

06/08/21

CARE OF RESPIRATORY SYSTEM

Inhalation: It is defined as the inhaling of gas air or may be a vapourized drug meant for drawing in to the lungs, but usually these are steam inhalation & are inhaled into the trachea & bronchi.

Dry inhalation: It is the inhalation of gases fumes from volatile drugs or burning drugs. e.g.,

- Inhalation of general anaesthetics
- Oxygen & CO₂ inhalation
- Inhalation of volatile drugs
- Aerosol spray / MDI

Moist inhalation: Breathing warm & moist air produced by a vaporizer is called steam / moist inhalation

- e.g.,
- Steam inhalation
 - Nebulization

Steam inhalation: Inhalation of warm, moist air into the mucous membranes area of respiratory tract

Purposes / effects

- Relieves inflammation & congestion of the mucous membranes of the upper respiratory tract.

- Relieves irritation by moistening & providing heat.
- Loosens/softens thick secretions & stimulates expectoration.
- Relaxes muscles & thus relieves coughing.
- Prevents excessive dryness of the mucous membranes.

Drugs used

- Menthol few crystals per 500 ml of boiling water.
- Camphor few crystals per 500 ml of boiling water.
- Methyl salicylate few drops per 500 ml of boiling water.
- Tk. Benzoin (Tincture of benzoin)

Methods for giving steam inhalation

- By Jug method
- By steam tent
- By electric steam inhaler

By Jug method

In this method, a Nelson's inhaler is used. The type of the inhalant required & the boiling water is filled in the jug & the pt breathes the vapour.

Purpose

- To relieve inflammation, swelling & congestion e.g., laryngitis, bronchitis.
- To soften the secretion e.g., post-operative cases, chronic bronchitis.

- To moisten the air e.g. Tracheotomy -

equipment

- Tray container
- Nelson's inhaler & cover
- Bath towel & bath blanket
- Bowl
- Gauze piece to cover mouth piece of the inhaler.
- Swabs to plug air way.
- Kidney tray & paper bag
- Handkerchief
- Boiling water in a jug
- Screen.

Procedure

- wrap the inhaler in a warm towel or set it in a bowl of hot water. Then pour two pints (1000cc) of boiling water into it until the air passage is reached, but do not allow the water to come over it or plug the air passage with cotton swabs.
- Add 10 drops of Tk. Benzoin (4cc per 500cc) one drop per pint & put in the stopper so that the glass mouth piece is turned in the opposite direction from the air passage opening.
- wrap the inhaler (or jug) in a bath towel & cover with a second towel, then take it to the pt's bedside
- Have pt sit or lie on one side &

lower arm raised. place the inhaler close to the axilla & have her support, if she is able to, in her hand.

- wrap the mouthpiece in a piece of gauze & place it to her lips. Remove cotton plug. instruct the pt to breathe deeply & each time she breathes out, to take her mouth away from the glass.

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By Steam Tent

when high concentration of steam is required, a steam tent may be used.

The quick & easy method - place a screen on either sides on the pt's bed & stretch blankets or sheets across them & fix w/ safety pins & forming canopy. Steam can be directed into the tent from the spout of a kettle.

care should be taken that the stove & the kettle are placed away from the screen & the bed clothes to prevent fire. Never point the spout towards the face of the patient. The steam is given for 20-30 minutes, repeat every 4 hrs.

By electric vaporizer

A small jar w/ a heating element extending into a jar. The jar is filled w/ water. Top of the jar is a removable perforated cap to which is attached a small

metal spout. Cotton saturated w medication is placed inside the cup & metal spout is filled over the cup. As the water boils the medication steam is directed through the spout is inhaled by the patient.

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NEBULIZATION

It means administering drugs by inhalation & nebulizer breaks up the solution to be inhaled into fine droplets & are then suspended in a stream of gas.

The pt actively inhales this gas stream containing the drug.

Indications

1. Delivery of bronchodilator drugs:
 - on acute attack of asthma nebulization is the most common means of delivery.
 - Respiratory pts who are too short of breath to use pressurized aerosol or inhaler effectively may be prescribed bronchodilators.
- 2) Infants & children w asthma:
 - Inhalation by nebulizer is the only means of effective inhalation therapy until a child is about 4 yrs. old.
- 3) Administration of antibiotics & antifungal agents.