

## Information about Submucous Cleft Palate

### What is submucous cleft palate?

A submucous cleft palate is one type of cleft palate. The word “palate” refers to the roof of the mouth and the term “cleft” indicates a split in the palate. The palate consists of both a bony portion (hard palate) and a muscular portion (soft palate). At the end of the soft palate, the small finger-like projection of tissue that hangs down is called the “uvula.” The term “submucous” refers to the fact that the cleft is covered over by the lining (mucous membrane) of the roof of the mouth. This covering of mucosa makes the cleft difficult to see when looking in the mouth.

A submucous cleft of the soft palate is characterized by a midline deficiency or lack of muscular tissue and incorrect positioning of the muscles. A submucous cleft of the hard palate is defined as a bony defect in the midline or center of the bony palate. This can sometimes be felt as a notch or depression in the hard palate. Often a submucous cleft palate is associated with a cleft (or “bifid”) uvula.

### What are the effects of submucous cleft palate?

When a submucous cleft is present, the muscles of the soft palate may not function properly which places the individual at risk for speech problems, middle ear disease, and swallowing difficulties. However, there are some individuals with a submucous cleft who have no apparent problems. Of importance to all persons with the submucous cleft, and their family, is the knowledge that submucous cleft has the same genetic (hereditary) risk as an obvious cleft of the palate.

### How can a submucous cleft palate be identified?

The most common reason that a child is evaluated for a submucous cleft palate is abnormal nasal speech. Other symptoms may include persistent middle ear disease and feeding/swallowing difficulties. A submucous cleft palate may be identified by the presence of a bifid uvula and a notch at the back of the hard palate. However, in some children, the palate may appear normal on physical examination despite the fact that the child is experiencing speech problems, persistent ear disease, and/or swallowing difficulties. In such cases, special tests are necessary to fully assess the palate. These tests include x-ray examination and nasopharyngoscopy (looking at the palate through a very small tube that is placed in the nose). These evaluations are most commonly done by members of a cleft palate team. If you suspect your child has a submucous cleft, you should contact a local cleft palate team.

### Should a submucous cleft be treated?

Submucous cleft palate only requires surgery if it is causing problems for the individual. The most common reason for treating a person with a submucous cleft palate is because of abnormal, nasal-sounding speech. In such cases the child’s speech should be evaluated by a speech pathologist who, in consultation with other professionals on the cleft palate team, can diagnose the cause of the problem. If the individual cannot prevent air from escaping through the nose during speech, a condition called velopharyngeal incompetence or VPI, then surgical repair of the palate will be required. Speech therapy usually alone cannot correct velopharyngeal incompetence.

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Feeding/swallowing problems can sometimes be managed through the use of special techniques which the feeding consultant on the cleft palate team can suggest.

Ear problems should be treated by the child's regular physician or by an ear, nose, and throat specialist. Treatment may include the use of antibiotics and/or surgical insertion of ventilating tubes in the ear drum. Proper management of the child's ears is essential to ensure good hearing and proper speech development.

If the feeding problems and/or chronic middle ear disease persist and are related to abnormal soft palate muscle function, then surgical treatment of the submucous cleft palate is indicated.

### **What treatment is available for submucous cleft palate?**

For individuals with submucous cleft and velopharyngeal incompetence, the most common treatment is surgery. This surgery involves reconstruction of the abnormal soft palate. If the submucous cleft causes abnormal speech, "pharyngeal flap" surgery or pharyngoplasty may also be recommended. A primary goal of this surgery is to allow for normal speech production. This surgery is done in a hospital under general anesthesia. Pre- and post-surgical evaluation by members of a cleft palate team should be part of the overall treatment program.

In a limited number of cases, velopharyngeal incompetence associated with a submucous cleft palate can be treated with an appliance that fits in the mouth and attaches to the teeth. This appliance is generally made by a dental specialist (prosthodontist) associated with a cleft palate team. Pre- and post-treatment evaluation by a cleft palate team should be part of any treatment program.

### **How can a cleft palate team be located?**

The **Cleft Palate Foundation** can provide you with information on cleft palate teams and support groups in your state/region. They also provide brochures and fact sheets about various aspects of clefting.

**For further information on cleft lip and palate, or for a referral to a cleft palate/craniofacial team, please contact:**

**Cleft Palate Foundation  
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Chapel Hill, NC 27514**

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