

JANUARY NEWSLETTER

Saskatchewan Respiratory Therapy Education Committee



Inhaled Nitric Oxide

A GENERAL OVERVIEW

- Nitric oxide is a potent endogenous vasodilator that can be exogenously administered via inhalation.
- iNO has the ability to provide selective pulmonary vasodilatation in well-ventilated lung units, to improve VQ mismatch and subsequently reduce elevated PVR and pulmonary hypertension seen in ARDS. A reduction in pulmonary arterial pressure and a decrease in intrapulmonary shunting occur within 40 minutes of iNO treatment initiation. iNO also increases the right ventricular ejection fraction and decreases right end-systolic volume, thus preventing decompensation of acute cor pulmonale.
- iNO can effectively inhibit the expression of pro-inflammatory cytokines, impede the activation of adhesion molecules, and curtail the activation of neutrophils. This multifaceted anti-inflammatory action becomes particularly relevant in conditions characterized by pulmonary inflammation, such as ARDS.
- Clinical applications include PPHN (in this application has demonstrated a reduction in the need for ECMO), neonatal RDS, pulmonary hypertension, and ARDS.
- Challenges and limitations include cost, technical challenges in administering iNO, potential adverse effects and safety concerns, and resistance to iNO therapy.
- Significant improvement in P/F ratio and oxygen index within 24hrs of iNO. No difference in ventilator free days. Significant increase in renal failure. No statistically significant effect on mortality.

DOCTOR: DO YOU KNOW OF A SELECTIVE PULMONARY VASODILATOR TO USE?

RT: iNO OF ONE.

**SOCIAL MEDIA HIGHLIGHT:
@OLLIVATE**

**CONGRATULATIONS TO
DONNA TURNER ON
RECEIVING THE SASKTEC &
BOMIMED RESPIRATORY
THERAPY EXCELLENCE AWARD
OF 2025.**

Educational Resources

INHALED NITRIC OXIDE

ARTICLE RESOURCES

- [A Comprehensive Review of Inhaled Nitric Oxide Therapy: Current Trends, Challenges, and Future Directions](#)
- [The beneficial use of nitric oxide during cardiopulmonary bypass on postoperative outcomes in children and adult patients: a systematic review and meta-analysis of 2897 patients](#)
- [Inhaled nitric oxide for acute respiratory distress syndrome \(ARDS\) in children and adults](#)

If you're having difficulty accessing the articles SHA Library Services is a great resource available to all SHA employees. Feel free to contact them to setup a library card number to obtain off site access.

WEBINARS

- [Inhaled Nitric Oxide \(iNO\): Evidence-Based Health Information Related to COVID-19](#)
- [Transporting iNO Webinar](#)

VIDEO RESOURCES

- [ACCP Chest Inhaled Nitric Oxide](#)
- [RishiMD Nitric Oxide](#)
- [EddyJoeMD Nitric Oxide vs. Epoprostenol](#)

PODCASTS

- [Response to inhaled nitric oxide and mortality among very preterm neonates with pulmonary hypertension](#)
- [Morbidity and mortality of preterm infants exposed to inhaled nitric oxide in Kaiser Permanence South Carolina](#)
- [Inhaled nitric oxide](#)
- [IBCC episode 95 - inhaled pulmonary vasodilators](#)

SUMMARIES & GUIDELINES

- [Nitric Oxide \(Lexi-Drugs\)](#)
- [MICROMEDEX - Drug Summary Nitric Oxide](#)



Congratulations to Donna Turner on receiving the SaskRTEC Respiratory Therapy Excellence Award sponsored by BOMImed.

Congratulations on your retirement, thank you for your dedication to the profession and for inspiring young RTs.

As we continue to grow this committee we are finding a need for more Members at Large.
If you're interested in joining the SaskRTEC please send us an email at saskrtec@gmail.com.