



High Flow Nasal Cannula Oxygen/Optiflow

Patient information Leaflet

March 2020

This leaflet explains what high flow nasal cannula oxygen/Optiflow is and why it is being used as part of your child's treatment. Your child's Doctor and Nurse will discuss this with you prior to starting treatment.

What is high flow nasal cannula oxygen (HFNC)?

HFNC oxygen – also called Optiflow - is a way of delivering warmed and moist oxygen via the nostrils (or tracheostomy if child has one in situ). It is used for babies and children who have increased work of breathing and/or low blood oxygen levels usually due to an illness such as bronchiolitis, chest infection or exacerbation of asthma.

One of the benefits of Optiflow is that it gives a little extra pressure into the lungs when your child takes a breath allowing them to take in more oxygen using less effort. The warm humidified (moist) oxygen delivered by Optiflow is generally better tolerated than standard oxygen therapy which is cold and dry.

Optiflow delivers the warm and moist oxygen via soft tubes that sit in the nostrils. In babies and younger children the tubes are secured to the face with stickers. In older children the tubes are secured by a band round the back of the head.

If your child has a tracheostomy then Optiflow is secured by an attachment to the tracheostomy.

Why does my child need this?

Your child's Doctor will make the decision to use Optiflow if your child is showing signs of respiratory distress such as:

- using their tummy muscles to breathe (recession),
- sucking in at the neck (tracheal tug),
- a high breathing rate (respiratory rate)
- and/or low blood oxygen levels (<92%).

They will also check your child's blood – a blood gas. This looks at how acidic the blood is, and also the oxygen and carbon dioxide levels in the blood.

Usually a few hours after starting Optiflow your child's respiratory distress will begin to decrease and their blood oxygen levels increase. If their blood gas was abnormal this should start to improve.

Can my child eat and drink whilst on Optiflow?

This is a decision made by your Doctor and this will be discussed with you.

If the doctor says it is ok for your child to have diet/fluids they can eat and drink as normal whilst they have the Optiflow in place.

Sometimes if your baby is having trouble feeding or they are working hard with their breathing then a tube will be passed down your baby's nose and into their tummy and milk or fluids will be given this way.

If your child or babies respiratory distress is severe then oral feeds will be stopped temporarily and your child will be given fluids by a drip straight into their blood

stream. Oral fluids will gradually be reintroduced when your babies/child's breathing improves.

Are there any side effects to Optiflow?

There are very few side effects to Optiflow and it is generally very well tolerated. Some children become very distressed by having the Optiflow put on and secured to their face. Most get used to it after 5-10 minutes however some children can get very distressed with Optiflow and will not tolerate it.

How will my child be monitored?

Whilst your child is on Optiflow they will be classed as a high dependency patient. This means that they require closer monitoring. They will be placed on a continuous pulse oximetry monitor. This continuously monitors their oxygen levels and heart rate. A nurse will also closely monitor their work of breathing, temperature and the Optiflow settings. They will have blood gases taken – usually by toe/finger/heel prick – to monitor any improvements or deteriorations of the oxygen and carbon dioxide levels in the blood.

How long will my child need Optiflow for?

Each child is different and it depends on their condition and how quickly they improve. The average is 2-3 days but it is not uncommon for babies to be on it for up to a week.

What if the Optiflow doesn't help?

If your child does not become better with the Optiflow the Doctor will speak to you about other options.

In infants less than 6 months they may be put on a machine called CPAP (continuous positive airway pressure). This gives more support with the breathing and provides continuous pressure. It is generally better tolerated by infants less than 3 months old. If your child requires CPAP they may be moved into a different room called the Resus room until they are stable. They will have a nurse who will be just allocated to look after your baby. Babies on CPAP are kept nil by mouth and given IV (intravenous) fluids through a cannula (drip). You will be able to stay with your baby at all times.

It is rare but in older infants and children who don't improve with Optiflow they may have to be given some medicine to make them sleep and a tube is put into their windpipe and a machine (ventilator) will take over their breathing until they get better. Children who need this treatment will have to be transferred to an intensive care bed in another hospital. A special team of doctors and nurses from the North West Transport Service (NWTs) will come in a specially equipped ambulance and transfer your child there whilst they are asleep and ventilated. You will be able to stay with your child at all times throughout this process.

If you have any questions you want to ask, you can use this space below to remind you

If you have a visual impairment this leaflet can be made available in bigger print or on audiotape. If you require either of these options please contact the Patient Information Centre on 0161 922 5332

If you require an interpreter, please ask an appropriate person to contact our central booking office between Monday to Friday 8am to 5pm on 0161 922 6991 to arrange this for you.

語言翻譯及病者支持服務 (LIPS):

如果閣下需要翻譯員在您的預約當日幫助您的話 請找一名合適的家庭成員 0161 922 6991 聯絡本中央預約辦事處來您您安排 我們的辦公時間是星期一至星期五 上午 8 時至下午 5 時

Językowo Tłumaczeniowa Usługa Pomocy dla Pacjenta (Language, Interpretation and Patient Support Service LIPS):

Jeśli potrzebujesz pomocy tłumacza w trakcie swojej wizyty, proszę poprosić odpowiedniego członka rodziny o skontaktowanie się z Centralnym Biurem Zamówień (Central Booking Office), w celu zorganizowania tłumacza pomiędzy poniedziałkiem a piątkiem w godzinach od 08:00 - 17:00 pod numerem 0161 922 6991.

لینگوئج، انٹرپرائٹیشن اینڈ پیٹینٹ سپورٹ سروس (لپس) (Lips)

اگر آپ کو اپنی اپائنٹمنٹ کے لئے مترجم کی مدد کی ضرورت ہو تو براہ مہربانی اپنے خاندان کے کسی موزوں فرد سے کہیں کہ وہ ہمارے سنٹرل بکنگ آفس سے پیر سے جمعہ 8.00 بجے صبح سے 5.00 بجے شام کے دوران 0161 922 6991 پر فون کر کے اس کا بندوبست کریں۔

References:

Casey, C (2019) Clinical Guidelines for the Administration of High Flow Nasal Cannula Oxygen to Infants and Children on the Children's Unit. Tameside and Glossop IC NHS Foundation Trust. UK

Author: C.Casey

Division/Department: Women and Childrens

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