



PAP Therapy: CPAP, APAP, BiPAP. What's the Difference?

If you have sleep apnea, chances are, you know what a CPAP is. CPAP therapy is the most common type of PAP therapy (Positive Airway Pressure) for obstructive sleep apnea, but there are various kinds of PAP devices that can treat your condition. Depending on your doctor and situation, you may have been ordered CPAP, APAP or BiPAP®.

All three of these therapies are similar in appearance and function. They each hook up to standard tubing and masks and provide pressurized air to your airways during sleep. This pressure is what splints your airways open so that you don't have apneas. The primary differences in these therapies are whether the pressure is constant or variable during your sleep and if it is different when breathing in and out.

Read below to learn more about different PAP therapies.

CPAP- Continuous Positive Airway Pressure.

If you are on CPAP therapy, your doctor has prescribed one set pressure level that does not change at all during the night. (The level will be between 4-20cmH₂O pressure). For example, if you are on 10cmH₂O, your machine delivers a constant pressure of 10 to your upper airways while you breathe in and out and does not change throughout the night. This pressure level was decided during your sleep study as the pressure needed to keep events (apneas and hypopneas) from happening while you sleep. CPAP therapy is the most common treatment for obstructive sleep apnea and the most economical of the PAP devices.

APAP- Automatic Positive Airway Pressure

If you are on APAP therapy, your machine will be set to a pressure range (a minimum and maximum pressure). The amount of pressure that you receive at any given moment will be somewhere between those two numbers. For example, if your range is 5-15cmH₂O, you could be receiving a pressure as low as 5cmH₂O or as high as 15cmH₂O. These machines are equipped with very specific technology that analyzes your breathing all night long and adjusts the pressure up and down as you need it. The range that is set on your machine was determined during your sleep study. APAP machines are more expensive than CPAP machines.

BiPAP®

If you are using BiPAP® therapy, your machine will not be set to deliver a range of pressures, but it will be set with two separate pressures, one when breathing in, and a different one when breathing out. The higher pressure (IPAP) is delivered during

inspiration to keep your airways open, and the lower pressure (EPAP) is delivered when you exhale. Some people who are ordered a very high pressure to relieve their apneas may find it difficult to breathe out against that pressure during CPAP therapy. If you are unable to use CPAP therapy for this reason, BiPAP® therapy may be an option.

BiPAP® therapy is also sometimes used for patients who have congestive heart failure or serious respiratory conditions such as COPD. BiPAP® therapy can help people with COPD remove excess carbon dioxide (CO₂) from their lungs.

BiPAP® machines are also sometimes used for patients with certain neuromuscular conditions. The difference between the two pressures (IPAP and EPAP) helps to reduce the work of breathing for certain patients who need it. BiPAP® machines also offer the ability for the clinician to set a “back-up” respiratory rate. When this rate is set, the machine monitors your breathing to ensure you are taking a certain number of breaths each minute. If you fall below that number, a breath is delivered.

Your specific situation will determine which type of PAP therapy is most effective for you. It is very important that have your needs identified by a trained professional and follow your doctor’s orders.