

# Mechanical ventilation

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mechanical ventilation is a method to mechanically assist or replace spontaneous breathing. Mechanical ventilation, is typically used after an invasive intubation, a procedure wherein an endotracheal or tracheostomy tube is inserted into the airway. It is used in acute settings such as in the ICU for a short period of time during a serious illness. It may be used at home or in a nursing or rehabilitation institution if patients have chronic illnesses that require long-term ventilation assistance.

The main form of mechanical ventilation is positive pressure ventilation, which works by increasing the pressure in the patient's airway and thus forcing air into the lungs. Less common today are negative pressure ventilators (for example, the "iron lung") that create a negative pressure environment around the patient's chest, thus sucking air into the lungs. Mechanical ventilation is often a life-saving intervention, but carries many potential complications including pneumothorax, airway injury, alveolar damage, and ventilator-associated pneumonia. [citation needed] For this reason the pressure and volume of gas used is strictly controlled, and reduced as soon as possible. ( [pic] intubation refers to the placement of a tube into an external or internal orifice of the body. Although the term can refer to endoscopic procedures, it is most often used to denote tracheal intubation. Tracheal intubation is the placement of a flexible plastic tube into the trachea to protect the patient's airway and provide a means of mechanical ventilation.

The most common tracheal intubation is orotracheal intubation where, with the assistance of a laryngoscope, an endotracheal tube is passed through the mouth, larynx, and vocal cords, into the trachea. A bulb is then inflated

near the distal tip of the tube to help secure it in place and protect the airway from blood, vomit, and secretions. Another possibility is nasotracheal intubation where a tube is passed through the nose, larynx, vocal cords, and trachea. Extubation is the removal of the tube. Endotracheal tube inserted  
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