

Tongue thrust and speech development

What is a tongue thrust?

When a child has a tongue thrust, the tongue moves forward in an exaggerated way during speech or swallowing. The tongue may also lie too far forward during rest. It may stick out more than usual between the upper and lower teeth when the child talks and swallows. Where the tongue sits may change the position of the child's teeth and jaws. Although a "tongue thrust" swallow is normal for a baby, it will usually decrease and go away as a child grows. If the child keeps having tongue thrust, he might not look, speak, and swallow the same as other children of the same age.

What are the causes of a tongue thrust?

A tongue thrust can be caused by tongue weakness. This weakness could be related to leukemia or a brain tumor. But it might also be caused by one of the following:

Heredity

One study showed that heredity (traits passed from parents to their children) may be a factor. Heredity can affect the size of a child's mouth; the number of teeth a child has and how they are arranged; and the strength of lip, tongue, mouth, and facial muscles.

Allergies

Allergies can cause some problems with the way the mouth and face muscles work. Allergies can block nasal airways making it hard for children to breathe through their noses. These children often breathe with their mouths open. Their tongues lie flat on the bottom of their mouths. Over time, lip muscles may lose their strength and tone if a child keeps his mouth open all the time.

Enlarged Tonsils and Adenoids

Enlarged tonsils and adenoids may also block airways. This can also lead to an open-mouth breathing pattern. If a child breathes through his mouth all the time, it could become a habit that he will keep doing even after the airway blockage has been treated successfully.

Behaviors

A tongue thrust may also result from bad habits such as frequent thumb or finger sucking, lip and fingernail biting, lip licking, and teeth clenching or grinding. If a child sucks his thumb a lot, it can change the shape of his upper and lower jaw and teeth. Later, these changes might cause the child to need speech therapy, dental work, and even orthodontics. The effect of the problem depends on how often the child takes part in the oral habit and how long the child keeps up the habit.

This document is not intended to take the place of the care and attention of your personal physician or other professional medical services. Our aim is to promote active participation in your care and treatment by providing information and education. Questions about individual health concerns or specific treatment options should be discussed with your physician.

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How can a tongue thrust affect my child's speech?

Tongue thrust can cause some children to develop sound errors called speech misarticulations. A tongue thrust most often causes sounds like *s*, *z*, *sh*, *zh*, *ch*, and *j* to sound different than they usually do. For example, an "s" may sound like a "th"; the word "some" may sound like "thumb." Also, the child may say other sounds, such as *t*, *d*, *n*, and *l*, the wrong way because of weak tongue tip muscles. Sometimes tongue thrust does not affect speech at all.

How is a tongue thrust treated?

Speech-language pathologists assess and treat open-mouth posture, swallowing problems, and speech errors that result from a tongue thrust. They specialize in assessing lip, palate, tongue, and facial muscles both at rest and during speech and swallowing. They also assess and analyze speech sound errors. When needed, they develop a speech treatment plan to help a child change his mouth posture and the way he says sounds within words.

Speech treatment for tongue thrust problems may include:

- Teaching the child to be aware of mouth and face muscles as well as the normal mouth and tongue position;
- Creating an oral muscle exercise program for your child to improve muscle strength or coordination; and
- Working toward normal speech and swallowing patterns.

If airways are blocked due to allergies or enlarged tonsils and adenoids, speech treatment may be postponed until the child completes medical treatment for these problems. In patients with oral habits (thumb/finger sucking, lip biting), speech treatment may first focus on ridding the child of these behaviors. Then, the therapist can address your child's speech and swallowing patterns.

Questions?

If you have questions about tongue thrust, call Rehabilitation Services at 901-595-3095. If you are inside the hospital, dial 3095. If you are outside the Memphis area, call toll-free 1-866-2ST-JUDE (1-866-278-5833), extension 3095.

Adapted from materials from the American Speech-Language Hearing Association, www.ASHA.org.

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