

# DRUG MONOGRAPHS

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Medication Administration Principles for AFA/EMR



# **Principles of Medication Administration**

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An AFA/EMR can administer two types of medications. The first is life-saving medications, given during the primary survey, including Ventolin, Epipen, and Narcan. These medications are crucial for treating respiratory distress.

All other medications are given during the secondary survey!

# Principles of Medication Administration

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Primary responder must complete **all** before administration of any medication:

1. Meet all indications
2. Rule out all contraindications
3. Review 7 Rights of Medication Administration
4. Rule out 4Cs and a E

# **7 Rights & 4Cs + E**

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**D** - Documentation  
**R** - Right to refuse  
**T** - Time  
**R** - Route  
**A** - Amount  
**M** - Medication  
**P** - Patient

**C** - Colour  
**C** - Clarity  
**C** - Concentration  
**C** - Contraindication  
**E** - Expiry

# **7 Rights & 4Cs + E**

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The 7 Rights and 4C's + E are safety guidelines to ensure accurate and responsible medication administration, minimizing errors and ensuring the right medication is given to the right patient at the right time and in the correct way.

# 7 Rights

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**D - Documentation:** Have a partner document the time and amount given.

**R - Right to Refuse:** The patient can refuse medication.

**T - Time:** Verify if it's the right time to administer.

**R - Route:** Confirm the correct route (oral, sublingual, etc.)

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**A - Amount:** Double-check the correct amount of medication.

**M - Medication:** Ensure it's the correct medication.

**P - Patient:** Verify that you're giving the medication to the right patient.

# 4 C's & E

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**C - Colour:** Ensure the medication has the correct color and appearance.

**C - Clarity:** The medication should be clear, free from particles.

**C - Concentration:** Verify the correct concentration or dosage.

**C - Contraindication:** Check for any conditions that prevent medication use.

**E - Expiry:** Always confirm the medication has not expired.

# **DRUG MONOGRAPHS**

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## **DRUG MONOGRAPH**

The following information provides general details about each drug. The indications may vary according to local protocols and include information on therapeutic actions, dosages, and side effects.

## **INDICATIONS**

These are general guidelines for using the drug, including functional inquiry questions and physical assessments. Local protocols may differ.

## **CONTRAINDICATION**

Contraindications refer to situations where a drug should not be administered, even if the patient meets the indications. This includes considerations based on functional inquiry questions and physical assessment requirements.

# **Acetylsalicylic Acid (Aspirin/ASA)**

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Aspirin is an antiplatelet aggregator administered during the secondary assessment as part of secondary medications for patients with cardiac-style chest pain.

## **Function**

Aspirin is an antiplatelet aggregator that helps prevent platelets from sticking together. By making platelets "slippery," it reduces the chance of a clot growing larger, which is crucial for patients with cardiac-style chest pain. While it doesn't treat the chest pain itself, it helps prevent further blockage and reduces the risk of a heart attack.



# **Acetylsalicylic Acid (Aspirin/ASA)**

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## **INDICATIONS**

Cardiac style chest pain or symptoms suggestive of cardiac ischemia and myocardial

## **CONTRAINDICATIONS - AAAD**

**A - Allergy:** Ask pt if they have an allergy to aspirin or if they have taken it before

**A - Asthma Exacerbation:** Ask pt if they have asthma that's ever been made worse by taking NSAIDS (ibuprofen or naproxen)

**A - Acute Bleed:** Look for signs of acute bleeds, ask if pt has any known internal bleeds

**D - Dose:** Ask pt if they have taken aspirin in the last 12hrs, must not exceed 162mg in 12hr period

# **Acetylsalicylic Acid (Aspirin/ASA)**

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## **CAUTIONS**

- Pregnancy
- Bleeding disorder
- Anticoagulants

**Amount/Dose:** 162mg

**Route:** Oral/ PO

**Onset:** 1 hour or 20 minutes if chewed

**Peak:** 1-2 hours

**Duration:** 4-6 hours; platelet inhibitory effects last the lifetime of platelet

**Half Life:** 3 hours (low dose)

# Nitroglycerin / Nitro

Nitroglycerin is a vasodilator given in the secondary after ASA is ruled in or out.

## Function

Nitroglycerin relieves chest pain by dilating blood vessels, which reduces the heart's oxygen demand. It lowers blood return to the heart (preload) and reduces pumping resistance (afterload). It also dilates coronary arteries, improving blood flow to the heart and helping to relieve pain.



Nitroglycerin Lingual Spray  
Nitroglycerin Lingual Spray  
400 mcg per Spray  
Delivers 200 Metered Sprays (12 g)  
14.1 g Net Contents Rx Only Pat. # 7,872,600  
Store at 20°C–25°C (68°F–77°F);  
excursions permitted to 15°C–30°C (59°F–86°F);  
(See USP Controlled Room Temperature)

Nitroglycerin Lingual Spray  
Nitroglycerin Lingual Spray  
400 mcg per Spray  
60 Metered Sprays (4.8 g)  
4.8 g Net Contents Rx Only Pat. # 7,872,600  
Store at 20°C–25°C (68°F–77°F);  
excursions permitted to 15°C–30°C (59°F–86°F);  
(See USP Controlled Room Temperature)

# **Nitroglycerin / Nitro**

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## **INDICATIONS**

Cardiac style chest pain. Nitroglycerin must be prescribed to them and systolic BP must be 100Hgmm or higher

## **CONTRAINDICATIONS - BEAP**

**B - Blood Pressure:** Assess BP before each dose, systolic must be  $\geq 110$ .

**E - Erectile Dysfunction Drugs:** Check if the patient has used Viagra/Levitra in 24 hours or Cialis in 48 hours.

**A - Allergy/Hypersensitivity to Nitrates:** Ask if they've had an adverse reaction to nitrates.

**P - Prescription:** Confirm if the patient is prescribed NTG.

# Nitroglycerin / Nitro

## CAUTIONS

- Beware nitroglycerin may cause hypotension

**Amount/Dose:** 1 full spray = 0.4mg , Q3 minutes

**Route:** Sublingual

**Onset:** 1-3 minutes

**Duration:** 30 minutes

## CONSIDERATIONS

- Do not shake prior to admin
- Must reassess pain and BP before administration

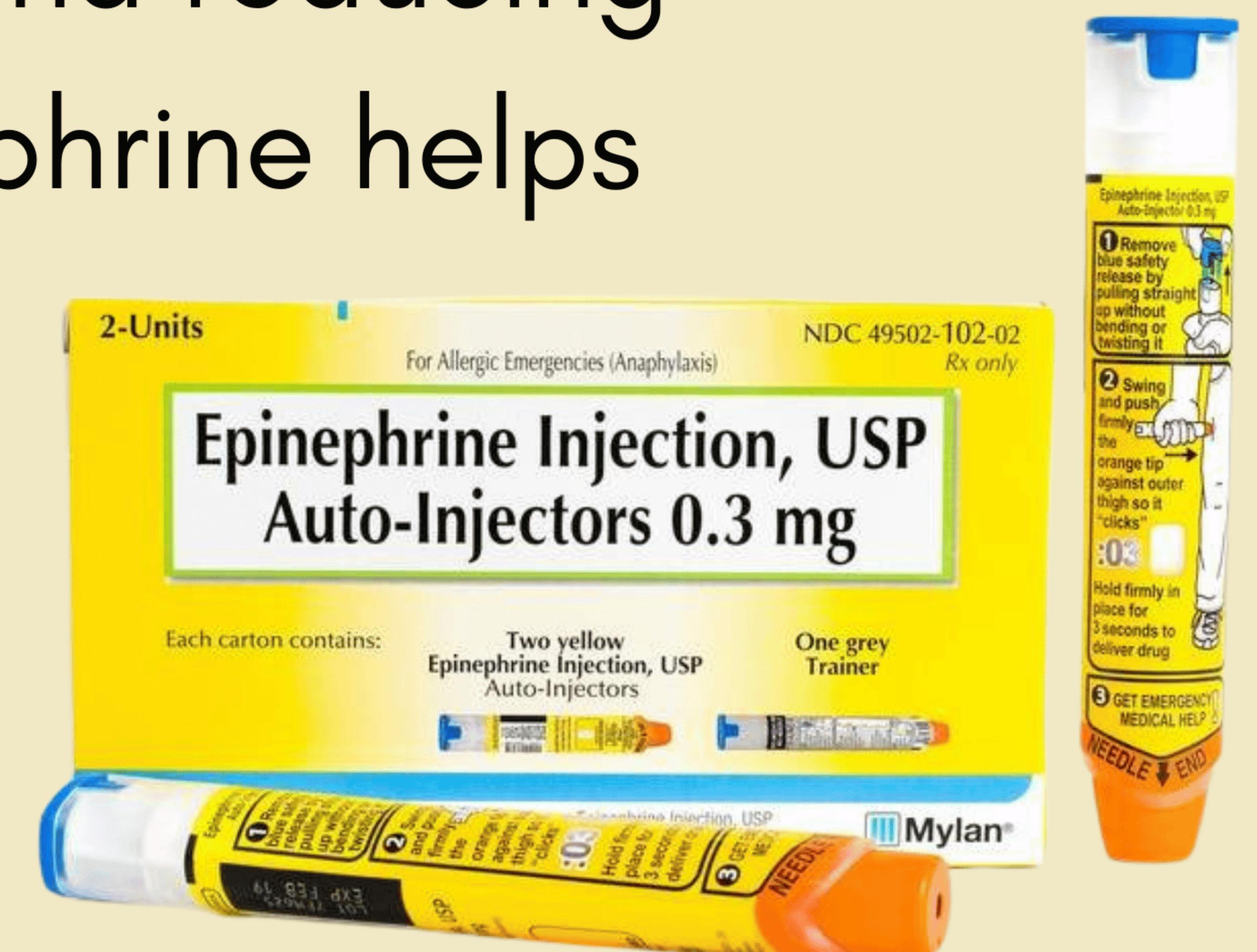


# Epinephrine / EPI-PEN

An Epipen contains epinephrine, and is administered during the primary survey as part of life-saving medications for severe allergic reactions.

## Function

Epinephrine, also known as adrenaline, is a critical medication used to treat severe allergic reactions/anaphylaxis. It works by rapidly constricting blood vessels to raise blood pressure, opening the airways to improve breathing, and reducing swelling. By stimulating these effects, epinephrine helps stabilize the patient's condition.



# **Epinephrine / EPI-PEN**

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## **INDICATIONS**

Severe allergic reaction

## **CONTRAINDICATIONS - PAS**

**P - Prescribed:** The Epipen must be prescribed to the patient

**A - Assist:** The patient must be able to administer the injection themselves; we only assist in the administration

**S - Severe:** Epipen is only for severe allergic reactions

# **Epinephrine / EPI-PEN**

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## **CAUTIONS**

- Must be patients Epi-pen

**Amount/Dose:** 0.3 mg of epinephrine for adults and 0.15 mg for children (under 30 kg or 66 lbs)

**Route:** Intramuscular

**Onset:** 1-2 minutes of administration

**Duration:** 10-20 minutes

## **CONSIDERATIONS**

- Patient may need multiple doses

# **Salbutamol / Ventolin**

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Ventolin is a bronchodilator administered during the primary assessment as part of life-saving medications for patients experiencing respiratory distress.

## **Function**

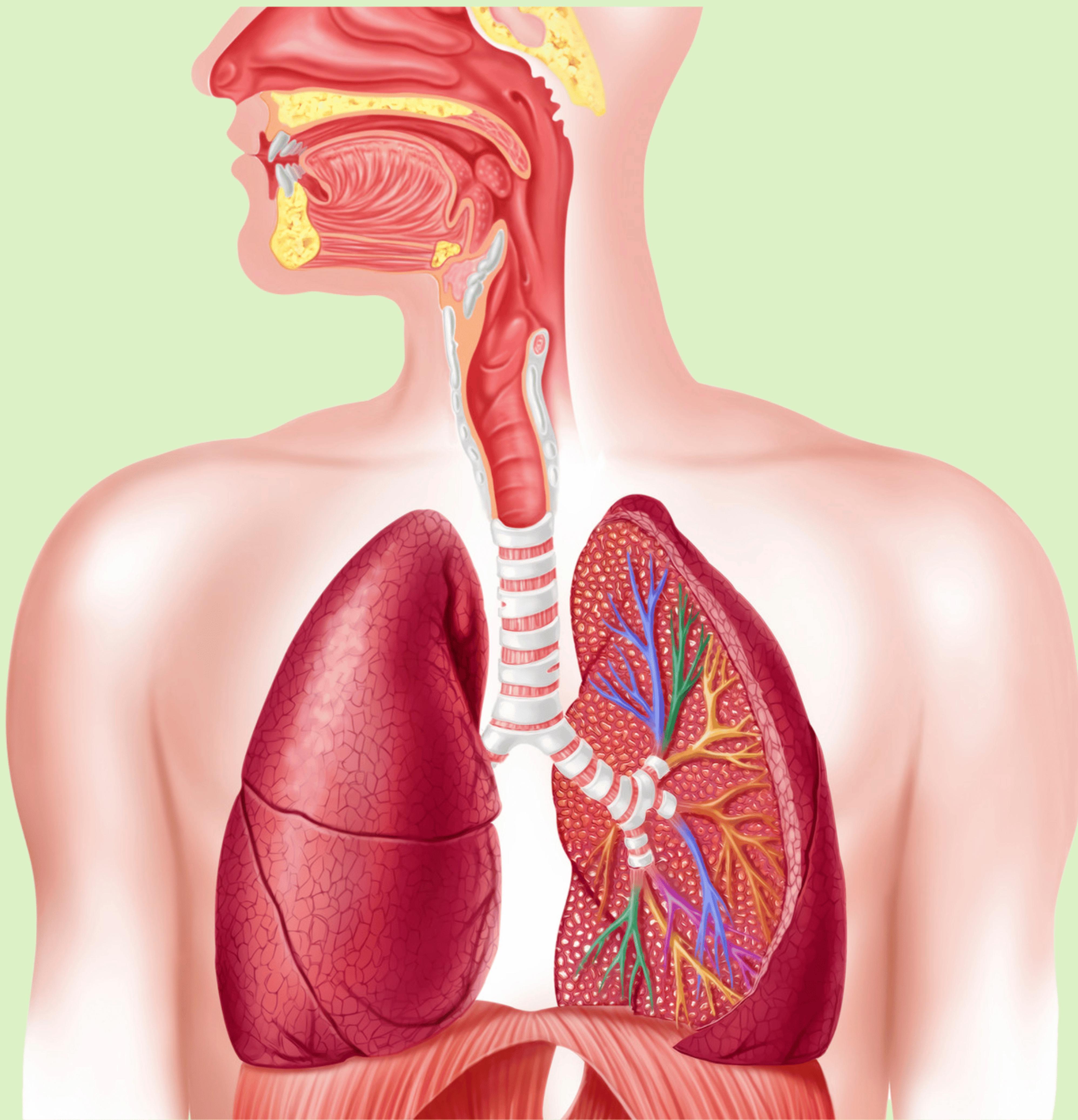
Ventolin (salbutamol) is a bronchodilator that relaxes airway muscles, improving airflow to the lungs. It is used to relieve symptoms of asthma, COPD, and bronchospasm by reducing wheezing and shortness of breath, providing quick relief during respiratory distress. It is typically administered through an inhaler or nebulizer.

# Salbutamol / Ventolin

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## INDICATIONS

Ventolin is indicated for respiratory distress, including symptoms of asthma, COPD, and bronchospasm



# Salbutamol / Ventolin

## CAUTIONS

- Shake prior to use
- Pregnancy and breast feeding
- Beta Blockers

**Amount/Dose:** 100-200 mcg

**Route:** Inhalation

**Onset:** 5-15 minutes

**Peak:** 30-60 minutes



# Oral Glucose

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Oral glucose is administered during the secondary assessment as a secondary medication for patients with hypoglycemia.

## Function

Oral glucose works by providing a rapid source of glucose that is absorbed through the digestive system and enters the bloodstream. This increases blood sugar levels, which helps restore energy to the body's cells, particularly the brain, relieving symptoms of hypoglycemia like confusion, dizziness, and weakness.

# Oral Glucose

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## INDICATIONS

Hypoglycemic patient

## CONTRAINDICATIONS

**Inability to follow commands:** If the patient cannot follow commands, they may not be able to safely ingest oral glucose

**Unconsciousness:** If the patient is unconscious, oral glucose cannot be used

# Oral Glucose

## CAUTIONS

- Must be patients Epi-pen

**Amount/Dose:** 15-30 grams / Full tube

**Route:** Oral

**Onset:** 10-15 minutes

**Duration:** 30-60 minutes



# Naloxone

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Naloxone is a life-saving medication administered during the primary assessment to reverse opioid overdoses and restore normal respirations.

## Function

Naloxone is an opioid antagonist that binds to opioid receptors in the brain, reversing the effects of opioid overdose. By blocking these receptors, it restores normal respirations and consciousness in individuals experiencing respiratory depression.

# Naloxone

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## INDICATIONS

Respiratory depression, loss of consciousness, altered mental status, pin point pupils and cyanosis

## CAUTIONS

- Shake prior to use
- Pregnancy and breast feeding
- Beta Blockers

**Amount/Dose:** 100-200 mcg

**Route:** Inhalation

**Onset:** 5-15 minutes

**Peak:** 30-60 minutes

