O_2 ADMINISTRATION.

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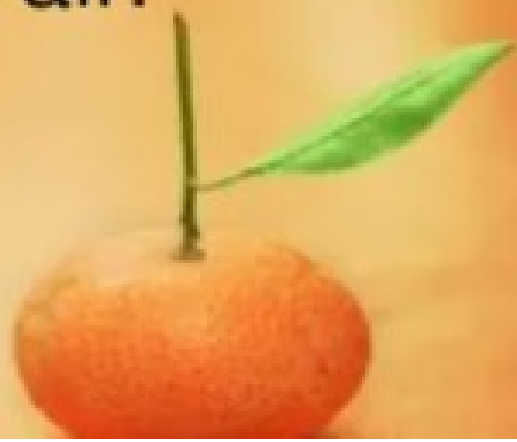
DEFINITION.

Oxygen administration is the process by which supplemented oxygen is administered in high concentration than that of atmospheric air.



SOURCES OF OXYGEN IN HOSPITALS.

Therapeutic oxygen is available from two sources:

1. Wall outlets.
2. Oxygen cylinders.

- Stationary
- Portable, mobile or ambulatory.

PURPOSE OF OXYGEN ADMINISTRATION.

- To relieve dyspnea.
- To prevent hypoxemia (low level of oxygen in the blood) and hypoxia (low level of oxygen in cells).
- To increase oxygenation in tissues.

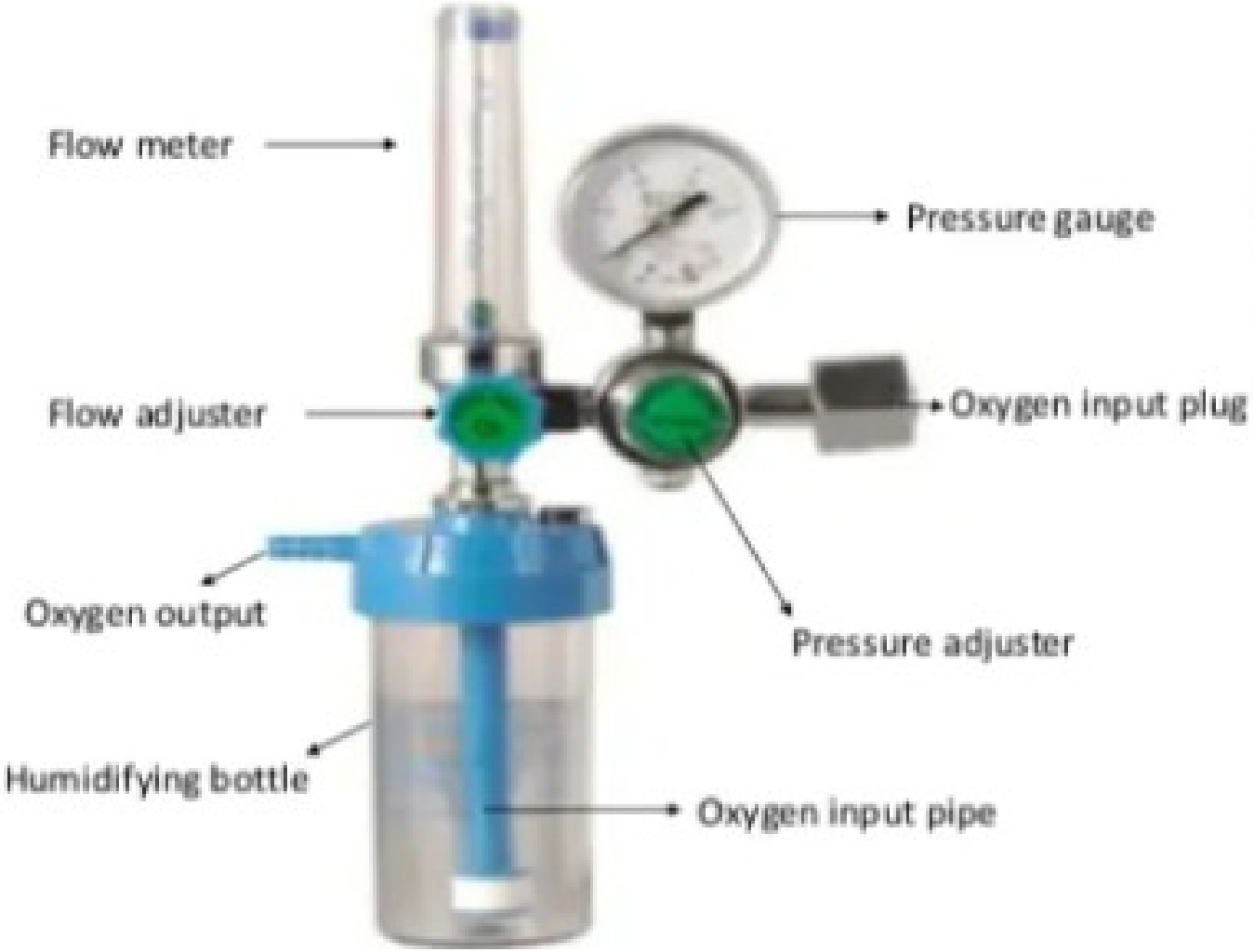
INDICATIONS FOR OXYGEN ADMINISTRATION.

- Severe respiratory distress (e.g. acute asthma and pneumonia.)
- Intra and post operatively
- Hypoxia and hypoxemia
- Shock
- Severe trauma
- Acute myocardial infraction (heart attack)

ARTICLES/EQUIPMENTS NEEDED FOR OXYGEN ADMINISTRATION.

- Oxygen source: wall outlets or oxygen cylinder.
- Flow meter.
- Humidifier filled with sterile water.
- Oxygen tubing.
- Nasal catheter or Mask.
- Gallipot with cotton swabs.
- Water soluble lubricant.
- Bowl containing water.
- Oxygen precaution sign.

PART OF OXYGEN CYLINDER.



Oxygen cylinders.

PARTS CONTINUES.

Oxygen mask.

Nasal cannula.

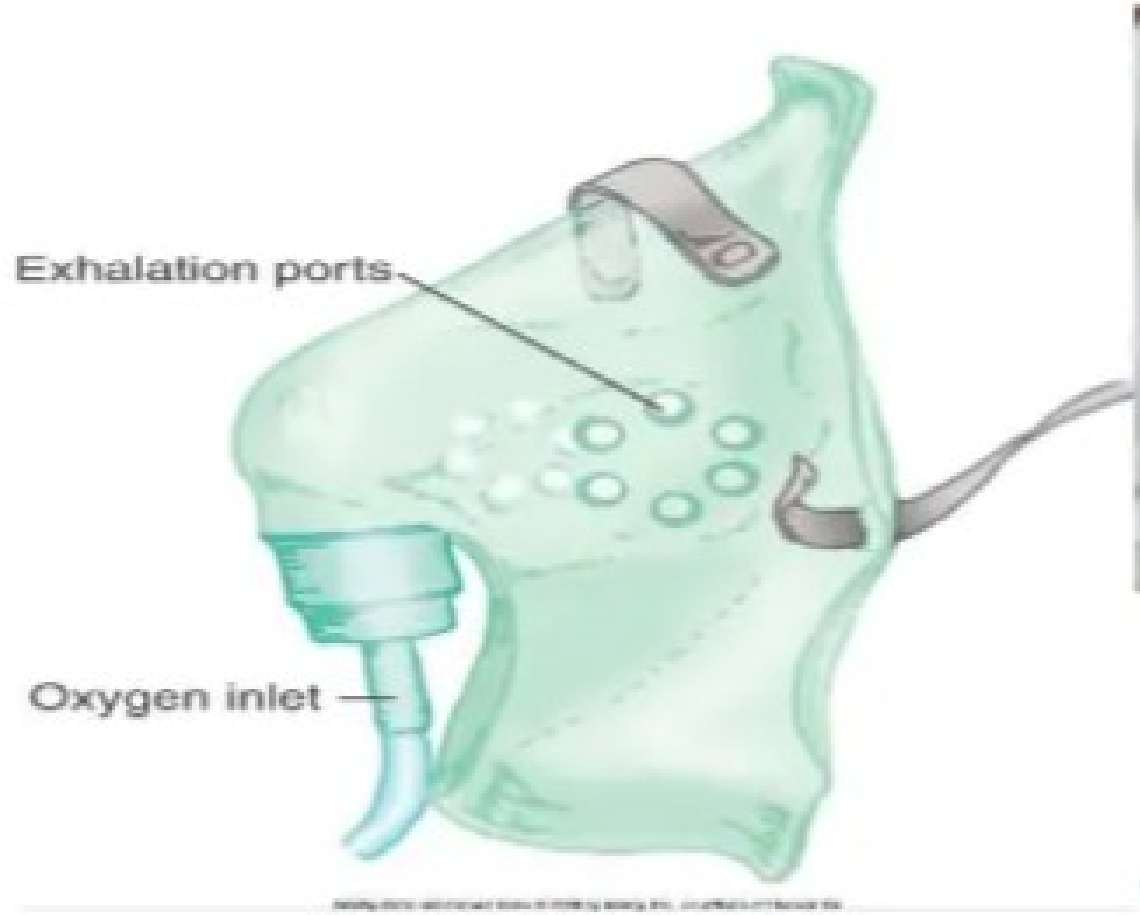
Oxygen stand /transporter

METHODS OF OXYGEN ADMINISTRATION.

There are many ways of administering oxygen to patients but the most common ones are:

- By mask.
- By nasal cannula.

OXYGEN ADMINISTRATION BY MASK.



REQUIREMENTS.

- Oxygen source.
- Oxygen tubing.
- Oxygen Mask.
- Bowl containing water.
- Gallipot with cotton swabs.
- Oxygen precaution sign.
- Gloves.

PROCEDURE.

- Check doctors order including the date, time and flow rate
- Explain purpose and procedure to patient to gain his/her cooperation and to allay fear/anxiety.
- Observe safety precautions in giving oxygen and let the patient, other patients and visitors know the dangers involved.
- Wash hands and dry.
- Assemble the equipments.
- Make patient comfortable in bed.

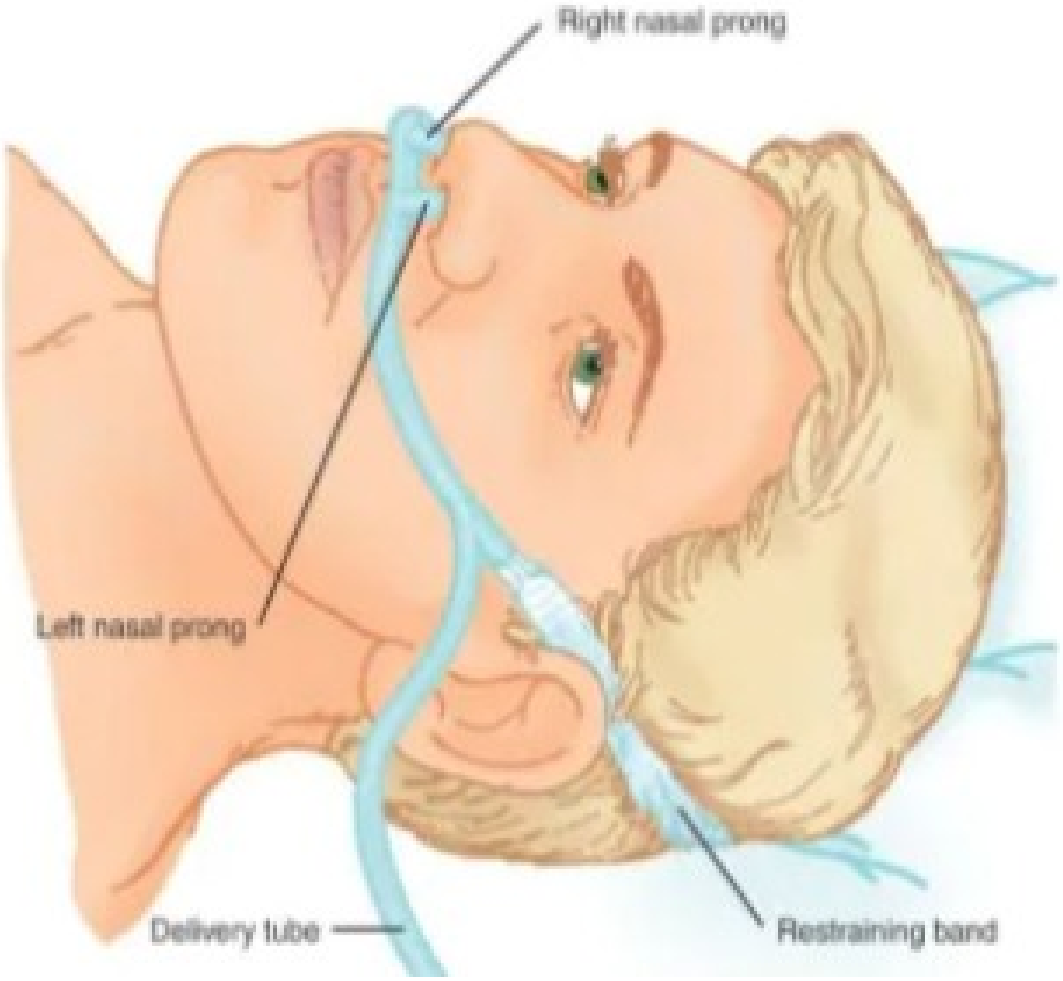
PROCEDURE CONTINUES.

- Attach the flow meter with humidifier filled with 1/3 of water and pressure gauge to the threaded outlet of the oxygen cylinder.
- Connect the tubing from the mask to the outlet on the humidifier.
- Turn on the key on the oxygen cylinder and put the end of tubing in the bowl of water to test for the flow of oxygen.
- Apply the mask over patients nose and mouth and adjust the elastic strap over clients head to keep the mask in position.
- Use gauze or cotton swab to reduce irritation caused by the elastic strap especially on patients scalp and ears.
- Regulate flow meter as prescribed e.g. 2-3 litres/minute in adults and half-2 litres in children.

PROCEDURE CONTINUES.

- Stand by to observe the flow of oxygen for some time before leaving patients bed side.
- Document the procedure and wash hands.
- Regularly check on patient for any abnormalities.
- Regularly check the flow meter and gauge for the amount of oxygen in the cylinder and the water level in the humidifier.
- Remove mask from patient when he/she is better.
- Turn off oxygen and make patient comfortable in bed.
- Record and report any abnormalities.

OXYGEN ADMINISTRATION BY NASAL CANNULA.



REQUIREMENTS.

- Oxygen source.
- Oxygen tubing.
- Nasal cannula Mask.
- Bowl containing water.
- Gallipot with cotton swabs.
- Oxygen precaution sign.
- Gloves.

PROCEDURE.

- Check doctors order including the date, time, flow rate and method.
- Explain purpose and procedure to patient to gain his/her cooperation and to allay fear/anxiety.
- Observe safety precautions in giving oxygen and let the patient, other patients and visitors know the dangers involved.
- Wash hands and dry.
- Assemble the equipments.
- Make patient comfortable in bed.

PROCEDURE CONTINUES.

- Attach the flow meter with humidifier filled with 1/3 of water and pressure gauge to the threaded outlet of the oxygen cylinder.
- Connect the tubing from the nasal cannula to the outlet on the humidifier.
- Turn on the key on the oxygen cylinder and put the end of tubing in the bowl of water to test for the flow of oxygen.
- Clean patient nostrils and place cannula in patients nostrils, send the tubing over patients head and adjust it behind patients head/ears.
- Encourage patient to breath through the nose and exhale through the mouth to trap more oxygen into the trachea, which is less likely to be exhaled through the mouth.

PROCEDURE CONTINUES.

- Remove nasal cannula from patient when he/she is better.
- Turn off oxygen and make patient comfortable in bed.
- Record and report any abnormalities.

PROCEDURE CONTINUES.

- Regulate flow meter as prescribed e.g. 2-3 litres/minute in adults and half-2 litres in children.
- Stand by to observe the flow of oxygen for some time before leaving patients bed side.
- Document the procedure and wash hands.
- Regularly check on patient for any abnormalities, especially the nares for irritations in an interval of four (4) hours.
- Regularly check the flow meter and gauge for the amount of oxygen in the cylinder and the water level in the humidifier.

NASAL CANNULA.

ADVANTAGES

- Patients are able to talk, eat and drink with oxygen in place.
- Patients can vomit and let oral secretion out easily without any interruption in oxygen delivery.
- It delivers low concentration of oxygen.

DISADVANTAGES

- It can easily dislodge from patient nostrils.
- It causes irritation in the nostrils.
- It causes dryness in the nostrils.

MASK.

DISADVANTAGES

- It must be removed while talking, eating, vomiting and drinking.
- It obstruct coughing.
- It blocks vomitus in unconscious patients.
- Carbon dioxide may build up in the mask.
- It causes skin irritation.
- Aspiration of vomitus is likely when mask is in place.

ADVANTAGES

- It delivers high concentration of oxygen.
- Its quick and easy to apply.

SIDE EFFECTS OF OXYGEN ADMINISTRATION.

- Oxygen toxicity.
- Drying of the mucus membrane.
- Infection.