Weaning From Mechanical Ventilation

Weaning refers to the process in which intensive care staff try to get a patient to breathe without the help of the mechanical ventilator (also see Information Sheet on Mechanical Ventilation). When patients have recovered enough, they often can breathe by themselves or with only a little help from the ventilator. This ability is checked during a short testing period called a weaning "trial." If the patient remains comfortable during a trial, a small amount of blood may be drawn at the end of the trial to check the level of oxygen and carbon dioxide (this is called an arterial blood gas). If these levels look good, the breathing tube can usually be removed from the lungs. If a patient becomes very short of breath or anxious during the weaning trial or if the levels of oxygen or carbon dioxide are not at an acceptable level, we say that the patient "failed" the trial. Further attempts at weaning may be made later that day or on another day.

In some cases, the intensive care staff chooses to reduce, in steps, the amount of help a patient gets from the ventilator. This reduction can occur rapidly (over minutes or hours) in patients who are doing well, or it can occur gradually (over days) in patients who are still moderately ill. At each step, the comfort of the patient is assessed.

In a small number of patients, the breathing tube (endotracheal tube) needs to be replaced after being taken out and the patient is placed back on the breathing machine. The weaning process has to then start all over again.