



# Initial Estimates of Continuous Positive Airway Pressure (CPAP) on Heart Volume, Position and Motion in Patients Receiving Chest Radiation

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## DESCRIPTION

Continuous Positive Airway Pressure (CPAP) is a form of Positive Airway Pressure (PAP) ventilation in which a constant level of pressure above atmospheric pressure is continuously applied to a person's upper airway. The application of positive pressure can be used to prevent upper airway collapse, such as occurs in obstructive sleep apnea, or to reduce the work of breathing in conditions such as acute congestive heart failure. CPAP therapy is very effective in treating obstructive sleep apnea. Adherence to acceptance of CPAP therapy use can be a limiting factor. Patients with obstructive sleep apnea who are being treated with CPAP have a face attached to a pump (CPAP machine) that pushes air into the nasal passages at a pressure high enough to unblock the airway and stimulate normal breathing. Wear the mask while you sleep. The airway pressure supplied to the upper airway is continuous during both inspiration and expiration. Nasal CPAP is currently the treatment of choice for moderate to severe obstructive sleep apnea. Daytime sleepiness improves or disappears. It also improves heart function and high blood pressure. First, CPAP patients should be monitored in a sleep lab to determine the proper air pressure. The first few nights of CPAP are usually difficult as the patient sleeps less. Many patients initially find masks uncomfortable, claustrophobic, or embarrassing. CPAP is not a cure and should be used nightly for the rest of your life. Patients who do not comply experience complete resolution of obstructive sleep apnea and related symptoms. Airway collapse can occur for a variety of reasons, and CPAP is used in many of these cases to maintain airway patency. Airway collapse is commonly seen in adults and children with breathing disorders such as Obstructive Sleep Apnea

(OSA), which is the cessation or cessation of breathing during sleep. OSA can arise from a variety of causes, including obesity, hypotension, and adenotonsil hypertrophy. CPAP can be used in the Neonatal Intensive Care Unit (NICU) to treat premature infants whose lungs have not fully developed and who may have respiratory distress syndrome due to surfactant deficiency. Physicians can also use CPAP to treat hypoxia and reduce the work of breathing in infants with acute infections such as bronchiolitis or pneumonia, or airway collapse such as tracheomalacia. Used in hypoxic respiratory failure associated with congestive heart failure to increase cardiac output and improve V/Q adaptation. CPAP can support oxygenation *via* PEEP prior to placement of an artificial airway during endotracheal intubation. Used for successful extubation of patients who may benefit from positive pressure but do not require invasive ventilation. Chronic snoring can have a huge impact on your sleep and your bed partner, and is often a sign of what is to come. If you have a problem with snoring, it can lead to UARS and OSA over time. Ask your doctor for a sleep study to identify any underlying issues and start using her CPAP machine if necessary. CPAP machines may look intimidating, but they can improve the health and quality of life for you and your loved ones by providing a good night's sleep.

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## CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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