

CLEFT AND VPI
Velopharyngeal
Incompetence (VPI) Clinic
Information for children and families



Speech Pathology



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What is VPI?

This booklet explains:

- What is VPI?
- Why is my child coming to VPI clinic?
- What assessments can we expect as part of VPI clinic?
- What to expect when your child comes to the hospital for these tests.

VPI is Velopharyngeal (vee-lo-far-in-jee-al) Incompetence*. VPI is when the muscles of the soft palate (roof of the mouth) and/or pharynx (back and sides of the throat) are not closing properly when your child speaks or swallows. This can cause:

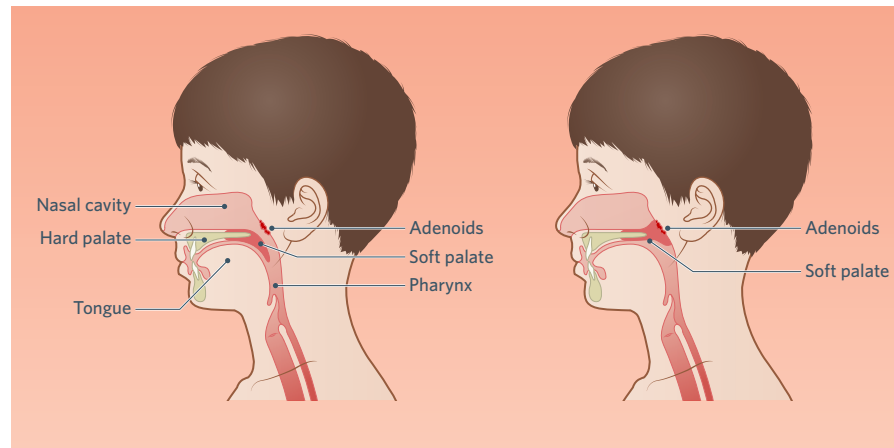
- Nasal regurgitation — liquid or food coming out of your child's nose during swallowing.

- Nasal speech — too much (hypernasal) sound coming from your child's nose during speech.
- Nasal air emission — air coming down your child's nose when they say certain sounds.
- Nasal turbulence — a nasal rustling/snort noise during speech.

Some children will compensate for this nasality by using alternative and sometimes unusual speech sounds when they can't easily produce the right sound.

Children come to VPI clinic to investigate why VPI might be happening with your child.

*VPI is also known as Velopharyngeal Insufficiency or Velopharyngeal Dysfunction (VPD).



What happens in VPI clinic?

VPI clinic might include one or more of the following assessments with a speech pathologist:

- Perceptual speech assessment
- Palatal videofluoroscopy (vi-dee-o-flu-ros-co-pee)
- Nasendoscopy (nay-zen-dos-co-pee)

the speech pathologist will review the results from these assessments with your child's plastic surgeon. The images and results from these assessments help to decide the best type of treatment for your child (e.g. speech therapy and/or surgery) and decide what to do next. The results will help you, your child's plastic surgeon and speech pathologist to decide whether surgery is needed or not. Sometimes a combination of speech therapy and surgery is needed.

If your child has already had surgery, the assessments can help speech pathologists and surgeons to assess the amount of improvement after surgery.

This booklet provides information about the different assessments that your speech pathologist might complete with your child.

My child will have the following VPI assessments:

My child's RCH speech pathologist is:

Perceptual speech assessment



What is a perceptual speech assessment?

A perceptual speech assessment is the assessment of sounds used in speech. In VPI clinic, the speech assessment is used to identify and describe nasal sounding speech.

What does a perceptual speech assessment involve?

Your child's speech pathologist will:

- Look inside your child's mouth.
- Listen carefully to your child's speech sounds.
- Talk with your child to see what sounds he/she can produce.
- Ask your child to copy some words and sentences. The speech pathologist might also ask to record your child's speech on video.
- Ask you questions about your child's eating, drinking and talking development.

What happens next?

Your child may need more tests to work out how well the roof of the mouth (the soft palate), back, and sides of the throat (pharyngeal walls) are working during speech. These tests are called palatal videofluoroscopy and nasendoscopy.



Palatal videofluoroscopy

What is a palatal videofluoroscopy?

A palatal videofluoroscopy is a moving X-ray which takes pictures of your child's mouth and throat from the side, while he/she is talking. This test examines structure and movement of the soft palate (the part at the back of the mouth) and the throat during speech.

Why does my child need a palatal videofluoroscopy?

If your child's speech has a nasal quality, a videofluoroscopy can provide more

information about how much the soft palate and throat (pharyngeal) muscles move during speech. This information helps to work out what sort of treatment is needed.

At what age can the palatal videofluoroscopy be done?

- This test can occur from around two–three years old.
- Your child needs to be able to sit still, look straight ahead, talk and copy words easily for this test.

What does the palatal videofluoroscopy involve?

A radiographer and a speech pathologist carry out this test in Medical Imaging at the hospital. Your child will sit on a chair near the X-ray machine and have a microphone attached to their clothes. Sometimes they may need to have a barium liquid (1 to 1.5ml) put into their nose so that the roof of the mouth and the walls of the throat are seen more clearly on X-ray. This does not hurt, but your child may taste it if some goes into their mouth while talking.

The speech pathologist will help your child say a list of words and sentences. This takes about 30 seconds. Once finished, the recording will be saved.

You can come into the room with your child, unless you are pregnant. It is best not to bring other children to the appointment as they cannot be in the room during the X-ray

Any family members and other people assisting with the procedure wear protective clothing.

The test is straightforward and nothing will touch or hurt your child in any way. The room can be daunting for some children so discussing what will happen can be helpful.





Is videofluoroscopy safe for my child?

The radiographer makes sure that only a small amount of radiation is used. To minimise the time your child is exposed to radiation, he/she needs to be able to cooperate well.

Barium can be swallowed without harmful side effects.

Will my child be upset during the videofluoroscopy?

Palatal videofluoroscopy is not a painful test. Some children are nervous about equipment in the room but most do not find it stressful. The speech pathologist will talk your child through the test. If your child is feeling quite nervous, please tell your speech pathologist before the day of your

appointment. Your speech pathologist can help work out a way to help your child feel more comfortable. For example, your speech pathologist can give you a story with photos to help explain what will happen during the assessment.

When do we get the results?

The investigation is not interpreted immediately; the images are reviewed later by the speech pathologist and the plastic surgeon.

What happens next?

Your child may need another test to work out how well the roof of the mouth (the soft palate), back, and sides of the throat (pharyngeal walls) are working during speech. This test is called nasendoscopy.

Nasendoscopy

At what age can the nasendoscopy be done?

This test is usually done with children over 5 years old but sometimes younger children can manage it. Young children usually sit on their parent's lap during the test.

What does it involve?

1. Before the test, the speech pathologist will examine your child's mouth and nose and then spray a small amount of local anaesthetic into one of their nostrils. This makes the nose feel numb. The spray doesn't taste very nice so we offer your child a lollipop to take away the unpleasant taste.
2. A thin tube will be gently passed into your child's nostril and then further backwards so that it sits over the soft palate and walls of the throat (at the back of the nose). The tube has a bright light and is linked to a tiny camera which sends pictures to a computer.
3. The speech pathologist will help your child say a list of words and sentences for about 30 seconds. You can watch the test on a computer monitor.
4. Once the speech sample is finished, the test is over and the tube is removed from the nose. The test is stored on the computer.



Your child's nose (and possibly throat) will feel a little numb for about an hour. It is best to avoid hot drinks, until the numbness has gone away.



Does the nasendoscopy hurt?

Local anaesthetic is placed in the nose to make the test as comfortable as possible. However, the tube may still feel a little uncomfortable especially if your child's nose is particularly narrow. Most children tell us that a nasendoscopy is not comfortable. Some children seem worried about it while others do not appear to be concerned and go through the assessment without difficulty. Each child's reaction is different so we take this into consideration when recommending a nasendoscopy.



How long will the nasendoscopy take?

If your child is comfortable, the whole appointment should take about 15 minutes. If your child is uncomfortable with the endoscope (tube) in his/her nose, it might take a bit longer.

The tube needs to be in your child's nose until he/she has said the phrases and sentences needed.

Could the nasendoscopy take place when my child is asleep?

As your child needs to talk for this assessment, he/she needs to be awake.

When do we get the results?

The results from the test will be analysed by the speech pathologist and plastic surgeon. You will get a written report posted to you with the results and recommendations.

What happens next?

An appointment will be made for you to see the plastic surgeon so that you can discuss how best to solve the nasal speech. This may involve speech therapy, surgery, or both. If surgery is recommended, RCH Speech Pathology will assess your child's speech at 6 and 12 months after the surgery. It is important that you attend these appointments.

Please call your speech pathologist at the hospital if you have any queries about any of the above information on (03) 9345 9300.





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