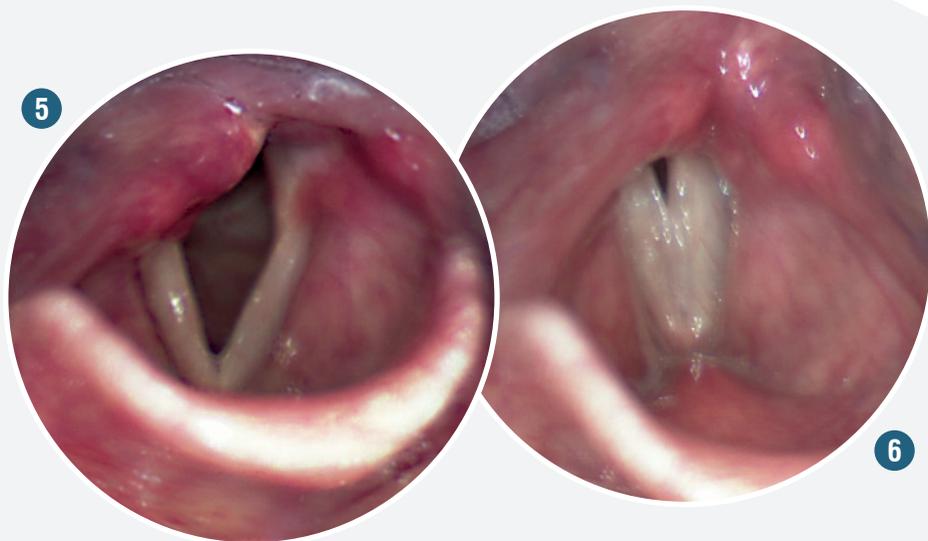
Manual Therapy: The voice specialised osteopath or physiotherapist may be very helpful in cases where excessive muscular tension is interfering with successful compensation strategies.

Surgery

In cases where the paralysis of the vocal fold is permanent and/or the working fold cannot compensate, surgery may be recommended. There are many good surgical techniques to position the paralysed vocal fold so it can make contact with the working fold. Recent advances in research mean that, in the future, it may also be possible to repair/replace damaged nerves in the larynx (reinnervation techniques). You will need to discuss which surgical option is likely to suit you best with your ENT Surgeon.

Surgery usually:

- Improves vocal intensity (loudness).
- Stabilises the pitch and improves voice quality.
- Reduces vocal effort and improves vocal stamina.



5: Paralysed right vocal fold: paralysed fold lies between the open and closed position in breathing.

6: Well compensated right vocal fold paralysis in voicing with good closure. Note the minimal posterior gap and the compensatory movement of the left fold across the midline.

What can I do to help myself?

- Try not to whisper. Speak as normally as you can rather than force your voice to be louder. Attempts to speak loudly usually make the voice sound worse.
- Make sure you have your listener's attention and face him/her when you are speaking.
- Avoid noisy surroundings where possible.
- Make sure your friends know that your vocal fold is paralysed and that you cannot speak loudly so they make allowances and don't speak over you.
- If you are a singer, continue to work on vocal exercises and try to keep singing to help maintain the muscle tone. Be prepared to accept your voice will not be at its best.
- If you need to lift things, make each load smaller and make more journeys
- If your paralysed vocal fold makes you more breathless, pace yourself by going a bit slower on stairs or up hills and give yourself time to adapt your breathing.
- If you have problems with swallowing make sure you sit upright while eating and don't try to eat and talk! Ask for a referral to a Swallowing Specialist Speech Therapist.
- Make sure you eat and drink more slowly taking smaller, more manageable mouthfuls.
- Try to avoid foods that mix solids with liquids, (e.g. cereal with milk or meat with thin gravy). While you are chewing the solids any liquid element may 'go the wrong way' and cause coughing/choking.

Remember, although a paralysed vocal fold is frustrating and distressing, in most cases it will either recover over time or the working vocal fold will learn to compensate. Meanwhile, make sure you get help and support from your ENT surgeon and therapy team.

For information about Superior Laryngeal Nerve Palsy see the BVA website:

www.britishvoiceassociation.org.uk



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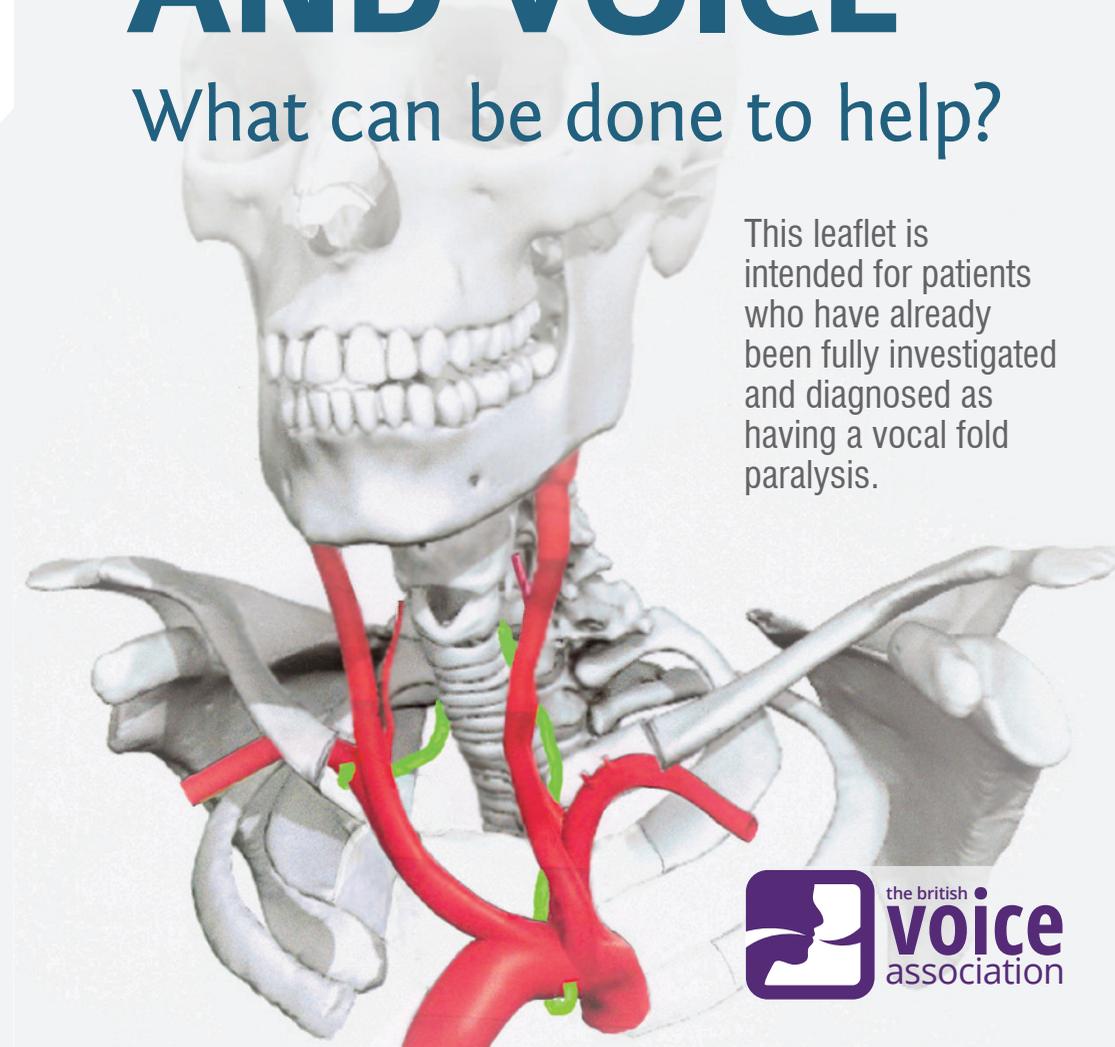
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PARALYSED VOCAL FOLDS AND VOICE

What can be done to help?

This leaflet is intended for patients who have already been fully investigated and diagnosed as having a vocal fold paralysis.



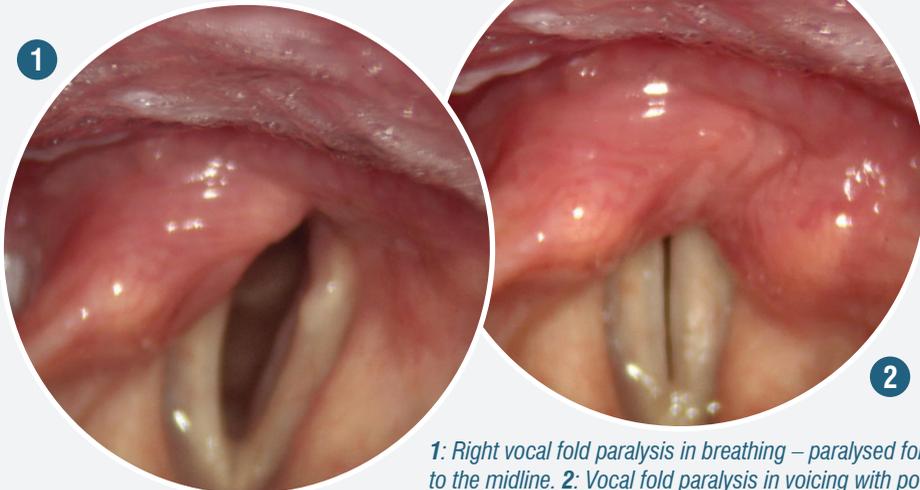
What is a paralysed vocal fold (cord)?

A paralysed vocal fold or cord (also referred to as a **vocal fold palsy**) occurs when the nerve that activates the vocal muscles which move the vocal folds together or apart no longer functions. As a result, one (or occasionally both) vocal folds stop moving.

How does a paralysed vocal fold affect my voice?

The effect on voice quality may vary considerably from person to person, depending on where the affected vocal fold comes to rest in the airway.

- If it is paralysed at or near to its closed position in the midline, it will usually still be able to make good contact with the working fold opposite and the voice may sound normal.
- If the paralysed fold comes to rest nearer the open position for breathing, the voice is likely to be more severely affected. The paralysed fold can no longer make contact with the opposite working fold leaving a wide gap between them for air to escape.
- If the paralysed vocal fold comes to rest somewhere between these two extremes, the effect on the voice will depend on how closely the vocal folds can approximate to one another. The nearer they are the better the voice is likely to sound.
- As the paralysed vocal fold loses its muscle tone it becomes thinner than its normal partner and this is likely to affect the stability of pitch control.



1: Right vocal fold paralysis in breathing – paralysed fold close to the midline. **2:** Vocal fold paralysis in voicing with potential for good closure.

Perceptually the voice is likely to sound:

- Higher in pitch, weak, quiet and pitch unstable.
- Two different pitches may be apparent in the voice (diplophonia).
- There is likely to be audible air escape (breathiness).
- Where there is a wide gap between the folds the voice may sound harsh, rough and strained as the speaker recruits surrounding muscles to assist the paralysed fold.

Even when the voice sounds normal the speaker may find that it **fatigues easily**, that it is **difficult to compete against noise** and that it may feel **strained, tight and uncomfortable to talk**.

Singers

If you are a singer you are likely to notice:

- Difficulty controlling the vocal intensity (power) and the stability of pitch.
- It may be harder to raise the larynx and use the pharyngeal muscles in the throat to ‘tune’ the resonances for vocal brightness.
- Your voice is likely to fatigue quickly and sound weaker and breathier than usual.

It is especially important for singers to work on their voices with a Speech Therapist **and with a singing teacher experienced with voice rehabilitation**.

Does a paralysed vocal fold affect me in any other way?

Some people notice that swallowing is more difficult.

- Food and particularly liquids may ‘go the wrong way’ causing coughing or choking.
- The throat may not feel completely clear after eating or drinking and may require a second swallow.
- Lifting heavy loads is difficult because air cannot be sealed in the chest to provide extra strength for the shoulder girdle.
- You may notice breathlessness when exercising especially climbing stairs or walking uphill.

If swallowing is a problem a **Speech and Language Therapist specialised in swallowing disorders** can assess the problem and provide valuable advice and exercises to help you while you recover. Exercises which strengthen the voice can often also improve swallowing.

Note re. photos: Photographs of the vocal folds taken during a laryngeal examination appear to be inverted (upside down) from the patient’s perspective. The right vocal fold therefore appears on the left side of the picture and vice versa.

How long does it take for the voice and swallow to recover?

In many cases, the damage to the nerve is only temporary and the voice and swallow recover quite quickly. Usually, people make a good recovery somewhere between three to nine months after onset. However, the recovery may sometimes be slower and incomplete with only very gradual improvement over a year. Occasionally, the nerve may have been severely damaged or severed and the paralysis is permanent. The paralysis is usually considered permanent if there has been no improvement after a year.

What can be done to help a paralysed vocal fold and improve the voice?

Voice Therapy

There are a number of approaches to treating a paralysed vocal fold. Voice Therapy with a **Voice Specialist Speech and Language Therapist** is usually the option of choice initially, especially where the vocal folds are close to the midline and while the chances of spontaneous recovery are good.

- Vocal exercises can often improve the voice quality by encouraging the working fold to move across the midline to make contact with the paralysed fold. Voice therapy will also help reduce excess effort and strain in the speaking voice.



3: Left vocal fold paralysis close to the open (breathing) position. Note the thin bowed appearance of the paralysed fold. **4:** Left vocal fold paralysis in voicing with poor closure. Note the recruitment of surrounding muscles.