

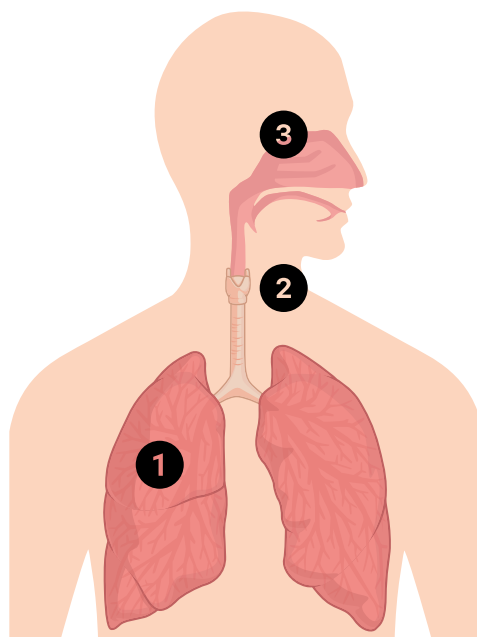
Voice Disorders

How do we produce voice?

There are three systems that work together to produce your voice:

- (1) Respiratory: The lungs provide breath support. This provides power for voicing.
- (2) Phonatory: The voice box, also known as the larynx, has vocal cords which vibrate. This produces sound as air passes through them.
- (3) Resonance: The sound produced by the vocal cords becomes amplified and enriched as it passes through spaces such the throat, nasal passages, sinuses, cheeks and oral cavity.

Normal voice production requires the respiratory, phonatory and resonance systems to work together to generate adequate pressure and airflow.



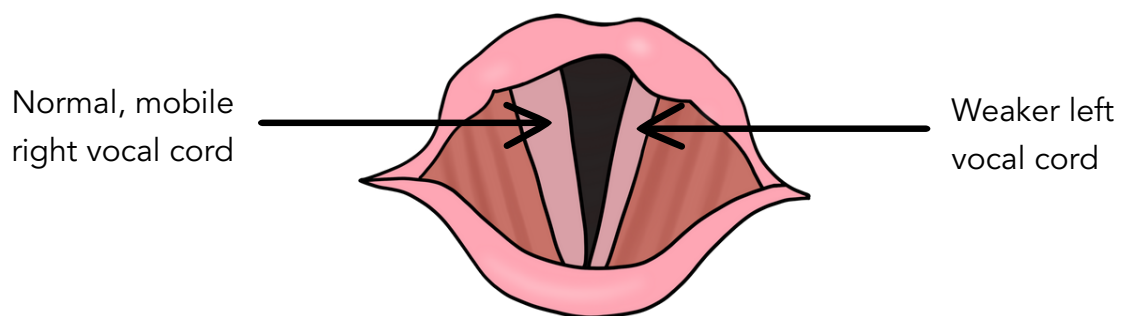
1. Respiratory
2. Phonatory
3. Resonatory

What are voice disorders?

A voice disorder occurs when vocal quality, pitch, or volume deviates from normal, affecting effective communication. There are 3 types of voice disorders:

Organic Voice Disorders

Organic voice disorders occur when there is an abnormality in the respiratory tract, larynx, or vocal tract. This can be caused by physical changes in anatomy (e.g., growth on the vocal cords) or neurological changes (e.g., nerve damage causing vocal cord paralysis).



Functional Voice Disorders

Functional voice disorders result from improper or inefficient use of the vocal mechanism when physical structures are normal. This includes misusing voice (e.g., shouting, straining when singing).



Psychogenic Voice Disorders

Psychogenic voice disorders result from psychological stressors or psychiatric conditions (e.g., anxiety, depression, conversion reaction, personality disorders). This causes changes to voice quality.

Signs of a Voice Disorder

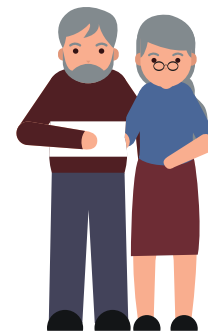
- Rough, breathy or strained voice
- Changes to pitch, volume or smoothness of voice
- Increased effort required to speak
- Feeling tired after prolonged voice use
- Feeling a lump in the throat when speaking
- Tightness or soreness in the throat when speaking
- Difficulties projecting voice
- Weak or no voice



Voice & Ageing

Presbyphonia refers to age-related changes to the voice of an individual. As we grow older, muscle weakness and changes in the shape and elasticity of the vocal folds can occur as part of normal ageing. This can result in changes in the quality of our voice such as:

- Higher pitch in men
- Lower pitch in women
- Reduced volume and projection of voice
- Reduced vocal endurance
- Softer voice
- Voice tremors or shaky voice



Role of Speech Therapists in managing Voice Disorders

Speech therapists conduct assessments to understand an individual's voice function, needs and goals. Therapy is individualised to cater for different types and severity of voice disorders.

The Speech Therapist may recommend:

- A referral to a Ear, Nose and Throat (ENT) doctor to determine the cause and severity of the voice problem. Stroboscopic evaluation of the larynx, offering a magnified view and video-recording of vocal cord movements may be done. Medication and surgery may also be offered.
- Healthy vocal and lifestyle habits to help protect your voice.
- Voice exercises and techniques to improve voice usage and quality.

Laryngopharyngeal Reflux (LPR)

What is LPR?

Laryngopharyngeal reflux refers to acid reflux from the stomach that flows back into the food pipe (oesophagus) and into throat and voice box (larynx). Stomach acid is corrosive and can cause irritation and swelling of the laryngeal tissues.

What are the symptoms of LPR?

- Throat itchiness
- Hoarse voice that is worse after lying down for long periods
- Feeling of something stuck in your throat
- Frequent coughing or throat clearing
- Frequent sore throat
- Difficulty swallowing
- Phlegm in the throat



How is reflux treated?

Please consult your doctor for medical management of reflux and its symptoms. Other ways of managing reflux include:

- Eat at regular timings or have small frequent meals
- Wait 3 hours after eating before lying down
- Drink sufficient water everyday
- Avoid alcohol and caffeinated drinks
- Avoid taking spicy, fried, fatty and acidic foods
- Avoid chocolates and sweets
- Stop smoking
- Maintain a reasonable weight



Vocal Hygiene

What you can do to support a healthy and strong voice:

Stay sufficiently hydrated

- Drink at least 2 litres of water a day.
- Avoid alcohol, caffeine and products with menthol or eucalyptus as these have a dehydrating effect on the vocal cords.
- Inhale warm steam when the throat feels dry.
- Place a humidifier in your room.

Use your voice appropriately

- Avoid yelling - walk to the person you would like to speak to, use a microphone or reduce the background noise.
- Avoid whispering - use a quiet or soft voice instead.
- Avoid clearing your throat - if needed, do it gently or swallow your saliva. You could also take sips of water.
- Do voice warm-ups before singing and know your vocal limits.
- Stop singing or talking before you get overly tired.

Develop good lifestyle habits

- Do not smoke.
- Rest sufficiently, exercise and eat at regular timings.
- Minimise the intake of chocolate, and fried and spicy food
- Ensure good posture when speaking to a large audience or in a noisy environment.
- Ladies should not overstrain their voice before and during their menstrual period as lowered estrogen levels can result in changes in the throat that may worsen voice quality.

Maintaining overall health through physical fitness, reducing stress and ensuring adequate sleep is vital in supporting a healthy and strong voice.

Contributed by Speech Therapy, Rehabilitation, Allied Health Services

This brochure is produced for educational purposes and should not be used as a substitute for medical diagnosis or treatment. Please seek the advice of a qualified healthcare provider before starting any treatment or if you have any questions related to your health or medical condition.

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