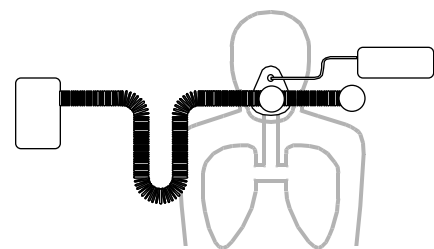




**Advanced
Solutions
in Acute
Respiratory
Care**



**Advanced
Integrated
Solutions in
Non-Invasive
Acute Clinical
Respiratory
Care**

Disease States

Mask CPAP has been shown to reduce the need for intubation, alleviate hypoxemia, and decrease the work of breathing in the following categories:

Acute Respiratory Failure – Several authors [4,5,6] have shown mask CPAP to increase PaO₂ and relieve tachypnea in patients with moderate respiratory failure (PaO₂/FIO₂ < 250). These studies demonstrate a success rate (intubation avoided) of 61-98%.

Pulmonary Contusion & Flail Chest – Lung contusion and rib fractures are associated with alveolar collapse and chest wall instability. Mask CPAP restores lung volume and stabilizes respiratory mechanics, improving oxygenation and ventilation. Adequate pain control is a critical adjunct to mask CPAP in this arena. Hurst et. al [7] showed a success rate of mask CPAP of 93% in patients with hypoxemia due to pulmonary contusion.

Cardiogenic Pulmonary Edema – Pulmonary edema resulting from congestive heart failure creates the classic wet lung. Bibasilar rales are evidence of the fluid filled lung and hypoxemia and tachypnea are usual findings. Mask CPAP in cardiogenic pulmonary edema, increases lung volume, improves oxygenation and reduces the work of breathing. As an added benefit, positive airway pressure reduces venous return, decreasing ventricular filling pressures and improving cardiac performance. Mask CPAP may also be

indicated in cardiogenic pulmonary edema in the presence of hypercarbia, if the patient has a normal ventilatory drive. Mask CPAP has also been shown to reduce the myocardial infarction rate compared to bi-level ventilation in these cases. [8,9]

Post-extubation Hypoxemia – Following extubation trauma and surgery patients may develop hypoxemia due to reduced lung volumes and stiff lungs. Mask CPAP has been shown to reduce the re-intubation rate in patients with hypoxemia following extubation in 90% of patients. [10]

Chronic Obstructive Pulmonary Disease – The air-trapping in COPD is attributed to small airway collapse prior to complete alveolar emptying. This phenomenon is commonly treated by pursed lip breathing. The effect is to maintain airway pressure above the pressure which causes airway collapse. The same effect can be seen with mask CPAP at low levels (<8 cm H₂O). Non-invasive ventilation is also highly successful in this arena, but must include low levels of CPAP/PEEP.

Post-operative Atelectasis – Post-operative atelectasis is a common finding following upper abdominal and thoracic operations. This malady is treated with a plethora of treatments including incentive spirometry, coughing & deep breathing, and intermittent positive pressure breathing. Mask CPAP is also effective in alleviating atelectasis and has the advantage of not requiring patient cooperation to increase lung volume. Several studies have shown a reduction in post-operative pulmonary complications with the use of CPAP compared to



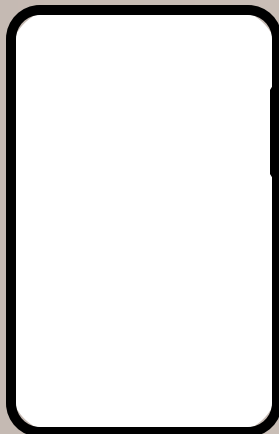
Clinical **CPAP** Components

WhisperFlow generators are simple but exceptionally accurate devices used in the administration of continuous positive airway pressure (CPAP). They allow variable flow generated, from 0 to 140 l/m, and oxygen concentration, from 28 to 100%, enabling the clinician to meet a wide range of adult to pediatric patient needs.



CPAP is an advanced treatment system for a broad range of respiratory conditions.

It utilizes a combination of continuous breathing circuit pressure and valves to manage patient breathing.



The WhisperFlow high flow CPAP generator is a viable alternative for patients with specific clinical indications. It creates an opportunity for oxygen therapy in a positive, non-invasive mode.

The combination of single and double port masks offers the most extensive line of “no-leak” masks available to the clinician today.

AirSeal anesthesia and respiratory care face masks are durable and effective.



and Functionality

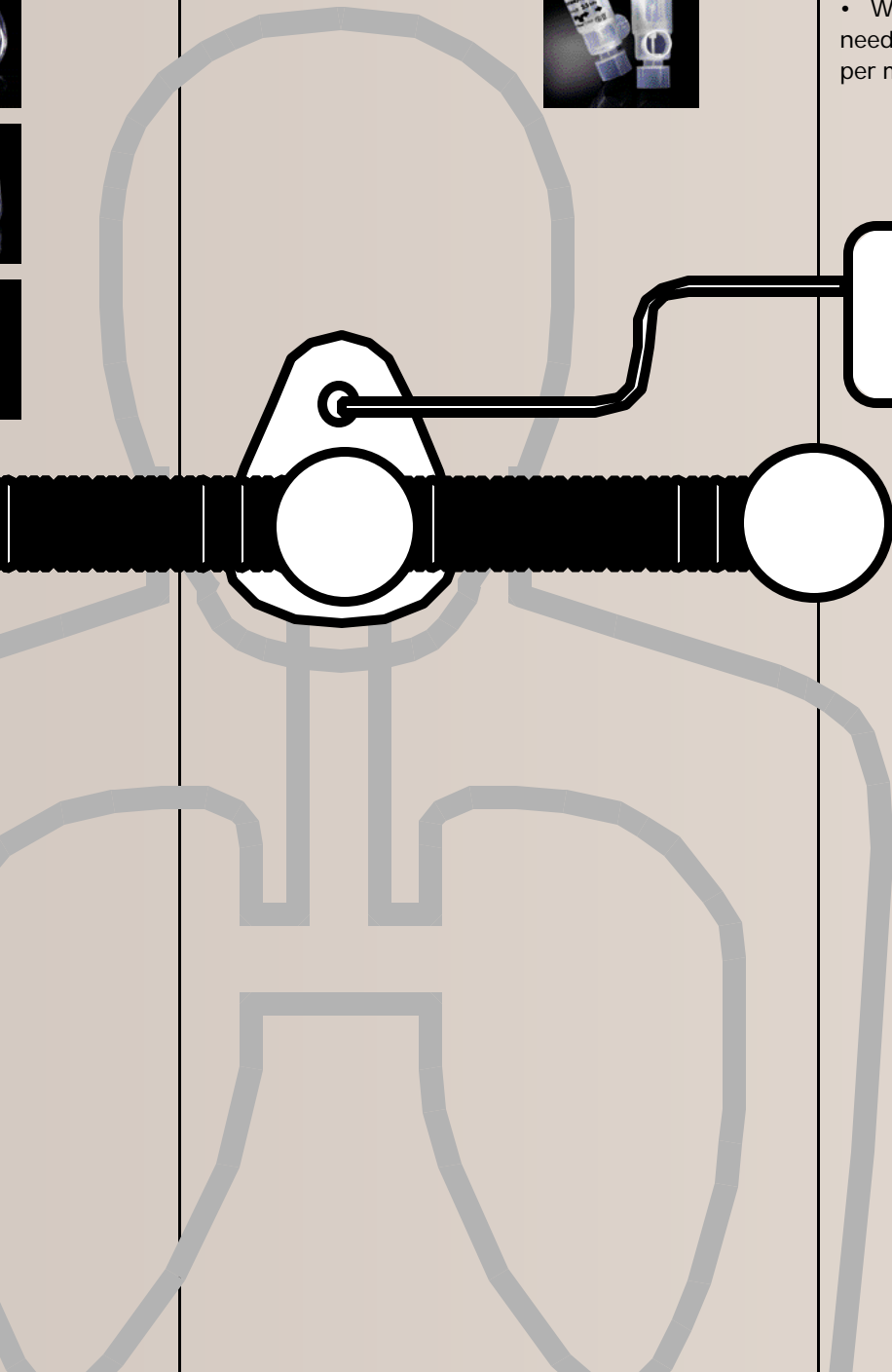
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The WhisperFlow high flow CPAP generator is a viable alternative for patients with specific clinical indications. It creates an opportunity for oxygen therapy in a positive, non-invasive mode.

- Variable Generator allows concentrations from 30% to 100% oxygen. Fixed generator produces a constant 40% oxygen flow.
- Will meet patient needs of up to 140 liters per minute.



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- Variable Generator allows concentrations from 30% to 100% oxygen. Fixed generator produces a constant 40% oxygen flow.
- Will meet patient needs of up to 140 liters per minute.
- Simple to assemble up and maintain.
- Very quiet and non-intrusive.

Caution:
Federal Law (USA) restricts this device to sale by or on the order of a licensed physician.

Warning:
Store in clean, dry conditions, away from heat and light. Check for air flow passage before use. Patient should be monitored constantly while this product is in use. Do Not use volatile gases. Do not soak, rinse, wash, gas or steam sterilize.



Caradyne
Parkmore Business Centre
Parkmore West, Galway, Ireland
T: 353 (0) 91 709010
F: 353 (0) 91 758929
Email: info@caradyne.com
Web: www.caradyne.com

2055 Executive Drive
Indianapolis, IN 46241 USA
T: 317.246.9010
F: 317.246.9011