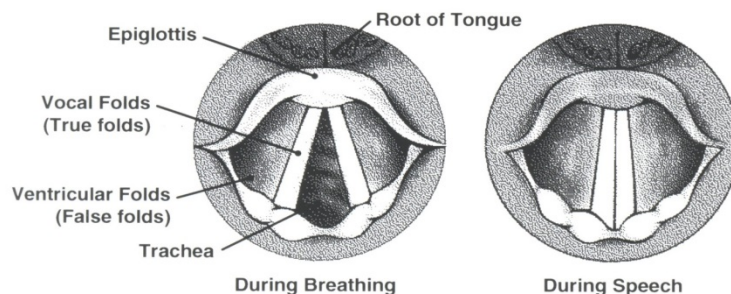


## Vocal Nodules

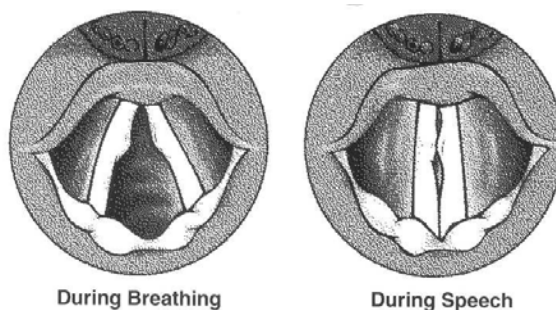
### What are vocal nodules?

Vocal nodules are callus-like bumps on the vocal cords (in the larynx or “voice box.”). When they are present, the vocal cords cannot close completely when they vibrate to produce the voice. This causes the voice to sound breathy and hoarse.

### Normal Vocal Folds



### Vocal Nodules



### What causes vocal nodules?

The most common cause of vocal nodules in children is vocal abuse. Vocal abuses include:

- Excessive shouting, screaming, whining, cheering, crying, etc.
- Strained vocalizations, such as imitating the sounds of motors
- Animal noises, super hero sounds, etc.
- Excessive talking
- Excessive coughing or throat clearing

Vocal nodules can also be caused by vocal misuse. Vocal misuse can include:

- the use of an incorrect pitch or volume
- Poor breath support for speaking or singing
- Controlling the voice at the level of the larynx

Other factors that may be associated with the development of nodules include:

- Chronic upper respiratory infections or allergies
- Reflux
- Smoking or secondary smoke
- Air pollution

When there is chronic abuse, misuse, or irritation of the vocal cords, this can cause a slight reddening on the edge of the vocal cord. If this continues, the reddening is followed by swelling or thickening on the edge of the fold. Finally, a definite bump or nodule develops on the upper one-third of the vocal cord, where maximum vibration occurs. Nodules can range in size from as small as a pin head to as large as a split pea.

### How are vocal cord nodules treated?

Vocal nodules are usually treated with voice therapy. The purpose of therapy is to eliminate the cause of the nodules and teach the child effective use of the voice. Because nodules develop over a period of time, they do not disappear quickly. Elimination of the nodules takes a conscious effort over time.

### What can parents do to help?

The successful treatment of vocal nodules is dependent on the involvement of the parents. The child needs to be made aware of vocal abuses in order to eliminate them. It is often necessary to establish a new set of “voice rules” for the child. These rules might include:

No screaming, yelling, or shouting. The child must walk up to the person to talk, rather than yell at a distance.

- **No loud talking.** Loud talking can often be a family problem, particularly if the child needs to talk over other members in the family to be heard. Parents should reinforce the rule that only one person in the family can talk at a time.
- **No screaming when mad.** The child can be given a pillow to punch or something to tear up when mad.
- **No motor, animal or superhero sounds.** The child can use an easy hum sound instead.
- **No talking when the television or radio is on.** Additional sound or noise makes the child talk more loudly to be heard.
- **Use a hard swallow instead of throat clearing.** A hard swallow will clear the secretions just as well, but does not damage the vocal cords.
- **Avoid singing for a while.** The child can be given a whistle or musical instrument to play.
- **Drink a lot of water and eliminate caffeinated drinks** (i.e. dark soft drinks). Caffeine causes dehydration, and vocal cords are more susceptible to injury when they are dry.

The child will respond best with a lot of positive reinforcement for following the rules. A sticker chart is often helpful for this purpose. Gentle reminders (rather than nagging) are appropriate when rules are broken.

The involvement of the parents with the otolaryngologist (ENT) and speech pathologist are essential to the success of the therapy program. With time and effort, the vocal nodules will eventually disappear.

For more information, please contact the Division of Speech Pathology at (513) 636-4341 or visit our website at [www.cincinnatichildrens.org/speech](http://www.cincinnatichildrens.org/speech).