Vocal Nodules and Voice Strain

IN PRE-ADOLESCENTS

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Signs and symptoms
The signs and symptoms of nodules or vocal strain in pre-adolescents include one or more of the following:

1. dysphonia, which is a hoarse, breathy or rough voice; or a voice with excessive glottal fry
2. intermittent aphonia, which is a recurring temporary loss of voice, especially first thing in the morning and at the end of the day, or after specific events such as sports day
3. voice breaks, which are fleeting interruptions to the voice, during speech or singing, as though it "cuts out" for a second
4. pitch breaks, which are fleeting, abrupt changes in the pitch of the voice, during speech or singing, usually from a lower note to a higher note
5. excessively loud voice
6. inability to sustain a note when singing
7. effortful or strained voice

Causes
Voice strain and nodules are caused by stress to the larynx, within which are the delicate vocal cords. This stress is generally referred to as "vocal abuse". It is rare to find just one "abusive" behaviour producing voice symptoms. Classically, young people with nodules are in the habit of talking too long, too loudly and with too much effort. Usually children develop vocal nodules or vocal strain due to the interaction of two or more of the following, done to excess:

1. talking and singing, for example: excessive and over-enthusiastic rehearsal of school plays or concerts; excessive choir or solo-singing practice; overusing the voice on school camps or excursions; shouting in the playground; talking and shouting against background noise, such as in a swimming pool; overusing the voice during an infection such as a head cold; cheer leading; and overusing the voice when tired or emotionally upset. Lengthy talking, even at normal rate and volume, but without a quiet "recovery time" can also contribute to vocal strain and nodule formation.

2. glottal attack: sharp glottal attack and forceful use of the voice can seriously damage the vocal cords.
3. coughing, and loud, forceful sneezing: many people with nodules do not rest their voices when they have upper respiratory tract infections, even when their throats are sore. Coughing and sneezing can be particularly problematic for a child with asthma or a post nasal drip.
4. crying, laughing and loud or prolonged outbursts of emotion: for example, even very young children who tantrum frequently can develop nodules. Inappropriate or unresolved coping mechanisms for negative emotions (anger, fear, sadness, nervousness) can lead to bottled up anger, explosive outbursts or irrational behaviour, accompanied by loud, forceful voice use.
5. grunting, cheering and screaming: one loud episode at a sporting event or pop concert is sufficient to produce an episode of aphonia.
6. throat clearing: the chronic throat clearing associated with post nasal drip puts a constant strain on the vocal cords, which are g-r-o-u-n-d together each time the throat is cleared.
7. making sound-effects: Dalek, explosion and monster noises, etc., especially if they are made while breathing IN (!) put a tremendous strain on the cords, as can assuming character accents, for example Power Rangers, Ninja Turtles, Street Sharks, and macho villain and "tough guy" impersonations, and using excessive and deliberate glottal fry when speaking.
9. **dryness**: the overuse of certain medications, such as cough lozenges, antihistamines and patent "cold cures", especially in conjunction with voice overuse, infections or allergy dries out the delicate lining of the larynx and vocal cords, making voice symptoms worse. Caffeine (e.g., in cola and coffee) can act as a diuretic, adding to drying effects. Mouth breathing is also potentially drying. Marijuana is more drying than nicotine, and can actually burn the larynx.

10. **restricted fluid intake**: for a healthy respiratory and vocal system good hydration is necessary (even in cold weather). A simple way of checking for adequate fluid intake is to ensure that urine is pale in colour.

**Risk factors**

Some young people are more vulnerable to developing vocal nodules and vocal strain than others. Those who are more at risk may have one or more of the following:

1. a family with loud voice habits such as yelling around the house and calling from room to room in constant background noise. Some young people with vocal problems have developed habitually loud voices simply in order to "get the message across" in a constantly loud household.

2. chronic asthma and/or allergies (including post nasal drip and allergic rhinitis); and incorrect use of some puffers (i.e., no spacer and/or drink of water when they are recommended)

3. recurrent and frequent upper respiratory tract infections including infected tonsils, sinuses, adenoids and throat

4. gastric reflux

5. affective disorders such as attention deficit disorder and hyperactivity, or a "temperamental personality"

6. behaviour problems

7. excessive stress or tension in the person’s life, due to internal factors (within the individual), external factors (within the environment) or interpersonal factors (e.g., conflict or competition)

8. a loud, outgoing, enthusiastic, competitive personality with a tendency to "act out" emotionally

9. a highly conscientious personality and a tendency for the young person to "push" themselves to succeed.

**Reference**


**More articles on this site about the voice and voice care**

- **Tummy Trouble! Conditions that may affect the voice**
  [http://www.speech-language-therapy.com/tummy.htm](http://www.speech-language-therapy.com/tummy.htm)

- **Voice care for tour guides**
  [http://www.speech-language-therapy.com/tourguides.htm](http://www.speech-language-therapy.com/tourguides.htm)

- **Voice therapy for adults - Voice strain / vocal nodules**

- **Voice therapy for children (1) Voice strain / vocal nodules**

- **Voice therapy for children (2) Signs, symptoms, causes, risk-factors**

- **Voice: Something out of the Box**