

Glossary of Singing Voice Terminology

Adduction The closing action of the vocal folds. The opposite of abduction, or opening.

Adolescent voice change The changes within the voice, in both boys and girls, that occur as a direct result of hormonal changes in the body during adolescence.

Arytenoid cartilage Two cartilages located on the back of the cricoid cartilage, They have a rocking and tipping action; this is responsible for vocal fold abduction and adduction.

Belting A term used in CCM singing. It describes a high impact sound, similar to shouting or calling. It is used occasionally to achieve an exciting and emotionally charged sound.

Breathiness The sound of air escaping through the glottis. This can be as a result of inefficient vocal fold adduction, generally due to an imbalance of muscular activity within the larynx.

Cambiata A term used to categorise boys' voices during adolescent voice change. This is a useful term to use when their vocal pitch range doesn't fall into the adult classifications of alto, tenor, baritone or bass.

Cervical spine The seven disc-like bones (vertebrae) at the top of the spine that form the vertical support for the head.

Classical Western Art Music from the renaissance to the present day.

Contemporary Commercial Music (CCM) Musical theatre, pop, rock, gospel, folk, jazz and musical vernacular.

Creak The vocal sound made at the lowest pitch possible. Creak quality can also overlay sound at higher pitches; in this case, it is caused by irregular vibrations of the vocal folds.

Cricoid cartilage The ring-shaped cartilage in the lower part of the larynx. The vocal folds insert onto this on the inside at the back.

Cricothyroid The muscle attached to the front sides of the thyroid cartilage and the outer sides of the cricoid cartilage. When contracted it pulls the thyroid forward and down, thereby lengthening the vocal folds and causing them to vibrate at a higher pitch.

Cross-training A term used to describe the use of a variety of training activities; it comes from sports training.

Deep neck flexors The muscles responsible for keeping the cervical vertebrae upright and relatively straight.

Diaphragm The principal muscle of inspiration. It is domeshaped and located inside the ribcage. Contraction results in a downward movement, pulling air into the lungs.

Dysphonia or voice disorders Any vocal health problem resulting in poor or inefficient voice function.

Epiglottis The flap of cartilage at the front of the larynx, which closes over the top during swallowing to prevent food entering the larynx.

Epilarynx The space within the larynx, above the vocal folds and below the epiglottis and aryepiglottic membranes.

Expiration The action of breathing out. The opposite of inspiration.

Falsetto Method of voice production used to extend the vocal range higher by releasing the thyroarytenoid muscle and lengthening the vocal folds. It is also known as Head Voice in women and children.

Fine motor skills The coordination of small muscle movements; for example, those in the fingers or the larynx.

Formant A relatively strong group of harmonics. A formant can be reinforced in a resonant cavity or space with the corresponding resonant frequency. In the voice, the first two formants define the vowel quality. Formants three, four and five define other aspects of vocal quality, mostly concerned with the projection of the voice.

Frequency The number of vibrations per second in the sound. Middle C has a frequency of 262Hz. See Pitch.

Fundamental Frequency The lowest and generally strongest frequency within a frequency spectrum. It is the actual frequency of vibrations that are causing the sound. The other frequencies are harmonics.

Gastro-oesophageal reflux disorder (GORD), gastric reflux, acid reflux

If stomach acids enter the oesophagus (gullet), normally when lying down, they can irritate the larynx. This irritation can result in coughing, throat clearing or dysphonia. It can go unnoticed for some time, as the sufferer may not actually feel any discomfort. It is exacerbated in those who eat shortly before going to bed.

Glottis The space between the vocal folds.

Gross motor skills The coordination of large muscle movements; for example, running, ball skills or dancing.

Harmonics The vibrations of the harmonic series. These are present in the sound spectrum of all vocal sounds. They occur as predetermined multiples of the fundamental frequency. These can be known as overtones or upper partials.

Hyoid The horseshoe shaped bone at the top of the larynx.

Inspiration The action of breathing in. The opposite of expiration.

Intonation The precise tuning of the pitch of a note.

Kinaesthetic A physical awareness, the sensation of feeling and doing.

Laryngeal constriction The closing action of the larynx (see Larynx, primary function). If this response is triggered to a small degree during voicing, it will adversely affect the sound, causing it to become harsh and eventually to crack.

Larynx The tube-like organ located at the top of the windpipe, containing the vocal folds. Its primary function is as a valve to stop anything other than air from entering the lungs. Its secondary function is to trap air in the lungs enabling the abdominal muscles to push when high exertion is required. Its third function is to make sound.

Loudness, amplitude, sound pressure level Sound pressure level defines the amplitude of the sound energy, this is measured in decibels (dB) and is heard as loudness levels.

Motherese The vocal sounds made by an adult as communication with an infant. These may be speaking, singing, cooing or babbling. They are generally of a sing-song nature and higher pitched than normal speech.

Motor memory An instinctive muscular action related to a specific task, such as walking or speaking. The combination of muscle use will be encoded in the brain as a rehearsed neurological pathway.

Mucosal layer The outer layer or layers of the vocal folds (and other surfaces within the body). A healthy and moist mucosal layer is essential for efficient voicing.

Mucosal wave The ripple action that passes around the vocal fold, from bottom to top, as a consequence of the nature of the vocal fold collision. The degree of movement of the mucosal layer can generate energy in the upper partials of the sound spectrum.

Onset The start of any sound.

Glottal: voicing that starts with a small click, as in the exclamation 'Uh-oh!', and whose purpose is often emphasis of the following vowel. It is created by the vocal folds coming together before the exhaling airflow starts.

Simultaneous: voicing that starts gently from nothing without any air escaping first. The vocal folds are brought together at the same time as the airflow starts.

Aspirate: sound that starts with audible air escaping before the tone begins (e.g. 'ha').

Creak: sounds like a door creaking at the start of the sound. It's created by loose, irregular vibration of the vocal folds.

Overtone See Harmonics.

Parasympathetic nervous system Part of the autonomic nervous system, which controls functions outside our conscious direction. The parasympathetic division controls the 'everyday' functions of digestion, cell repair and respiration.

Pharyngeal constrictor Muscles around the wall of the pharynx. When these contract, the throat is narrowed and the larynx is lifted. They are part of the swallowing mechanism.

Pharynx The throat, or the tube-like space between the back of the mouth and the top of the larynx.

Phonemes Units of spoken or sung sound that are the components of words.

Pitch A cognitive reaction to a complex sound wave. We will hear the fundamental frequency of the sound, but we also hear a lot of tone colour information from upper harmonics. The colour of a sound may affect what we perceive as pitch, without affecting the fundamental frequency.

Posterior glottis chink The gap at the back of the vocal folds observed when voicing. This is due to inefficient action of the muscles controlling the arytenoid cartilages. It is common in girls and women and results in a breathy tone.

Practice The sequence of warming up the muscles of the voice, repeating technical exercises and rehearsing repertoire. This is a regular, private activity of any performer or student.

Psychomotor skill An action, combination of or sequence of actions that has been rehearsed and memorised. An example is riding a bicycle. See Muscle memory.

Puberphonia The use of a falsetto speaking voice during and after puberty. This can result from an underlying reluctance to accept the physical changes accompanying the process of puberty.

Repertoire Music available to or known by the singer. This can be individual songs or choral music.

Roughness A slight grating quality in the sound: irregular vibrations in the vocal folds result in intermittent vocal sounds in addition to the fundamental frequency.

Soft palate or velum The soft tissue at the back of the roof of the mouth. When raised, it forms a seal between the mouth and the nasal cavity. During swallowing, this action prevents food from entering the nose.

Stamina The ability to sustain extended activity without fatigue.

Strap muscles Muscles able to lower the larynx. These are relatively weak and can only function effectively if the suspensory muscles are released.

Support A term used to describe the action of maintaining breath activity suitable for singing. It can be ambiguous and is often misunderstood.

Sympathetic nervous system Part of the autonomic nervous system, which controls functions outside our conscious direction. The sympathetic nervous system operates when the body is under threat or in a state of arousal. The responses include an increased heart rate and sweating, everyday functions such as digestion are inhibited.

Thyroarytenoid The muscle within the vocal fold, along with the vocalis. It attaches to the thyroid cartilage at the front and the arytenoid cartilages at the back. When it contracts, it shortens the vocal folds, lowering the frequency of vocal fold vibration.

Thyroid cartilage A laryngeal cartilage shaped like a curved shield. It can be felt at the front of the neck as the main prominent part of the larynx.

Tongue retraction The action of pulling back the tongue in the mouth. This can result in vowel distortion.

Tongue root tension The action of pressing the base of the tongue onto the hyoid bone. This can be felt as pressure by the fingers placed under the chin.

Twang, ring or the singers' formant The sound quality generated by enhanced upper partials in the sound, in particular formants three, four and five, at around 3000Hz. Enhancing these is a particularly effective way to boost the projection of the voice. Human ears are acutely sensitive to these frequencies.

Vibrato A periodic fluctuation of frequency and loudness, normally at about seven cycles per second. This can be a naturally occurring phenomenon and is linked to muscle tremor.

Vocal folds The membranous tissues stretched horizontally across the larynx. They contribute to the valve function of the larynx. When brought together on exhalation, the edges vibrate in the airstream to make sound.

Vocal health The state of health of the entire vocal system, but in particular, the vocal folds themselves.

Vocal ligament Part of the vocal folds, this runs within the length of the membrane and contributes to the tensile strength of the vocal fold. It is not evident in infants but can be seen in the adolescent vocal fold.

Vocal loading A measure of strain on the voice. Contributory factors include amount of voice use [69], level of voice use (loudness) and anxiety levels.

Vocal register Different parts of the range of the human voice. Registers are defined by the vibrational activity in the vocal folds; in the lower register, the entire vocal fold vibrates in each cycle, in the upper register, the mucosal cover of the vocal fold vibrates in each cycle. Chest register has often been used to refer to the lower range, and is characterised by richness of sound. Head register has often been used to describe the upper vocal range, characterised by its lighter, simpler quality. The terms chest and head voice are historic terms that date from when it was thought that the sounds were produced in those different areas. We now know that this is inaccurate, and that sound is produced in the larynx.

Vocal timbre The timbre or quality of the sound depends on the distribution and intensity of the upper partials or harmonics in the sound spectrum. Strong higher harmonics will result in a brighter sound, lower harmonics give a darker sound.

Vocal tract The space between the vocal folds and the lips or nostrils. This comprises the epilarynx, pharynx, oral and nasal cavity.

Vocalis The muscle within the vocal fold, along with the thyroarytenoid. It attaches to the thyroid cartilage at the front and the arytenoid cartilages at the back. When it contracts, it shortens the vocal folds, lowering the frequency of vocal fold vibration.

Vowel modification The action of consciously altering the vowel in order to exploit the resonant properties of the vocal tract at particular pitches