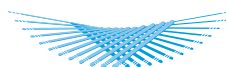




Speech Surgery

*Surgery and post-operative care
information for family and whanau*



COUNTIES
MANUKAU
HEALTH

What is Velopharyngeal Impairment?

Children born with a cleft palate will vary in their speech development. The severity (size) of the cleft does not always indicate how your child's speech will develop. Many children have no problems, whilst others find some sounds more difficult to make.

Some children who do not have a cleft palate, can develop speech problems that require surgery.

The palate works to separate the nose from the mouth for feeding and for speech (FIG 1).

By closing off the nose, it allows

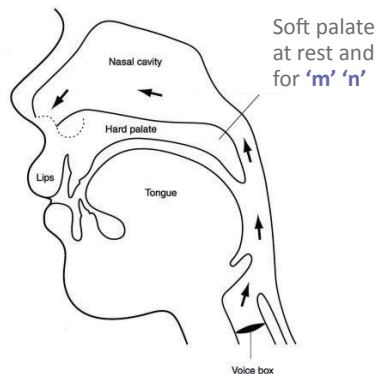


FIG 1

pressure to build up in the mouth for sounds such as 'p,b,t,d,k,g,s,z,f,v' (FIG 2). It also stops liquid and food passing back through the nose.

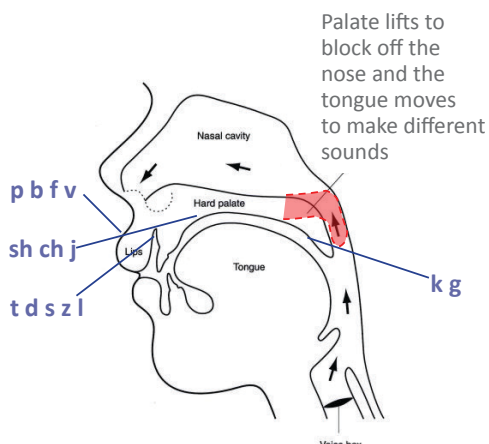


FIG 2

Velopharyngeal impairment (VPI) occurs when the opening between the soft palate and the back wall of the throat (velopharyngeal space) cannot close properly during speech. This problem results in your child sounding hypernasal and there may also be too much air flow through the nose during speech (nasal emission).

In general, VPI occurs for one of two reasons.

1. If there isn't enough tissue in the palate for the surgeon to use during palate repair, the repaired soft palate may be shorter than normal. As a result, the soft palate may be too short to make contact with the back wall of the upper throat.
2. It is possible that the muscles that move the soft palate and walls of the upper throat are not able to function properly to move these structures far or fast enough to make the velopharyngeal space close when needed.

In some instances, a combination of these factors can result in VPI.

Following speech assessment, there are some further tests that can be done to diagnose VPI.

A video x-ray machine can allow us to view the velopharyngeal mechanism from the side and the front. This procedure is called videofluoroscopy.

Another way to examine the palate is to use a narrow, flexible camera through the nostril to view the palate from above. This procedure is called Nasendoscopy. Your cleft palate team may recommend one or both of these procedures to help diagnose the problem.

Depending on what the Surgeon and Speech Language Therapist find on the Videofluoroscopy or Nasendoscopy, a decision will be made with you about what surgery may be most appropriate for your child. Different options will be appropriate for different children. Talk with members of your cleft palate team for more information.

The purpose of treating VPI, is so that your child can create pressure in their mouth which allows them to make stronger sounds. Surgery should also reduce hypernasality and excessive nasal air escape during speech.

Sometimes a small amount of nasality is still present after treatment, but perhaps not enough for most people to notice.

Treating the VPI may improve the balance of air and the airflow into the nose. However, it will not automatically change the way your child makes speech sounds. Many people who have VPI make sounds in the base of their throat or use the back of the tongue which makes it harder to understand what they're saying. Speech Therapy can often help re-train their mouth to make speech sounds correctly.

Surgical Options:

The most common surgeries are described here:

Lengthening the soft palate:

A lengthening procedure involves the surgeon re-operating on the soft palate. The aim is to make the soft palate longer and move the muscles into a better position so that it moves better. This means that when the soft palate moves during speech it is longer and more mobile so can reach to make contact with the back wall of the upper throat during speech.

Buccinator flap:

Sometimes if there is not enough muscle or tissue in the soft palate then the surgeon may take some tissue from the inside of the cheek and turn it around, behind the back teeth and insert it into the junction of the hard and soft palate to make it longer.

Pharyngeal Implants:

When there is a small velopharyngeal gap and the soft palate is moving well, the surgeon may place an implant behind the skin in the back wall of the upper throat to create a bulge. This means the soft palate doesn't have as far to go to get good closure. The surgeon can add bulk by inserting some artificial material (e.g. Medpore) or by using fat or cartilage from your child.

Pharyngoplasty:

The sphincter pharyngoplasty changes the shape of the velopharyngeal space. The surgeon makes incisions along each side of the throat in order to create two flaps of tissue. These two flaps are then pulled up and attached to the sides and back of the throat. The result is a permanent ring of tissue that lines the walls of the upper throat and makes the velopharyngeal space smaller.

Pharyngeal Flap:

For people who don't have much length and movement of the soft palate but who have good movement of the sides and back wall of the upper throat during speech, a pharyngeal flap can be a good option.

The surgeon makes incisions in the back wall of the throat and creates a flap of tissue. The surgeon attaches the free end of the flap to the soft palate. The result is a permanent bridge of tissue between the throat and the soft palate that helps reduce the velopharyngeal space. Ideally, the flap does not totally block the opening into the nose but it can make breathing a bit more difficult. This can cause noisy breathing or snoring.

The surgery planned for your child is

_____ procedure

Coming into Hospital

You will be notified by our Theatre Co-ordinator, of the time and date for admission for surgery.

Admission to the Kids First Surgical unit is usually on the day of surgery. If you live out of Auckland, it can be arranged that you stay in hospital the day before.

It is important for your child's safety that they do not have anything to eat or drink (Nil By Mouth) including water before surgery, unless instructed otherwise.

Our Co-ordinator will let you know what time your child will have their last food/drink before their surgery. The time of this will depend on when your child will go to theatre that day.

The time of surgery depends on the age of your child and the other children on the surgical list. Usually the youngest child goes first.



After Surgery – Things to remember

Your child will be in hospital for one to two days after surgery; discharge will depend on how comfortable they are feeling.

After surgery, the palate and throat will be swollen and bruised for several days. The feeling of a stuffy/blocked nose is common during this time, and speech may sound stuffy for 7-10 days or longer.

The stitches in the palate and throat will dissolve away after surgery. This can take up to 7-10 days or longer.

Your child will need to be on a soft diet for 3 weeks. You will be given written information about what foods are suitable.

Please keep your child's mouth clean and fresh to prevent infection, by offering your child some water after each meal or if able, gently gargling with water or a mild mouth wash.

It is also important to protect the operation site after surgery.

Your child should have a soft diet,

- no sucking on drink bottles, straws, fruit pouches etc.,
- stop them putting objects or their fingers in their mouths
- avoid anything cold such as ice-blocks for several days post-surgery.

Regular pain relief will be given to ensure your child is comfortable during their stay in hospital. You will be given a prescription on discharge for pain relief and antibiotics to be given at home to keep your child comfortable. Please take these as instructed.

Some children can snore after surgery, due to the swelling from the surgical procedure. This should settle down after a few days but if you are concerned, please contact the cleft nurse specialist – 021 574 434

On going treatment

Surgical treatment has been shown to be very successful in treating VPI. However, there are possible problems as well. Sometimes the pharyngeal flap or the sphincter pharyngoplasty reduces the size of the velopharyngeal space more than desired. When this happens, it may be more difficult to breathe through the nose, and speech could sound stuffy for months (or perhaps longer) after surgery.

If nasal breathing becomes extremely difficult, a person may be unable to breathe normally during sleep and could develop sleep apnoea. In extreme cases, another surgery may be needed to remove some of the tissue put in place during the first surgery. The surgeon will try to remove enough tissue to improve nasal breathing but still leave enough tissue to help with the original VPI problem. Keep in mind that surgery cannot solve every speech problem, especially when a person's airway cannot tolerate the extra tissue needed to improve speech.

Another possible problem is that the size of the velopharyngeal space may still be too large after surgery. Even when the most suitable surgical options is chosen and the surgery goes well, sometime the velopharyngeal gap is still too big or the movement of the soft palate is still too limited. Sometimes the

tissue intended to make the space smaller might pull away from the throat, or the tissue might shrink too much when the back of the throat heals. If this happens, you may still hear air and sound escaping out of the nose during speech. In some cases, an additional surgery may be needed to reduce the size of the velopharyngeal space further.



Follow up Appointments

A post-operative appointment will be made approximately 6 weeks after surgery to check the surgical site has healed.

Speech therapy sessions can start again at this time. Your speech therapist will give you homework that you can do with your child each day. Together with surgery and Speech Language therapy, you will see improvements in your child's speech over time.

Your child will be regularly seen in the Cleft clinic and assessed by your team.

Ongoing cleft clinic appointments are 1-2 yearly. It is important to attend all appointments as each child is unique and it is not possible to predict exactly what care may be necessary in the future. Along the way as your child grows, issues with their speech may arise that will need to be reviewed by your Surgeon and Speech Language therapist.

For parents – When to see your GP

If your child is in pain and pain relief does not seem to help

- If there are signs of infection, or the operation site looks different
- Your child is not eating or drinking
- Fever
- Bleeding from the operation site
- Snoring or difficulty breathing

**If you have any concerns
please contact the Cleft
Clinical Nurse Specialist**

**09 276 0044 ext 58922
021 574 434**



My Notes

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Map of Middlemore Hospital

Middlemore Guide

 Rainbow Corridor

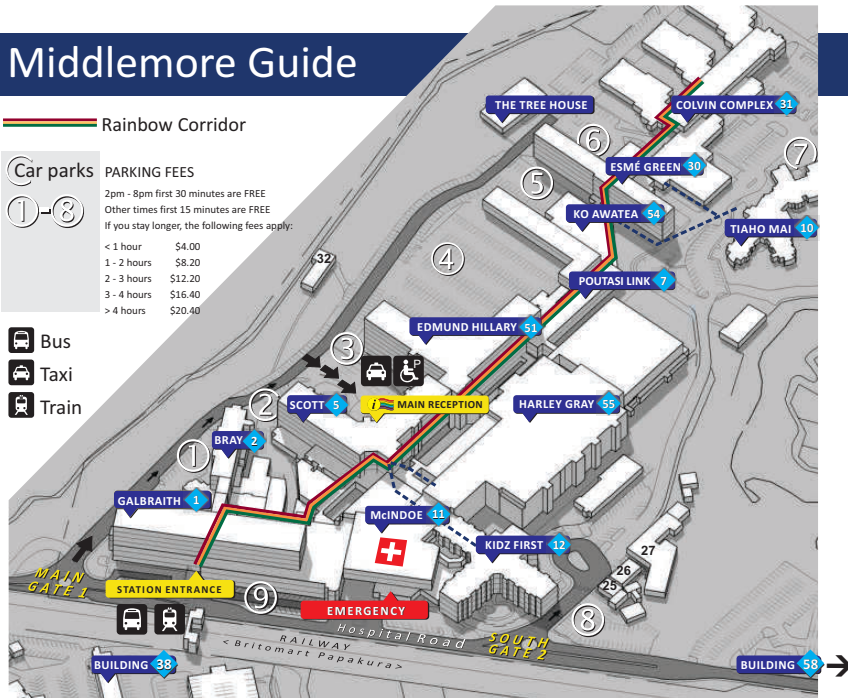
Car parks



PARKING FEES

2pm - 8pm first 30 minutes are FREE
Other times first 15 minutes are FREE
If you stay longer, the following fees apply:


< 1 hour	\$4.00
1 - 2 hours	\$8.20
2 - 3 hours	\$12.20
3 - 4 hours	\$16.40
> 4 hours	\$20.40



Main Reception

   Cashier • Spiritual Centre (Main Gate 1)














Emergency

Emergency  all ages (on Hospital Road)

Kidz First

Children's Hospital (South Gate 2)

BUILDING

-  **Galbraith**
-  **Bray**
-  **Scott**
-  **McIndoe** *via Scott*
-  **Harley Gray**
-  **Edmund Hillary**
-  **Poutasi Link**
-  **Ko Awatea**
-  **Esmé Green**
-  **Colvin Complex**
-  **Tiaho Mai**
-  **Building 38**
-  **Building 58**

SERVICES

Radiology* • Birthing • Maternity • GynaeCare • Early Pregnancy • Wound Care • Manchester Suite
Bereavement Care • Middlemore Foundation
Wards 1 - 11 • Coronary Care • Cardiac Catheter Laboratory • Cardiac Step-down • Oral Health
National Burn Centre • Middlemore Central • Staff Centre
Critical Care • Neonatal Care • Operating Theatres • Medical Assessment
Wards 31 - 35 • Koropiko • Haematology • Gastroenterology • Cardiac Investigation • Discharge Lounge
Eligibility • Car parking
Ko Awatea Centre
Middlemore Clinical Trials • University of Auckland • M.I.T. • A.U.T.
Wards 22/Tui, 23, 24 • Rehabilitation
Huia • Kuaka
Whitiora • Home Health Care • Renal Self Care
MRI + CT scans*

* Radiology services are in two buildings.
Please check your destination.

Counties Manukau Health Values

We aspire to live and breathe our values every day as the foundation of our strategic goal to achieve health equity for our community:



VALUING EVERYONE – Make everyone feel welcome and valued

KIND – Care for other people’s wellbeing

TOGETHER – Include everyone as part of the team

EXCELLENT – Safe, professional, always improving

The Code of Rights

This means that you should have

- | | |
|-----------------------------|--------------------------------------|
| 1. Respect and privacy | 6. Information |
| 2. Fair treatment | 7. Your choice and decisions |
| 3. Dignity and independence | 8. Support |
| 4. Proper standards | 9. Rights during teaching & research |
| 5. Effective communication | 10. Your complaints taken seriously |



Artwork supplied by Hilary Meehan at Hilary’s Studio



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