

WHAT TO KNOW ABOUT BEING ON A VENTILATOR

Definition:

A ventilator is a machine that sustains and supports breathing. Ventilators are used for patients who are unable to breathe on their own, or are not able to breathe sufficiently (American Thoracic Society [ATS], 2013).

How Ventilators Work (National Institute of Health [NIH], 2011)

Ventilators use a breathing tube to mechanically deliver oxygen into the lungs and remove carbon dioxide, which is the process that normally occurs when inhaling and exhaling. For patients that will only be on a ventilator for a short period of time, one end of the breathing tube is inserted through the mouth and into the windpipe, and the other is attached to the ventilator. For patients that will be on a ventilator longer, they will have a tracheostomy, which is a surgically created hole through the front of the neck and into the windpipe. The breathing tube will then be placed in this newly created hole and attached to the ventilator. The tube acts as an airway, allowing oxygen to flow into the lungs and carbon dioxide to flow out. The ventilator uses positive pressure to blow air into the lungs, and can be set to breathe the way that best helps the patient. It can also be adjusted as the patient's needs change.

Why You May Need a Ventilator (NIH, 2011)

Ventilators are often needed during surgery to help patients breathe while they are under anesthesia. Anesthesia is administered so that patients are sedated during procedures. While sedated, they are unable to breathe sufficiently on their own, thus requiring a ventilator.

A ventilator may also be needed when a patient has a condition that impairs breathing. The ventilator can help the patient to breathe while they are recovering, until they are able to breathe on their own. Some diseases or conditions that impair lung function- such as COPD or pneumonia- may require the use of a ventilator. Some people may still be able to breathe on their own, but ventilators will help to relieve the stress and pressure of breathing.

What to Expect While on a Ventilator (ATS, 2013)

Ventilators can be uncomfortable. Patients often receive medications to sedate them and minimize discomfort while the breathing tube is in place. Some patients may also require a feeding tube to ensure that they are receiving adequate nutrition, since they cannot eat while on a ventilator (NIH, 2011).

The breathing tube can be removed either after surgery, or when the patient's breathing improves and they are able to breathe on their own. The ventilator is weaned before it is turned off to make sure that the patient can breathe adequately. During weaning, the ventilator will be used less and less until it is not necessary to use it at all. This will allow the lungs to readjust to breathing on their own (NIH, 2011).



Weaning is unnecessary when mechanical ventilation is stopped following surgery, since the breathing tube has only been in place for a matter of hours rather than days. In those cases, the lungs don't need an extended period of time to readjust to breathing on their own, so the ventilator does not need to be weaned slowly and the breathing tube can be removed much more quickly (ATS, 2013).

Risks of Being on a Ventilator (NIH, 2011)

The main risk of being on a ventilator is infection. The breathing tube can allow bacteria to enter the lungs, which may cause pneumonia. Ventilators also make it difficult to cough, which can be harmful because coughing helps remove lung irritants. Sinus infections, lung damage, oxygen toxicity, and vocal cord damage are also risks posed by ventilators and breathing tubes. While on a ventilator, a team of medical professionals will monitor the patient closely for any signs of infection or complications (ATS, 2013).

What to Expect after the Ventilator is Removed (NIH, 2011)

After being weaned off the ventilator, it is common to have a sore throat and a hoarse voice. If these symptoms do not clear up after a few days, contact your physician.

Although being on a ventilator might seem scary and complicated, medical professionals are always available to answer any questions and concerns (University of Pittsburgh Medical Center, 2011).

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REFERENCES

1. National Institutes of Health (2011). What Is a Ventilator? Retrieved July 22, 2015, from <http://www.nhlbi.nih.gov/health/health-topics/topics/vent>
2. National Institutes of Health (2011). How Does a Ventilator Work? Retrieved July 22, 2015, from <http://www.nhlbi.nih.gov/health/health-topics/topics/vent/howdoes>
3. National Institutes of Health (2011). What To Expect While on a Ventilator. Retrieved July 23, 2015, from <http://www.nhlbi.nih.gov/health/health-topics/topics/vent/while>
4. National Institute of Health (2011). What To Expect When You're Taken Off of a Ventilator. Retrieved July 23, 2015, from <http://www.nhlbi.nih.gov/health/health-topics/topics/vent/after>
5. University of Pittsburg Medical Center (2011). When Someone You Love is on a Ventilator. Retrieved July 23, 2015, from <http://www.upmc.com/patients-visitors/education/breathing/pages/love-ventilator.aspx>
6. American Thoracic Society (2013). Mechanical Ventilation. Retrieved July 23, 2015, from <http://www.thoracic.org/patients/patient-resources/resources/mechanical-ventilation.pdf>