



## Understanding Tongue Thrust

### What is tongue thrusting?

Tongue thrusting, simply defined, is the habit of placing the tongue in the wrong position during swallowing, either too far forward or to the sides. It is estimated that every 24 hours, you swallow a total of 1,200 to 2,000 times, with about four pounds of pressure per swallow.

This constant pressure of the tongue will force the teeth and arches out of alignment. Aside from the pressure exerted while swallowing, nervous thrusting also pushes the tongue against the teeth while it is at rest. This is an involuntary, subconscious habit that is difficult to correct.

### What causes tongue thrust?

No one specific cause has actually been determined for the tongue thrust problem. There are several suspected causes:

1. Thumb sucking
2. Some artificial nipples used for feeding infants
3. Mouth breathing, which can cause the tongue's posture to be very low in the mouth. Nasal congestion, allergies, or obstructions may contribute to this.
4. Difficulty swallowing which can be a result of adenoids, frequent sore throats, or tonsils
5. An exceptionally large tongue
6. The angle of the jaw line or other hereditary factors within a family
7. Muscular, neurological, or other physiological abnormalities
8. Being "tongue tied": having a short lingual frenum

### Is tongue thrust very prevalent?

The term "tongue thrust" has been described and discussed in speech and dental publications since 1958 by many writers. The fact that a significant number of school-age children have tongue thrust has been noted by specialists.

For example, recent literature reports that as many as 67 to 95 percent of five- to eight-year-old children exhibit a tongue thrust that may be associated with, or contribute to, an orthodontic or speech problem. In the United States, 20 to 80 percent of orthodontic patients exhibit some form of tongue thrust.



## What are the consequences?

The force of the tongue against the teeth is an important factor in contributing to malformation (“bad bites”). Many orthodontists have had the discouraging experience of completing dental treatment with great results, only to discover that the patient had a tongue thrust swallowing pattern. This continual habit will push the teeth out of alignment and reverse the orthodontic work.

## Is speech affected by tongue thrusting?

Speech is not frequently affected by the tongue-thrust swallowing pattern. The “S” sound (lisp) is the one most affected. The lateral lisp (air forced on the side of the tongue rather than forward) shows dramatic improvement when the tongue thrust is also corrected. However, one problem is not always associated with the other.

## At what age does a child usually exhibit a tongue-thrust swallowing pattern?

A child exhibits a tongue-thrust pattern from birth, because it is an infantile swallowing pattern. It is acceptable to have this swallowing pattern up to the age of four.

Most children will outgrow the infantile pattern and develop the mature pattern of swallowing; in other words, they will not develop a problematic tongue thrust. If the child has not naturally outgrown the pattern by age four, the thrust is strengthened, becomes an issue, and will require a training program to correct the thrusting pattern.

## Who diagnoses tongue thrust?

The most difficult problem of all is the diagnosis. As a rule, orthodontists, general dentists, pedodontists, some pediatricians, and speech therapists detect the problem.

In many cases, tongue thrust may not be detected until the child is under orthodontic care. However, diagnosis usually is made when the child displays a dental or speech problem that needs correction.

## What is the probability of correction?

With sincere commitment and cooperation of the child and parent, and if there is no neuromuscular involvement, correction is possible in most cases.

At the present time, successful correction of tongue thrust appears in 75% of treated cases, 20% of patients are unsuccessful due to poor cooperation and lack of commitment by parents and patients, and the remaining 5% are unsuccessful due to other factors that make correction impossible, such as physical or mental development problems.



Tongue thrusting is the reason for misalignment and bite problems in nearly half of orthodontic patients. Tongue therapy is usually completed during orthodontic treatment.

Generally, the tongue-thrust swallowing pattern may be handled in two ways:

1. Correction by MyoFunctional Therapy or Tongue Therapy, which is an exercise technique that re-educates the tongue muscles. It is similar to “physical therapy” for the tongue, which is taught by a trained therapist. There are in-office visits and home exercises. The length of therapy is based upon the patient’s cooperation and dedication. Therapy has proven to give the highest percentage of favorable results.
2. An appliance that is placed in the mouth by the dentist or orthodontist, which is generally not very successful. It is simply a punishment for the tongue instead of retraining.

## Tongue Thrust Exercises

Place a sugar free mint, small candy, Cheerio or raisin on the tip of the tongue and touch it to the roof of the mouth of the alveolar ridge. Hold the mint between the tongue tip and ridge while a swallow is made. Do not let the tongue go forward against the teeth; rather, keep it on the alveolar ridge. Swallow repeatedly, holding the mint up, until the tongue becomes very tired. Remember, the correct swallow is an up and back motion, not down and forward.

When the mint is gone or eaten, swallow again, keeping the tongue up in the same position. Try to swallow this way from now on. Do not allow the tongue to touch or push on the front teeth; make sure the tongue goes up and back, not down and forward.

Now take a piece of celery or carrot and chew it up, keeping the lips closed as you chew. Swallow the celery or carrot, remembering to keep the tongue tip up on the alveolar ridge. Do not allow the tongue to push on the front teeth.

Now drink a glass of water. Again, remember to swallow with the tongue in this new swallow position. Do not let it touch, push, or come through the front teeth.

### Sound Exercises

1. With the tip of the tongue positioned down behind the lower teeth, make the /z/ sound repeatedly.
2. Make a list of words that end with the /z/ sound (i.e. buzz, rose, close, etc.). Practice these words making sure the tongue tip stays down behind the bottom front teeth.
3. Put each /z/ word in a sentence or phrase and practice them, making sure the tongue tip stays down for the /z/ sound.