Heated humidified oxygen is administered through a high-flow nasal cannula when a patient requires a higher dose of supplemental oxygen or increased flow for shortness of breath. The device can deliver:
- fraction of inspired oxygen (FiO2) of 21% to 98%
- relative humidity of 95% to 100%
- a flow rate of 15 to 60 L/minute.

The device consists of a large bore nasal cannula that attaches to corrugated tubing (circuit) to a heated humidifier with an oxygen source.

**Indications for use**
- Patients who require a higher dose of supplemental oxygen but can’t tolerate a mask or when a mask impairs a patient’s ability to eat, drink, and speak.
- The device can also be used as an alternative to continuous positive airway pressure (CPAP) delivered by nasal prongs or a nasal mask in neonates.
- Good alternative to a CPAP/BiPAP to prevent skin breakdown on nose bridge.
- The lighter device may also make it easier to care for & handle a neonate.

**Equipment**
- High-flow (large bore) nasal cannula
- Heated humidifier
- Sterile water for inhalation
- Oxygen source
- Pressurized air source (device dependent)
- Pulse oximeter and probe

**What is High Flow Oxygen?**
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**Special Considerations**
- Follow AGP PPE guidelines
- Collaboration between nursing and respiratory therapy is essential when using device and caring for the patient. Communication is needed with oxygen and/or respiratory status changes.
- Oxygen toxicity can occur when oxygen is delivered in concentrations greater than 50%; however, there's no consensus in the literature defining a safe upper limit for prevention of oxygen toxicity. Rule of thumb: always adjust FiO2 to lowest level to achieve SpO2 goal per order.
- Heated humidifier should always have water present. Water should be labeled “Inhalation Only” and will be managed by RT. Be sure to fill according to manufacture guidelines.
- Ensure all connections are secure. A slight disconnect could cause negative effects like oxygen desaturation.
- Some devices have external temperature probes that are plugged into the circuit.
Monitor and Documentation

- Obtain the patient's baseline oxygen saturation level via pulse oximeter to detect changes in the patient's condition during the procedure.
- The nasal cannula interface on the patient, fitting the prongs into the patient's nares.
- Place the elastic strap around the back of the patient's head above the ears.
- Ensure skin assessments are done with focus on the nose and pressure points of the face.
- Consider use of silicone foam prophylactic dressing under cannula
- Adjust the strap so that it fits snugly, not too tight, and utilize gown clip(s) to prevent skin breakdown.
- Monitor the patient's oxygen saturation level and tolerance of the prescribed oxygen therapy.
- If the patient's oxygen saturation level doesn't reach the targeted level or the patient's condition deteriorates, notify the practitioner because alternative therapy may be warranted.
- Documentation includes O2 Device, O2 Flow Rate (L/min), FiO2 (%) and SpO2.
- After the patient's condition stabilizes, make sure that the call light and necessary personal items are within the patient's reach to promote patient safety.
- Work closely with your Respiratory Care Team

Interface options

Heated Breathing Tube

Info

https://youtu.be/tsn4Z6QLlgs

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