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OXYGEN DELIVERY SYSTEMS



Ramaiah International Centre for Public Health Innovations (RICPHI)
Bengaluru, Karnataka



Oxygen Tank

- Metal tanks containing pressurized oxygen.
- A line of tubing is connected to the tank at one end and then to a nasal cannula or oxygen mask at the other. This allows the oxygen in the tank to be delivered directly into the patient's nose.
- Personal oxygen tanks are typically mounted on a trolley that allows them to be easily transported by the patient themselves or a caregiver.



OXYGEN CYLINDER



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Oxygen Concentrator

- Oxygen Concentrators collect oxygen from the surrounding air, concentrate it, and then deliver it to the patient via a mask or nasal cannula
- There is no need for replacement or refilling.
- Concentrators may be large and can be kept for use in the hospital or at home and wheeled.
- There are also portable backpack versions that people who need oxygen long term can wear while travelling.



OXYGEN CONCENTRATOR

Source: http://www.iambiomed.com/equipments/oxygen_conc.php



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Advantages of Oxygen Cylinder

- No electricity needed
- Silent
- Lower cost initially (especially if needed only for a short period of time)

Disadvantages of Oxygen Cylinder

- Heavy to transport everywhere
- Needs to be refilled if the contents get over
- Greater cost long term (as it needs refilling)

Advantages of Oxygen Concentrator

- Unlimited amount of oxygen
- Lightweight and easy to carry
- Lower cost long term (especially if oxygen is needed long term)
- Many types available depending on patient needs

Disadvantages of Oxygen Concentrator

- Electricity needed for functioning
- Creates a lot of noise
- Greater initial cost and might not be affordable for all.



Which system to choose?

Prefer Oxygen Cylinder if

- Oxygen is needed short term
- If the patient is primarily at home
- If the initial cost of a concentrator is too much

Prefer Oxygen
Concentrator if

- Oxygen supply is needed long term
- Patient needs a portable oxygen source
- If it is affordable and needed long term



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References:

- <https://www.rehabmart.com/post/oxygen-tanks-vs-oxygen-concentrators-x-tips-to-help-you-choose>

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