



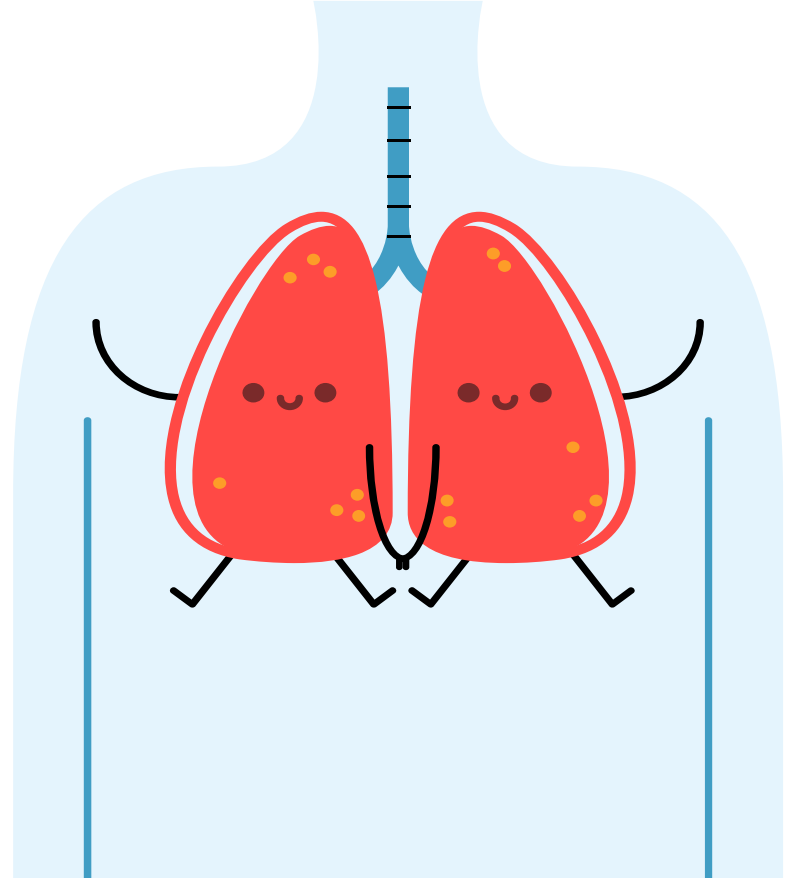
Libyan International Medical University
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Aerosol

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At the end of this presentation you will be able to:

01

Define the aerosol in medical terms.

02

List types of aerosol.

03

Discuss uses of aerosol.

04

List the advantage and disadvantage of the aerosol.



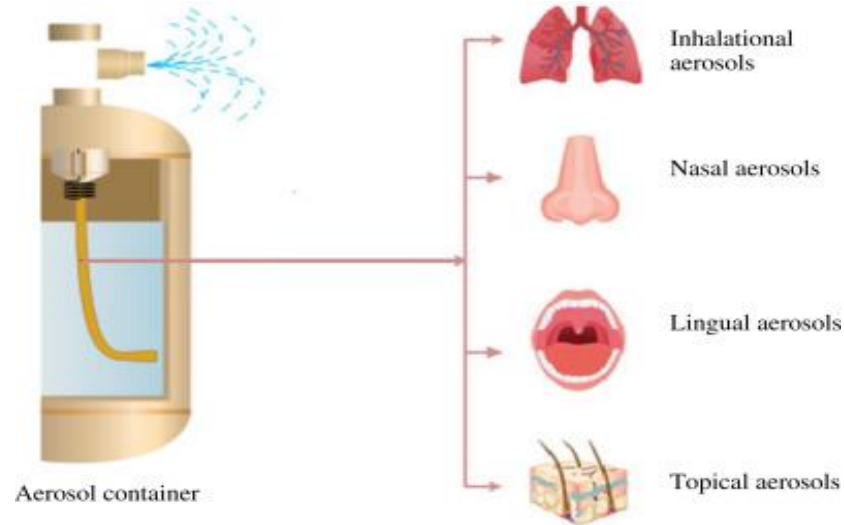
Introduction:

Aerosol drug therapy is an efficient, effective, and economical way to deliver an array of medications to treat acute and chronic respiratory diseases.

Aerosol: is a product that is packaged under pressure and contains therapeutically active ingredients that are released upon activation of an appropriate valve system.

It is intended for topical application to the skin as well as local application into the:

- Nose (nasal aerosols).
- Mouth (lingual aerosols).
- Lungs (inhalation aerosols).



Types of pharmaceutical aerosol:

Pharmaceutical aerosols are stored in two types of inhalers:

- Metered-Dose Inhalers (MDIs).
- Dry Powder Inhalers (DPIs).

1. MDIs:

Is used to provide a certain dose of an aerosol of medication.

It is likely to be either: Ventolin, or one that includes a small dose of steroid such as Flixotide These work by relaxing the muscles of the large airways and/or reducing the inflammation of the airways.

2. Dry powder inhalers :

Are an alternative to the aerosol based inhalers commonly MDIs, that deliver a powder dosage form to the lungs.

Most DPIs include an active ingredient and one or more excipient to aid powder dispersion and flow.

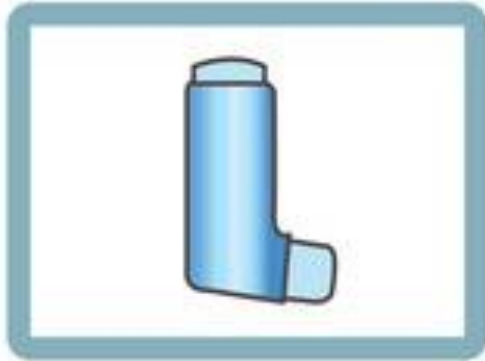


Uses of aerosol:

- Administration of drugs from an aerosols is very easy and they can be applied directly on the affected parts.
- It is used very effective treatment of illness of asthma and chronic obstructive pulmonary disease (COPD).
- Pharmaceutical aerosols are also very effective in the treatment of diseases like diabetes, angina pectoris and many others.
- Inline dry powder inhalers offer a potentially effective option to deliver high dose inhaled medications simultaneously with mechanical ventilation.



The right way to use



The advantage of the aerosol:

- Pharmaceutical aerosols are easy to apply.
- Aerosol administration gives very efficient and quick relief.
- The drug can be directly applied to the affected areas.
- It protects the drug from gastrointestinal tract degradation.
- Aerosols can be used for both systemic and local applications.
- A sterile dose of drug is dispensed and also the contamination of drug is prevented.



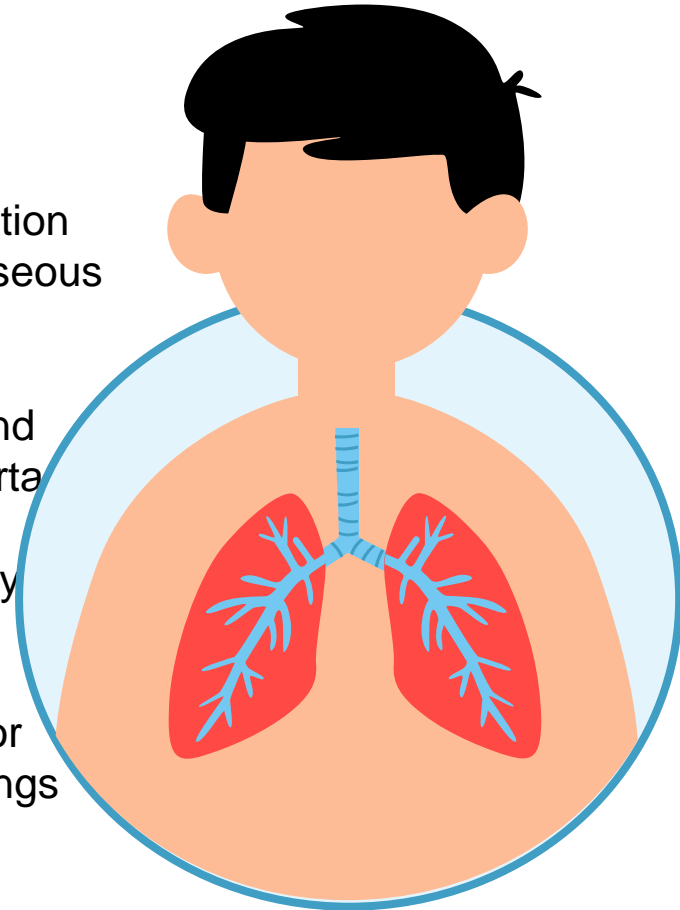
The disadvantage of the aerosol:

- Difficult disposal of empty aerosol containers.
- Allergic in some case.
- Explosive.
- It is difficult to prepare aerosols dosage form of insoluble drug.
- Sometimes propellants may cause toxic reaction.
- Some time its contaminated drugs by its trace metal that presence in container.



Summary:

- Pharmaceutical Aerosols are pressurized dosage forms containing one or more active ingredients which upon activation emit a fine dispersion of liquid and/or solid materials in a gaseous medium.
- This type of dosage form have some obvious advantages and some not so obvious advantages which can be just as important.
- Aerosols are used to administer drugs to the lungs especially to treat respiratory conditions.
- They can also be used for topical application of drugs and for systemic action as the drug can be absorbed through the lungs into the blood supply.



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Thank you for listening

