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When Your Baby Needs Oxygen At Home

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Chronic respiratory conditions can cause levels of oxygen in the blood to drop too low. When this happens, it is called hypoxemia. Children with hypoxemia may need to have oxygen therapy at home once they are discharged from the hospital. This helps them maintain normal blood oxygen levels so they can stay healthy.

Understanding hypoxemia

Like a fever, hypoxemia is a symptom of an underlying condition--not an illness itself. It can be caused by a variety of conditions and illnesses, not just respiratory ones.

Some of the chronic respiratory conditions that can cause hypoxemia include:

- Bronchopulmonary dysplasia
- Sleep-disordered breathing (sleep apnea (/English/ages-stages/baby/sleep/Pages/Sleep-Apnea-Detection.aspx))
- Sickle cell disease (/English/health-issues/conditions/chronic/Pages/sickle-cell-disease-in-children.aspx)
- Pulmonary hypertension (/English/health-issues/conditions/heart/Pages/Pulmonary-Hypertension-in-Infants-Children.aspx) with or without congenital heart disease
- Cystic fibrosis (/English/health-issues/conditions/chronic/Pages/Cystic-Fibrosis.aspx)
- Interstitial lung disease
- Children with airway problems
- Children who are (or were) dependent on a ventilator for breathing

If it is left untreated, hypoxemia can create issues like:

- Poor feeding
- Poor growth
- Poor sleep
- Poor brain development
- Dangerous drop in heart rate (/English/health-issues/conditions/heart/Pages/Irregular-Heartbeat-Arrhythmia.aspx#%3a~%3atext=Irregular%20heartbeats%2c%20also%20called%20arrhythmias%2c%20are%20a%20common%2cthe%20heart%20when%20they%20breath%20in%20or%20out.) (bradycardia)
- Short periods of not breathing (apnea)

Using oxygen at home

[illegible] who are medically stable and whose parents have been trained can be sent home on oxygen to prevent [illegible]mia. Being at home benefits both your child's and your family's emotional health. Caring for your baby at home [illegible]lps reduce healthcare costs.

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For home use, most babies get oxygen through a nasal cannula, a small tube that fits in your baby's nostrils and secures around the head. In a small number of babies, oxygen is delivered through a tube in the neck called a tracheostomy, a continuous positive airway pressure (CPAP) machine or a ventilator.

Your doctor will prescribe how much oxygen your baby needs. This is usually written as a specific flow rate (for example, ¼ liter of oxygen per minute) when a nasal cannula is used. For a ventilator or CPAP machine, your doctor will prescribe the settings you will need for the machine.

Home oxygen delivery systems

There are three main types of oxygen delivery systems used at home, including:

Compressed gas. This is the most common type. Small, pre-filled tanks of oxygen are delivered to your home before your baby is discharged from the hospital. The number of tanks you get depend on how much oxygen your baby needs. You may also get a big, non-portable gas tank. A representative from the durable medical equipment (DME) company you use will show you how to read the gauges so you can tell when you need to refill your tanks.

Oxygen concentrator. This device separates oxygen out of the air and gives it to your baby. It's usually sent to your home and it runs on electricity. Someone from the medical equipment company will show you how to use the concentrator. A portable backup oxygen tank is needed, too, for times when your baby isn't near an electrical outlet and just in case there's a power outage.

Liquid oxygen. Oxygen that has been cooled to a liquid state is stored in tanks. The liquid changes into gas as your baby breathes it in. One of the reasons this system is not used as often is because liquid oxygen is expensive and insurance companies may not cover the cost. A liquid oxygen tank takes up much less space than a large compressed oxygen tank, but a big disadvantage of liquid oxygen is that it evaporates when it is not being used.

Other equipment

Depending on the reason your baby needs oxygen therapy, an apnea monitor or a pulse oximeter may be used.

An apnea monitor is a device that uses chest leads or best around the chest to monitor your baby's breathing rate and heart rate. The machine alerts you when your baby's breathing rate slow or heart rate drops, which could be a sign of respiratory distress. A pulse oximeter is a machine that uses a small band wrapped around your baby's hand or foot to measure the oxygen levels in the blood.

You will receive instructions on how to use these machines before your baby leaves the hospital. Your doctor will also explain what readings mean you need to call your health care provider. Keep in mind that an alarm may not always signal distress, so it is important to look at your baby's breathing, color, and activity.

Safety precautions when using oxygen at home

Any time a baby is sent home from the hospital on oxygen, there are safety precautions you should follow:

- Your baby's room should be well ventilated. You can keep the door open to ensure that the room has good air flow and is not too stuffy.
- There should be no smoking (/English/health-issues/conditions/tobacco/Pages/Importance-of-Smoke-Free-Homes-and-Cars.aspx) in the house when a baby is receiving oxygen. You can hang a sign on the door to let people know not to smoke in the house. Ask your medical equipment provider or your pediatrician's office for a sign.
- Oxygen is a flammable gas, so when your baby is on oxygen, keep your baby at least six feet away from open flames, heaters, fireplaces, radiators or gas appliances with pilot lights. Make sure you also store all oxygen tanks at least six feet away from any source of heat or fire.
- Do not use rubbing alcohol, petroleum jelly or spray cans near a baby on oxygen. Avoid using hand sanitizer (/English/health-issues/conditions/COVID-19/Pages/Keep-Hand-Sanitizer-Out-of-Childrens-Reach.aspx) nearby, too.
- Make sure that the smoke detectors in your home are working and periodically review your home fire escape plan with your family.

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What else to expect

Learn before you leave. In the last few days before your baby comes home from the hospital, you should get familiar with the equipment you will be using at home, as well as how to care for your baby. The best way to learn all this is by spending as much time as you can caring for your baby at the bedside while in the neonatal intensive care unit (/English/ages-stages/baby/preemie/Pages/How-You-Can-Participate-in-the-Care-of-Your-Baby-in-the-NICU.aspx) NICU. This will allow you to learn from the health care team and practice while you have experts available to answer questions. Some NICUs have a room for parents to stay with the baby the night before going home to help with the transition.

Home nursing visits. Babies sent home on oxygen may have home nursing visits arranged through their insurance by the doctor. The nurse will check on your baby and make sure you are using all your equipment properly. He or she will also be happy to answer any questions you might have about caring for your baby. Most babies are weaned off oxygen gradually based on recommendations from your child's doctor and a lung specialist called a pulmonologist.

Alert essential services. Make sure your health care team provides letters to give to your telephone company, electric company and local emergency medical services (EMS) to alert them that you have a child with special needs in your home. Keep the phone numbers to your physician, EMS or ambulance service in a convenient and easily accessible place in your home in case of any life-threatening emergencies.

Remember

While it all may seem overwhelming at first, you will become a pro before you know it. Contact your child's doctor or oxygen equipment provider with any questions.

More Information

- What is a Pediatric Pulmonologist? (/English/family-life/health-management/pediatric-specialists/Pages/What-is-a-Pediatric-Pulmonologist.aspx#%3a~%3atext=If%20your%20child%20has%20breathing%20problems%2c%20or%20a%2cWhat%20Kind%20of%20Training%20Do%20Pediatric%20Pulmonologists%20Have?)
- HealthyChildren.org: Chest and Lungs (/English/health-issues/conditions/chest-lungs/Pages/default.aspx)

About Dr. Kehinde

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