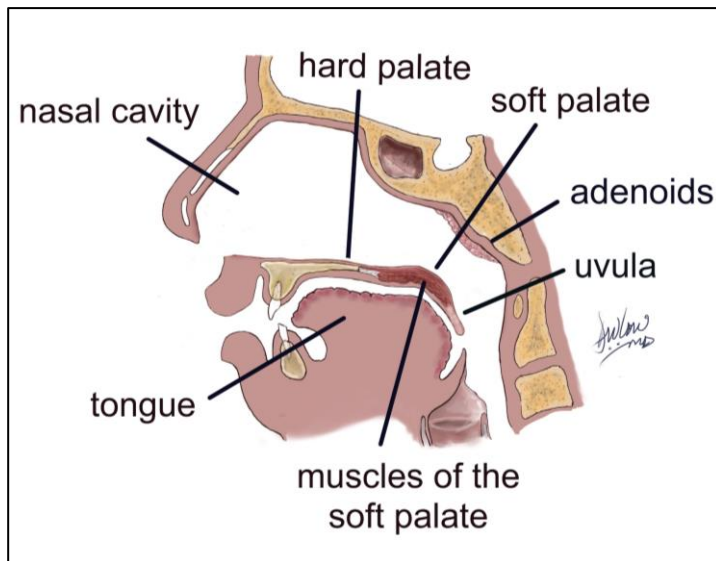


# Cleft Palate & Submucous Cleft Palate

The **palate** is the roof of the mouth, and it **separates the nose and the mouth**. The front portion is a bony part called the **hard palate**. The back part, which is made of muscles and mucous membrane, is called the **soft palate**.

Palate problems are common in children with 22q11.2 deletion syndrome (22q11.2DS). Affected children may have difficulty swallowing, reflux of liquids or foods out of the nose, a nasal speaking voice, and chronic ear infections.

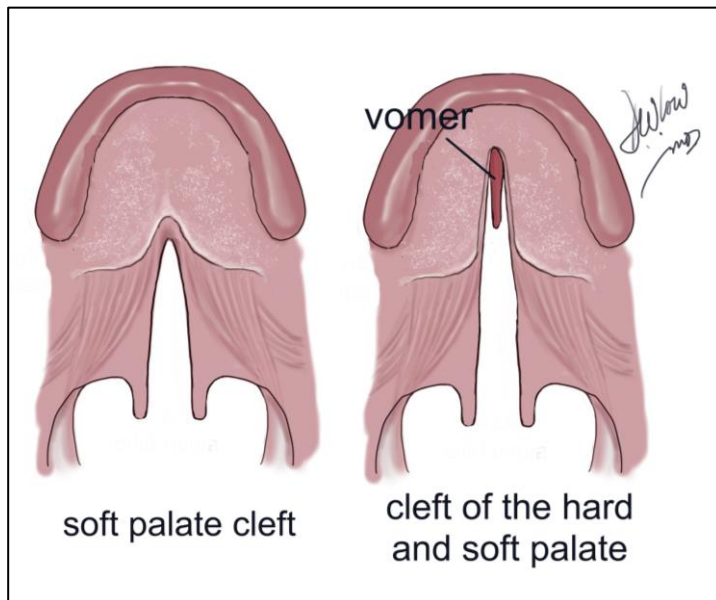
This info sheet discusses **cleft palate** and **submucous cleft palate**, which are two of the causes of **velopharyngeal dysfunction (VPD)**. Please see our other info sheets on VPD for more information.



The nose, mouth, and throat area

## Cleft Palate

- A **cleft palate** is a **split in the roof of the mouth**. It forms an opening between the mouth and the nose.
- A cleft palate happens if the two sides did not fuse together properly before birth. It can occur with or without a cleft lip.
- Since there is an opening in the palate, the area between the mouth and the nose is not closed as it should be.
  - Food and liquids can come through the nose during feeding.
  - Air can come through the nose when the child tries to talk. His/her voice sounds hypernasal.
- Cleft palate is found in about 11% of babies with 22q11.2DS.
- Surgery is necessary to repair a cleft palate.



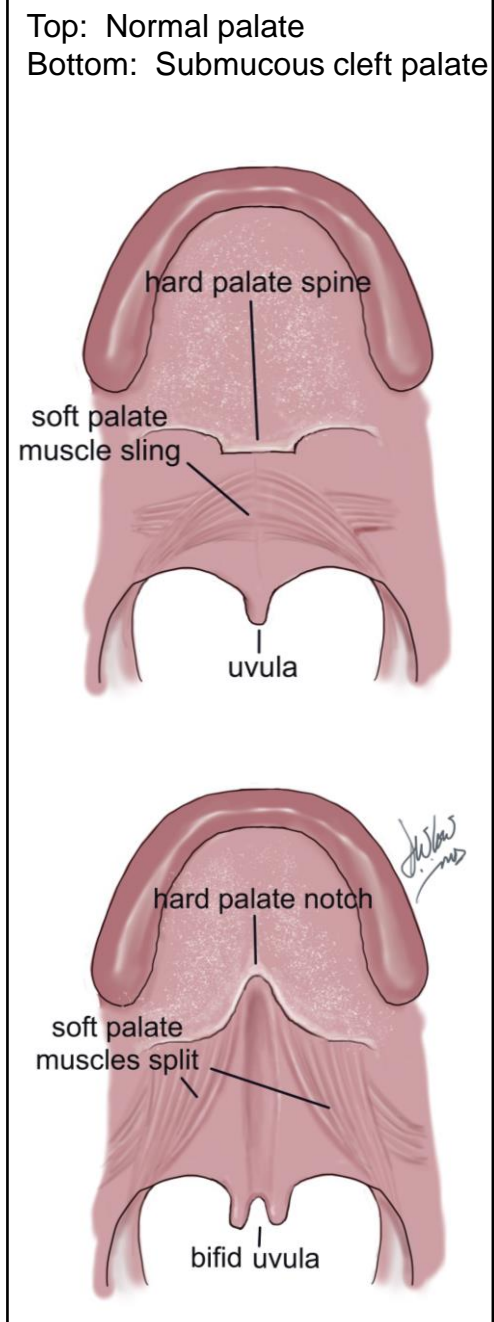
### Cleft Palate

Vomer is the bone that separates the left and right parts of the nose.

## Cleft Palate & Submucous Cleft Palate (continued)

### Submucous Cleft Palate

- In the case of a **submucous cleft palate**, the split happens only in the muscles in the soft palate.
- The **split in the muscles is hidden by an intact mucous membrane**, so it is harder to spot.
- The **uvula** is the small, bell-shaped tissue hanging at the back of the soft palate. A **bifid uvula**, which is a uvula that has split, may be a **clue that the child has submucous cleft palate**. It is sometimes hard to see whether a uvula is split until the baby is a bit older.
- In a child with a submucous cleft palate:
  - Food and liquids can come through the nose during feeding.
  - Ear infections occur commonly in children with cleft palate, sometimes even after repair of the palate.
  - Air may come through the nose when the child tries to talk. His/her voice may sound nasal.
    - The levator muscle that helps control the velopharyngeal sphincter is malpositioned so it cannot close the space between the mouth and the nose. This results in a leak between the oral and the nasal cavities which is called **velopharyngeal dysfunction (VPD)**.
- Submucous cleft palate is a common condition in children with 22q11.2DS. It is recommended that they receive a thorough evaluation by a cleft surgeon and a speech-language pathologist who specializes in the palate.
- Surgery is sometimes needed to help the soft palate close properly in submucous cleft palate. Speech therapy alone may not correct the problem if it is affecting speech.



For more info, visit the Nationwide Children's Hospital's [Cleft Palate](#) and [Submucous Cleft Palate](#) resources.