

Positive Airway Pressure (PAP)

The different modes of therapy

Continuous Positive Airway Pressure (CPAP) Therapy

✚ Provides the same pressure during inhalation and exhalation. Typically used to treat Obstructive Sleep Apnea (OSA).

Types of CPAP

- **Fixed pressure CPAP** – is a set pressure throughout the night.
- **Automatic CPAP** – automatically responds to continuous changes in the patient's upper airway by varying the pressure to keep the upper airway open during sleep.

Bi-Level Therapy

✚ Delivers two levels of positive pressure that are set to coincide with the patient's breathing. Usually delivers a higher pressure when you breathe in and lower level of pressure as you breathe out.

✚ Sleep specialist may prescribe Bi-Level to treat

- Nocturnal hypoventilation and Obesity Hypoventilation Syndrome
- Respiratory insufficiency
- Neuromuscular disease
- Respiratory failure
- Chest wall deformity
- Chronic obstructive pulmonary disease (COPD)
- Amyotrophic lateral sclerosis (ALS) or Lou Gehrig's disease
- OSA – usually prescribe for patients who requires higher pressure
- Obesity Hypoventilation Syndrome

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Types of Bi-level

- **Fixed pressure Bi-Level** – set inspiratory positive pressure (IPAP) and expiratory positive pressure (EPAP).
- **Automatic Bi-Level** – automatically adjust IPAP and EPAP according to patients breathing requirement.

Modes of Bi-Level

- **Spontaneous (S)** – In this mode the device triggers IPAP when flow sensors detect spontaneous inspiratory effort and then cycles back to EPAP.
- **Spontaneous/Timed (S/T)** – it is comparable to spontaneous mode, the device triggers to IPAP on patient inspiratory effort but when the device does not detect the patients spontaneous breath the set backup rate will trigger to ensure that patients still receive a minimum number of breaths per minute.
- **Timed** - the IPAP/EPAP cycling is purely machine-triggered with a set rate.

Servo-ventilation Therapy

- ✚ Another form of Bi-level ventilation with a smart program that evaluates your breathing. If the machine detects that your breathing diminishes, it will provide additional support to maintain your normal breathing pattern by varying the IPAP.
- ✚ Sleep specialist may prescribe Servo-Ventilation to treat
 - Central Sleep Apnea
 - Complex Sleep Apnea
 - Mixed Apnea
 - Cheyne-Stoke Respiration (CSR)

Average Volume Assured Pressure Support (AVAPS™) Therapy

- ✚ A specialized type of bi-level ventilation for patients requiring ventilatory support. AVAPS utilizes a smart program to provide support breath-by-breath to achieve an average volume, based on the patient's height and ideal body weight.
- ✚ Sleep specialist may prescribe AVAPS to treat
 - Nocturnal Hypoventilation
 - Neuromuscular diseases
 - Amyotrophic lateral sclerosis (ALS) or Lou Gehrig's disease
 - Respiratory insufficiency