

OXYMIZER and OXYMIZER Pendant
Disposable Oxygen Conserving Devices

DESCRIPTION AND RATIONALE

OXYMIZER and OXYMIZER Pendant devices are simple, disposable oxygen conservers. The use of these products allows healthcare professionals to maintain adequate oxygen saturations in hypoxic patients while using significantly lower oxygen flow rates than required by traditional means.

By reducing the oxygen flow rate necessary to achieve adequate oxygen saturations, these devices reduce by 50% to 75% the amount of oxygen required to treat a patient successfully. The benefits of this conservation include:

- Reduced oxygen costs
- Increased ambulation by making portable systems last significantly longer
- Reduced nasal irritation and dryness, eliminating the need for humidification in most patients
- Use of low flow oxygen concentrators on patients who require higher flow rates than their existing concentrators provide
- Ability to adequately saturate higher flow oxygen patients more comfortably, eliminating the need for an oxygen mask.

These conservers accumulate and store, in a 20ml reservoir, the oxygen that is usually wasted during exhalation. A highly responsive membrane within the reservoir acts as a reflux to force the accumulated oxygen, together with the reduced oxygen flow, into the lungs quickly. This occurs at the very beginning of inhalation – the optimal time to deliver supplemental oxygen.

The delivery of this 20ml bolus of oxygen at the very beginning of inhalation allows the healthcare professional to reduce the oxygen flow rates required to obtain target oxygen saturations. For example, in the first half second of inhalation (the time period during which all the oxygen that takes part in the gas exchange reaches the distal portion of the lungs), a patient who requires 2 l/m oxygen by traditional means receives the same amount of oxygen and achieves the same blood oxygen saturations when the oxygen is delivered at .5 l/m via the OXYMIZER devices. One l/m via OXYMIZER is equivalent to 3 l/m via standard cannula and 2 l/m is equivalent to 4 l/m via traditional means. These equivalencies have been confirmed in more than (30) worldwide clinical studies in a variety of circumstances and clinical conditions.

Two versions of the OXYMIZER device are available. Both work on the same reservoir principal and provide similar oxygen saturations and savings. The original OXYMIZER places the reservoir directly under the patient's nose. Although patients report that this is the more comfortable of the two styles, its configuration makes it too obtrusive for some patients. The OXYMIZER Pendant version incorporates the reservoir system in the cannula tubing and a circular chamber resembling a pendant that rests against the patient's chest. This chamber can be concealed easily under clothing, making it much less obtrusive than the original OXYMIZER device; however, it is not quite as comfortable. Many patients use both styles – they wear the original OXYMIZER when they are in the privacy of their homes and the OXYMIZER Pendant when they go out.