Nasopharyngoscopic Evaluation of Velopharyngeal Closure during Speech

Nasopharyngoscopy (naze oh fair in GOS co pee) is a test that involves viewing the back of the nose and throat. This test uses a small tube-light camera, called an endoscope (or “scope”), to view this area while the child speaks.

By using the imaging information from this test, the surgeon and speech-language pathologist (SLP) team can see if velopharyngeal dysfunction (VPD) is present, find its cause, and guide treatment decisions. A child with VPD is not able to close off the nose from the mouth (specifically known as the velopharyngeal port) during speech, swallowing, or both. VPD causes hypernasal speech, leakage of air through the nose during speech, and in some cases, leakage of food or liquids through the nose while eating. (See Helping Hand HH-I-448, Velopharyngeal Dysfunction for more information.)

This is a relatively fast test. The scope is typically in your child’s nose for only 1 to 2 minutes, while he or she repeats words and phrases.

Before the test

Your child should practice saying some speech sounds, words, and phrases with the SLP. This will prepare him or her to say the same things during the test.

Nasopharyngoscopy is typically well tolerated, even by young children. It may be a bit uncomfortable for your child; however, the doctor can give some anesthetic spray in the nose before the test to help decrease any pain.

This spray includes a combination of a decongestant to aid in clearing mucous and a numbing agent (topical anesthetic) to make the test more comfortable for the child. It feels like a regular nasal spray.
The medical team will show your child the scope and how it works. The entire exam is usually video recorded and can be shown to you and your child after it is completed.

A Child Life Specialist may be present to help explain the process to your child. Please speak to your child’s medical team if you would like to specifically request Child Life Services before your child’s scheduled appointment.

**During the test**

A parent or guardian can remain in the room with the child during the entire test. The child must be awake, sit still (on a parent’s lap, if desired), and say the exact words requested by the SLP so that a correct diagnosis can be made.

The surgeon and SLP typically conduct this test together. Your child will sit in a special chair, often on a parent’s lap. The surgeon or SLP will insert a very small flexible scope through the child’s nose. This scope is about the size of a spaghetti noodle (Picture 1).

Once the scope is in place in the back of the nose (within about 5 seconds), above the soft palate, the SLP will then tell the child to say several words or sentences to determine if the velopharyngeal port can close completely during specific speech sounds. Examples may include:

- Pet a puppy.
- Buy baby a bib.
- Pick up the book.
- Sissy sees the sky.

However, the specific words will be picked to best match your child’s age and speech skills. After the child finishes saying the words and the medical team has completed the exam, the scope will be removed.

**After the test**

After the scope is removed, you and your child may watch the video recording of the test. The SLP and surgeon can show you and your child the parts of the back of the nose and throat and how they move during speech, as well as the size and location of the leak in the velopharyngeal port, and likely cause of VPD. The
team will then explain the findings of the test, and share a recommended treatment plan.

Side effects from this test are uncommon and typically do not last long. They are limited to the time during the actual test and include mild pain and irritation in the nose and rarely, a mild nosebleed (usually only if the child moves his or her head around a lot during the exam). Fainting, vomiting, and other side effects are very rare.

**Diet restrictions**

If your child received the topical anesthetic and decongestant nasal spray before the test, he or she should not eat or drink for 90 minutes after the test is over. This is because the throat may feel slightly numb and this can impact the ability to swallow.

**Medicine**

Before the test, be sure to tell your child’s doctor if your child is allergic to any medicines or has a history of an allergic response to anesthesia in the past.

**Appointment**

Your child’s appointment is on (date) ______________________ at (time) ______________________ in the (place) ____________________________ .

Please write down all your questions as you think of them. Bring this list with you when you see your child’s doctor.

Be sure to call the doctor if you cannot keep your child’s appointment.

**Other information**

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If you have any questions, be sure to ask your doctor, nurse, or the team speech pathologist.