Oxygen Concentrator

Oxygen concentrations produce 85-95.5% oxygen from ambient air using two sieve beds.

**USE FOR**
Nearly all sick infants may benefit from oxygen therapy.

**STANDARD OF CARE**
Target SpO2 is:
- 90–95% for patients on O2
- 90–100% for patients off O2

**ASSESSMENT & PREPARATION**

1. **TURN ON DEVICE**
   - Plug in concentrator and turn on device
   - Allow to run for 5 minutes OR until indicator light shows appropriate concentrations of oxygen are reached

2. **PREPARE DEVICE**
   - Adjust regulators to desired oxygen flow level
   - A. Connect correctly sized nasal prongs or tubing to oxygen port
   - B. Check that flow comes out of nasal prongs

3. **PREPARE PATIENT**
   - Follow hand washing protocol, wear gloves if needed
   - Assess nasal patency, suction if secretions are present
   - Insert nasal prongs and place gauze under tubing to protect skin
   - Secure tubing with tape

4. **MONITOR PATIENT**
   - Monitor using a pulse oximeter
   - Adjust regulator flow up and down. Patient saturation goal is 90–95%
   - Assess RR, HR, work of breathing, and nostril patency while on oxygen therapy
   - If oxygen flow is more than 1 L/min and saturations less than 90%, consider switching to CPAP

**DISINFECTION & INFECTION PREVENTION**
- Clean hands with soap and water or alcohol before and after handling materials that will be used on patients
- Begin reprocessing oxygen tubing according to ward guidelines immediately after use
- Clean oxygen concentrator unit housing and regulators using gauze and 70% alcohol after every use

**COMPLICATIONS**
- Hypoxia
- Hyperoxia
- Nasal blockage
- Necrotic septum

Target saturations for infants on oxygen are 90-95%. Any amount of oxygen given without appropriate monitoring of oxygen saturations can cause harm.

**NEST360 Respiratory Support — Oxygen Concentrator (AirSep)**

Clinical Job Aid
**Oxygen Concentrator**

Units should be located 30-35 cm away from the nearest wall to ensure that air can freely flow into the oxygen concentrator.

### DAILY MAINTENANCE

- Always wipe the oxygen concentrator with alcohol using gauze or a cotton swab before first use and between patients.

### PREVENTIVE MAINTENANCE

Fine particle and gross particle filters should be checked weekly.

- Oxygen concentrator should be turned on and allowed to run for at least 15 minutes every week if it has not been in use.

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**If the oxygen concentrator is not turning on**

- Check that the power cable is plugged into a socket.
- Check that socket is turned on and has electricity.
- Push the reset button.

**If the low oxygen concentration alarm is on**

- Check the gross particle filter for dust and debris.
- If dirty, replace filter with spare, clean filter.
- Check if set flow rate (L/min) is within maximum machine specifications.
- If the set flow rate exceeds capacity, lower flow rate to within capacity limits.

**When it’s time to clean the filter**

- Turn off the device, then remove the back of the unit.
- If available, replace dirty filters with clean ones and turn back on for use.

**Gross particle filter:**
- Place in lukewarm, soapy water. Rinse with clean water and place in shaded area until completely dry.

**Fine particle filter:**
- Do not wash this filter in water. It should be checked weekly by the maintenance department.

**If the oxygen concentrator is turning on but there is no flow**

- Connect nozzle to oxygen port.
- Check port for debris or blockages.
- If debris is seen, clean using a cotton bud or forceps wrapped in gauze and soaked in alcohol.

**If alarm still sounds after reducing within capacity limits OR fine particle filter appears dirty, contact the maintenance department.**

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**CONTACT A TECHNICIAN OR MAINTENANCE DEPARTMENT IF DEVICE CONTINUES TO NOT WORK PROPERLY AFTER ADDRESSING THE COMMON ISSUES**