

# FACTSHEET

This fact sheet is for education purposes only. Please consult with your doctor or other health professionals to make sure this information is right for your child. If you would like to provide feedback on this fact sheet, please visit: [www.schn.health.nsw.gov.au/parents-and-carers/fact-sheets/feedback-form](http://www.schn.health.nsw.gov.au/parents-and-carers/fact-sheets/feedback-form).

## Bi-level ventilation

### What is Bi-Level Ventilation?

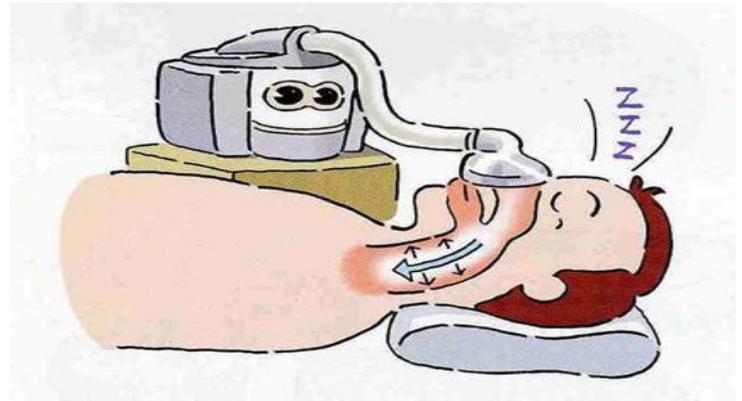
Bi-Level therapy (or BiPAP) is a type of breathing support that helps your child to breathe. It involves the use of a mask and a Bi-Level machine. The Bi-level machine delivers pressure via the mask to the airways and lungs. This opens the airways to allow normal breathing.

Normal breathing is important, as it delivers oxygen and gets rid of carbon dioxide. The pressure in Bi-Level therapy is delivered at 2 levels – inspiratory (breathing in) pressure and expiratory (breathing out) pressure.



### Why does your child need Bi-Level Ventilation?

Your doctor has told you that your child has a breathing disorder called Central Sleep Apnoea (CSA) or hypoventilation. In CSA, the body “forgets” to breathe for periods, when asleep. Hypoventilation happens when your child does not breathe enough.



CSA and hypoventilation are only a problem when your child sleeps. For this reason, your child will need to use Bi-Level when sleeping. Bi-Level gives pressure during sleep to open the airways and stop them closing. It also helps with your child’s breathing rate.

If your child sleeps during the day, it is important to also use Bi-Level for these naps.

### What will we do?

If you have seen your sleep doctor in clinic and it has been decided that your child needs Bi-Level support, you will meet one of the team members who will explain the admission details to you. At this appointment, your child will be fitted with a mask. Your child needs to get used to wearing the mask before Bi-Level therapy can start. You will take the mask home and over the next few days, encourage your child to wear the mask for short periods. This can be when your child is either awake or asleep, as the objective is to make sure that your child is not fearful

of the mask. You will also be given information about hiring the mask and machine, to use at home.

We will take a 3D photograph of your child's face during the first admission. This will help us monitor the growth of the bones and make sure that the mask is not pressing on the top teeth. With continuing mask and pressure treatment, this 3D photograph should be repeated every 2-3 years.

Your child will need to come into hospital for 3-4 nights while we alter the pressures on the machine and get them used to using Bi-Level. During this time, you will meet the Clinical Nurse Consultant (CNC), Clinical Nurse Specialist (CNS) or Registered Nurse (RN) and get education and information, about the Bi-Level machine, so you can confidently use the machine when you go home. You will also be given contact details in case there is a problem with the Bi-Level machine at home.

If your child is already in the hospital and your sleep doctor decides that your child needs to start Bi-Level ventilation, you will meet the CNC/CNS or RN on the same day. They will fit your child with the right size mask, start education and give you information on hiring the equipment to take home.

### How do you get the mask and machine?

The Children's Hospital at Westmead has a small number of Bi-Level machines which we are able to hire out to families for a fee. Please tell us if you have a health care (concession) card, so we can help with any application for funding.



When your child is first established on Bi-Level, you pay a fee for the mask at The Children's Hospital at Westmead. This fee is a single payment of \$100 and must be paid before the discharge home. Any additional masks must be bought at retail outlet centres.



The retail price of a mask is approximately \$200 - \$300 but may be sourced online for a cheaper price. We will give you the details you need to buy future masks.

### How long will your child need to use Bi-Level Ventilation?

In most cases, Bi-Level therapy is a long term treatment. For this reason it is *important to have regular follow-up appointments* with your Sleep/Respiratory Doctor. Your child will also need to have regular sleep studies to monitor their progress.

### Other comments

When your child is discharged home on Bi-Level (or Bi-PAP), If you are eligible for centrelink payments, you are also eligible for the 'Essential Medical Equipment Payment' through Centrelink. This is an annual payment of \$140. An application needs to be completed by you and your doctor and be sent to Centrelink.

Most Bi-PAP machines do not have internal batteries. You must be aware of this as it will stop working in a power failure. It is important to contact your electricity supplier and notify them that a family member is on Bi-PAP. We will give you a form for this as you will also be eligible for a discount on your electricity bill.

### What if your child becomes unwell at home?

If your child gets sick and needs to come to the Emergency Department, you will need to bring all Bi-Level equipment with you.

If your child is breathing rapidly, noisily or seems to be having difficulty breathing, you should present to the nearest emergency department.

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Call an ambulance (000), if the problem is very severe.  
You may see a dusky or blue colour around your child's lips or there may be pauses when they stop breathing.

## Contacts

- Clinical Nurse Consultant  
(02) 9845 2572
  - Clinical Nurse Specialist  
(02) 9845 0230
  - Registered Nurse  
(02) 9845 0545
- Biomedical Engineering Department  
(02) 9845 2602

### Remember:

- Your child will need to use Bi-Level every time they sleep.
- You will need to rent or buy the Bi-Level machine.
- You will need to buy a Bi-Level mask for long term use.
- Children using Bi-Level will need regular assessment and follow up.

## Acknowledgement for images

Philips Home Healthcare

Devilbiss Healthcare Australia