

BiPAP: Bi-level Positive Airway Pressure or non-invasive ventilation

What is BiPAP?

BiPAP is a treatment to help with your breathing.

When we breathe in, we take oxygen out of the air to keep us alive. The body uses oxygen to make energy and produces carbon dioxide as a waste product, which we breathe out. If your breathing becomes difficult and your muscles become tired, it can lead to a build-up of carbon dioxide in your blood. In addition you may not have enough oxygen in your blood.

The aim of using BiPAP is to increase your oxygen level and to help you breathe out more carbon dioxide. It also takes some of the effort out of breathing because your chest muscles don't have to work as hard, so it helps to ease the feelings of breathlessness.

Why do I need this treatment?

BiPAP is used to support people with breathing difficulties.

For example, people with:

- COPD (Chronic Obstructive Pulmonary Disease) or emphysema
- Infections like pneumonia
- Respiratory failure
- Muscle weakness
- Motor neurone disease
- Chest wall disorders
- Breathing limited by obesity.

When you experience a flare up of your breathing problem, such as a chest infection, breathing becomes harder work and your muscles get tired. Your body may not be able to take in enough oxygen and you might get a build up of the waste gas, carbon dioxide.

How does BiPAP work?

You will be given a cushioned mask to wear that fits over your mouth and nose. It is fitted quite firmly to your face but it can be taken off easily. It has to fit tightly so that air doesn't escape from the sides. This mask is attached to an oxygen machine, which will blow air into the mask.

A slightly pressurised airflow is blown into the mask while you breathe. The strength of the pressure varies during the breathing cycle. The airflow is strongest when you breathe in, to help you take in as much air as possible. Airflow pressure is lower when you breathe out.

This continual positive pressure helps to open the airways, allowing more air to get in and out of the lungs.

The carbon dioxide and oxygen levels in your blood will be monitored as you are using BiPAP.

Does BiPAP hurt?

The treatment doesn't hurt, although it may take a while to get used to the mask and you may feel some discomfort over the bridge of your nose where the mask fits. Staff will put a dressing over the bridge of your nose to prevent any damage to your skin.

Can I eat and drink while using BiPAP?

After the first few hours, you will be able to have regular breaks from the mask and will be able to eat and drink as normal. The staff will help you with this.

Why does the machine's alarm keep sounding?

Usually this is because there is too much air leaking from the sides of your mask. Staff will try and adjust the mask to prevent this, but it is nothing for you to worry about.

What if I need help?

Staff will be on hand and will be there to help and comfort you if needed. The mask can be taken off quickly and safely if you need to remove it.

When can I stop using BiPAP?

This depends on how quickly oxygen and carbon dioxide levels in your blood improve.

What are the risks of using Bipap?

BiPAP is usually very safe. It has a lower risk of complications, such as infection, compared with ventilator support like a tracheostomy. Most problems from BiPAP involve the facemask. It may fit too tightly. Some other risks include:

- Local skin damage from the mask
- Dry mouth
- Mild stomach bloating
- Leaking from the mask
- Eye irritation
- Sinus pain or sinus congestion

Further sources of information and support

The British Lung Foundation: www.blf.org.uk

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