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## Nodules in Children

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Nodules are bilateral (on both vocal cords), benign (non cancerous), soft swellings of the vocal cords. They can vary in size and in duration and can be acute or chronic. Vocal nodules are caused by excessive muscle tension in the larynx, which is where the vocal cords are situated. Use of the voice with excessive muscle tension is generally referred to as “vocal hyperfunction”. Classically, children with nodules are in the habit of talking to long, too loudly and with too much effort.

### Signs and Symptoms

- Dysphonia (presents as a hoarse, breathy or rough voice)
- Intermittent aphonia (temporary loss of voice, especially after specific events such as a sports day or birthday party)
- Voice breaks – sounds as if the voice has “cut out” for a second
- Pitch breaks – where the voice changes briefly and abruptly from a normal to a high pitch (sometimes heard as squeaks in the voice)
- A very loud voice
- An effortful or strained voice – as if it’s taking a lot of effort to produce voice

### Causes

It is rare to find just one vocal behavior that has produced the voice problem, especially with children. Usually vocal nodules are due to a combination of the following:

- Excessive talking and/or singing –e.g. school camps, plays or show rehearsals, shouting in the playground, overusing the voice during an infection, overusing the voice when tired or upset
- Forceful use of the voice
- Coughing and loud forceful sneezing, which is particularly an issue for children with asthma or a post nasal drip (when excessive mucus produced by the sinuses)
- Crying, laughing and loud or prolonged outbursts of emotion. This can include tantrums and expression of negative emotions like anger or frustration
- Constant coughing or throat clearing – causes the vocal cords to crash together and can cause swelling
- Making sound effects – common in children! This can include explosion and monster noises, character accents, using glottal fry when talking; especially if noises are made while breathing in!
- Dryness in the larynx and throat; caused by many factors including the overuse of medications and caffeine (e.g. Coke). Mouth breathing can also be potentially drying
- Not enough fluid intake. Good hydration is necessary for the healthy respiratory and vocal system. A simple way of checking for adequate fluid intake is to ensure that urine is pale in colour

### Treatment

- Voice therapy from a speech pathologist to improve vocal technique and vocal habits, reduce the muscle tension in and around the larynx, and to help the child learn strategies to look after the voice.

