

## Furlow Z-Plasty

### Velopharyngeal Insufficiency (VPI):

During normal speech, the soft palate (also called velum) raises and closes against the back wall of the throat (also called pharynx or pharyngeal wall). This closes off the nose from the mouth for speech. If the soft palate is not long enough to firmly close against the back of the throat during speech, sound and air can leak into the nose through the gap. This condition is called velopharyngeal insufficiency (VPI).

VPI can affect resonance, which is the quality of the voice. The voice may sound hypernasal because there is too much sound in the nose during speech. (Hyponasality is the opposite problem. It is due to blockage in the nose and occurs when the person has a bad cold.) VPI can also affect speech sound production. The child may not have enough air pressure in the mouth to make certain speech sounds. Also, a leak of air through the nose may be heard during speech.

To correct VPI for normal speech, the opening between the nose and mouth must be closed. The Furlow Z-plasty can correct VPI, particularly for children with a history of cleft palate or submucous cleft (where the muscles under the skin of the soft palate have not come together properly).

**Procedure:** A Furlow Z-plasty is done to lengthen the soft palate so it can reach the back of the throat during speech. This is done by using the width of the soft palate to make it longer. The resulting scar on the child's palate looks like a "Z," which is why it is called a Z-plasty.

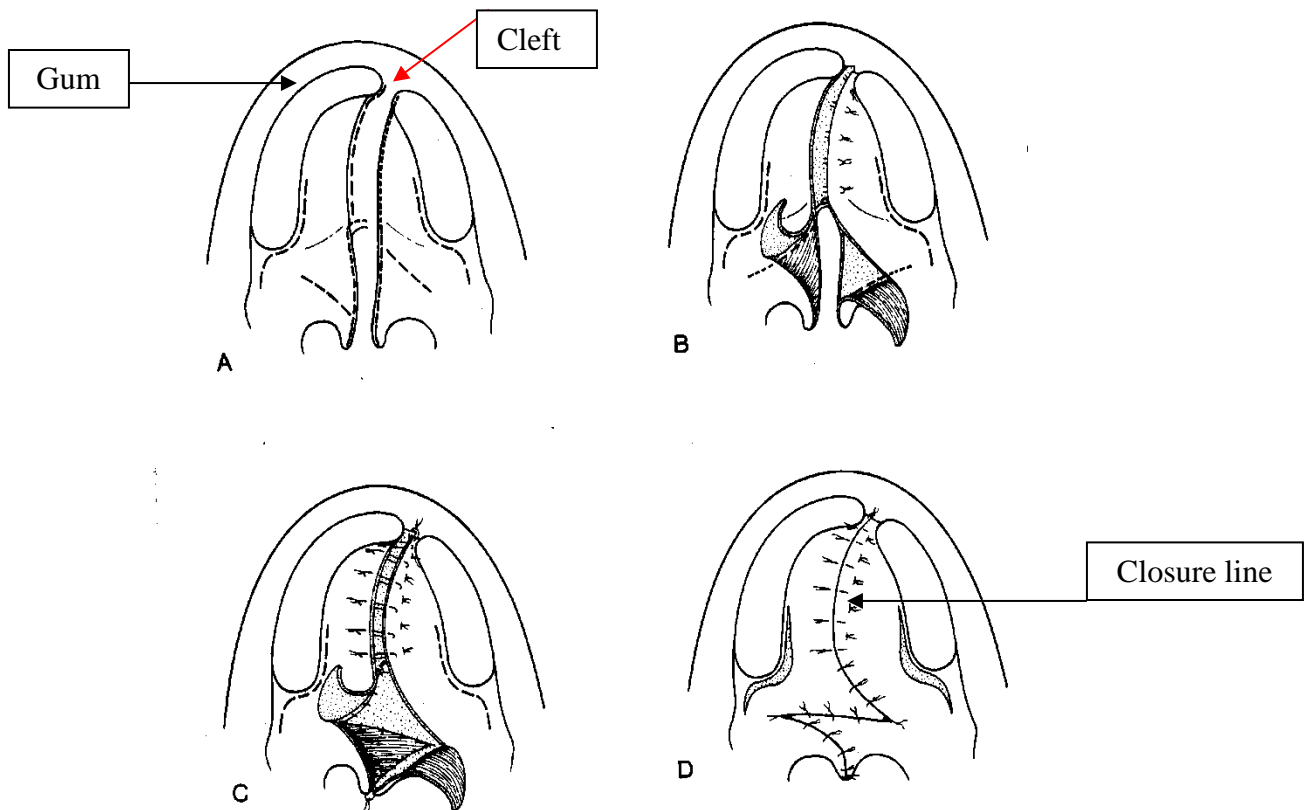
**What to expect after surgery:** The Furlow Z-plasty takes about 1 ½ hours. The child will probably stay in the hospital for one day. In the first few days after the surgery, there is minimal to moderate pain. The pain can easily be managed with oral pain medicines. Soft food is recommended for 5 to 7 days.

**Possible complications:** Complications are rare. They can include a breakdown of the repair which causes a fistula (hole) in the palate.

**Speech therapy:** The surgery improves the child's ability to close off the nose from the mouth during speech. This gives the child the potential for normal speech. However, speech therapy is usually needed to correct speech errors that were learned before the surgery.

**Outcomes:** Normal speech can be expected after surgery and speech therapy in 60% to 70% of patients. Another surgery (such as a pharyngeal flap or sphincter pharyngoplasty) may be necessary if this procedure does not result in normal speech.

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For more information, please contact the Division of Speech Pathology at (513) 636-4341 or visit our websites at

[www.cincinnatichildrens.org/vpi](http://www.cincinnatichildrens.org/vpi)

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