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Oxygen Delivery Systems

Home oxygen equipment has two essential components: the oxygen [storage system](#) and the oxygen delivery system. The first stores oxygen. The second moves the oxygen from the storage container to your lungs.

Your oxygen delivery options include:

- Nasal cannulas
- Transtracheal catheters
- Reservoir cannulas
- Pulsed delivery systems
- Face masks
- Oxygen-conserving devices

Nasal cannula

Most people who use oxygen at home use low-flow, dual-pronged nasal cannulas. The nasal cannula consists of two small prongs connected to plastic tubing. The prongs rest in your nostrils, and the tubing connects to the oxygen source. You get a continuous flow of oxygen that's been diluted with room air. **Flow rate:** generally, up to six liters per minute.

Pros

- Simple and inexpensive

Cons

- Continuous oxygen flow can dry out the mucous membranes in your nose
- Delivers oxygen when you're breathing in **and** out, so it's not efficient or cost-effective

Transtracheal oxygen delivery

Transtracheal oxygen (TTO) catheters can continuously deliver a high flow of oxygen. As its name implies, this device is a catheter that's

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inserted into the windpipe (*trachea*) Oxygen enters the windpipe through the catheter.

Pros

- Reduces shortness of breath while you're eating
- It may look better to you than tubes in your nose
- Delivers oxygen at a reduced flow rate, which saves you a lot of money

Cons

- Requires a strict self-care routine and someone to help with care and problem-solving
- Not recommended if you take high-dose steroids every day
- Many possible complications, especially if the catheter gets dirty

Reservoir cannulas

Reservoir cannulas store oxygen in a small chamber while you exhale, then deliver it back to you when you inhale. They're often used by people who need higher flow rates to get enough oxygen. Reduced-flow settings can cut the amount of oxygen you use by half.

Pros

- Simple to use
- Reliable
- Don't cost a lot

Cons

- Large
- More noticeable than other systems

Pulsed oxygen delivery devices

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These devices may be separate units or built into your oxygen storage device. They deliver a small amount of 100% oxygen when you start to inhale. This brings oxygen to the alveoli, which makes it easier for oxygen to get into your blood.

Pulsed delivery devices sense when you start to inhale. You can pre-set them to adjust to specific demands.

- **Fixed-pulse devices** can be set to deliver oxygen at a set rate along with each breath. You can also program it to skip one or more breaths.
- **Demand-pulse devices** can deliver oxygen the whole time you inhale, or for part of the time. It can also adjust to your oxygen needs on-demand.
- **Variable-demand devices** adjust oxygen delivery based on how you're breathing.

Each system should have a fail-safe mode, so it can be set to full, constant oxygen flow if the device malfunctions or fails.

Pros

- Adjust for use during different activities, like exercise or rest

Cons

- Need a doctor's prescription
- Can't use while sleeping

Face mask

Some people need a face mask to get enough oxygen. These plastic masks fit snugly over your nose and mouth.

Pros

Deliver a lot of oxygen

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Cons

- Can be uncomfortable
- Makes it hard to talk
- Has to come off when you eat or drink

Paying for home oxygen delivery

The [American Lung Association](#) estimates more than one million Americans use home oxygen on a long-term basis. It's a huge national health expenditure with home oxygen costs adding up to more than 2.8 billion dollars every year. Home oxygen is the most expensive non-surgical treatment paid for by Medicare as part of its Durable Medical Equipment (DME) coverage.

Make sure you know the facts about [your insurance coverage](#).

For more in-depth information on this topic, please visit the [Big Fat Reference Guide \(BFRG\)](#). If you are enrolled in AlphaNet's Subscriber Portal, you can access the BFRG [here](#).

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