

Oxygen

Evidence-Based Strategies for Delivery in Respiratory Failure

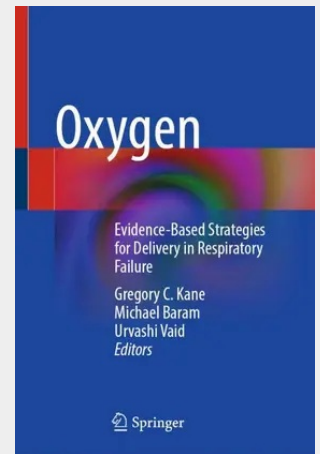
This book puts forward a comprehensive text that addresses routine uses of oxygen as a therapeutic modality as well as utilization of supplemental oxygen and advanced support of academic respiratory failure in the sickest patients with hypoxemia seeking care in medical centers. These centers range from rural or safety net hospitals to the most advanced academic medical centers. Oxygen supplementation may be one of the most commonly applied therapeutic modalities utilized in modern medicine. Despite this, a comprehensive discussion of the practical application of supplemental oxygen has often been limited to treatises that deal with the very advanced forms lung disease without educating the reader on the basics of oxygen in human physiology and the full spectrum of human illnesses that compromise oxygen delivery to the host. As highlighted by the recent pandemic, there are growing number of tools to improve oxygenation.

The authors cover both harmful effects of oxygen delivery, beneficial effects, and a careful description of the risks and benefits to understand when advanced techniques can be life-saving and when they should be avoided. In 2018, a meta-analysis addressed the use of simple supplemental oxygen in a number of routine diagnoses including pneumonia, myocardial infarction, sepsis and stroke. The authors put this very important background into context for the modern physician guiding them on the appropriate use of oxygen to avoid the pitfall of increasing mortality without affecting important patient outcomes. Every practicing physician should be aware of the benefits of oxygen therapy, but must also understand the harms and how to avoid overuse.

Beyond routine therapeutics, the authors review the use of oxygen in SCUBA and mountaineering so that the recreational enthusiast and the physician treating such individuals can be ready to understand the pathophysiology and therapeutic options available to the clinician. The authors also include chapters covering special disease states such as sleep apnea, carbon dioxide poisoning and methemoglobinemia to understand how these conditions can reduce oxygen delivery and lead to significant morbidity and even mortality.

This is an ideal guide for all medical professionals who use oxygen to treat and help their patients.

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