# Medication Delivery

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# Notice

- Portions of this lecture was recorded during a live presentation at the ESEC Training Center via the Virtual Classroom.
- Some interactions and discussions with the Classroom and Virtual Classroom participants remain.

# Objectives

- Review the Right of Medication Administration
- Analyze the benefits of intramuscular (IM) administration compared to the subcutaneous (SQ) route
- Critique the delivery of medication with a nasal atomizer to other routes of administration.

# Why do we give medications?

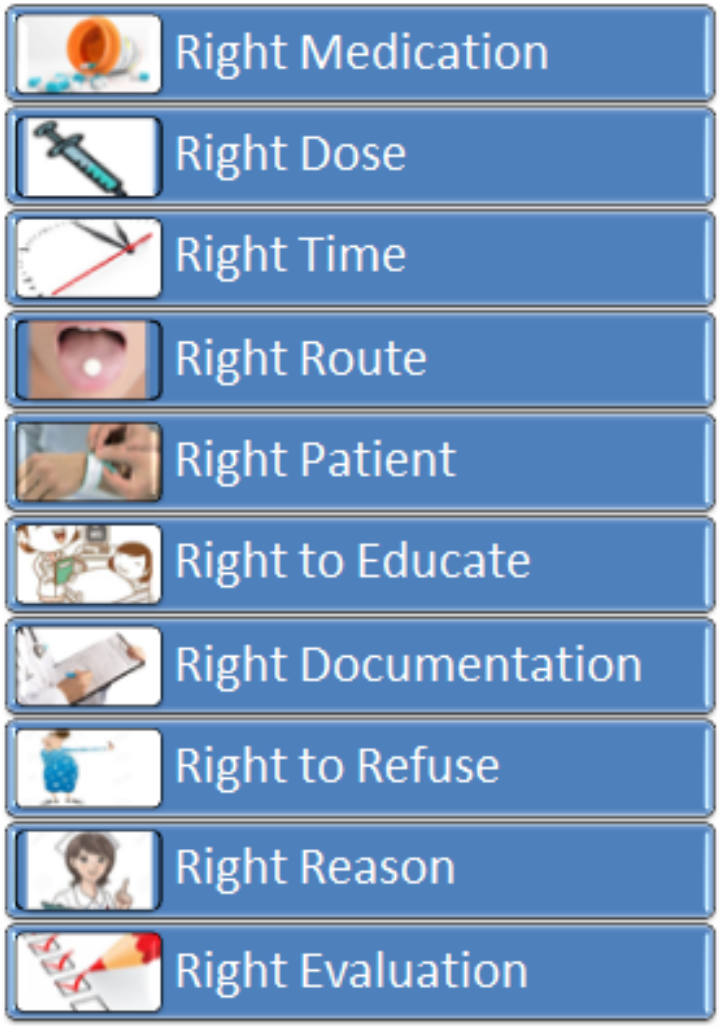
Pharmacodynamics is how a medication produces the intended response

| | |
|---|---|
| Bind | Receptor sites to either promote or inhibit a specific activity |
| Change | Affect the physical property of a cell which in turn alters the function of that cell |
| Combine | With other chemicals within the body to alter or limit the effects of this chemical or allow it to be removed |
| Open | Or alter a metabolic pathway to achieve the desired result |

# Classes of Medications

Only an abbreviated list

- Vasopressors
- Inotropes
- Vasodilators and Antihypertensives
- Sedatives, Anesthetics, Analgesics, and Anticonvulsants
- Neuromuscular-Blocking Agents
- Histamine Antagonists and Proton-Pump Inhibitors
- Antiemetic/Gastrointestinal Medications
- Pulmonary Medications
- Antiarrhythmics
- Anticoagulants and Thrombolytics


Right Medication
Right Dose
Right Time
Right Route
Right Patient
Right to Educate
Right Documentation
Right to Refuse
Right Reason
Right Evaluation

# Bioavailability

The amount of an administered medication that reaches the patient's systemic circulation without any alteration.

- IV
- IO
- IM
- SQ
- PO
- PN
- PR
- TD
- IO

**Factors that affect this are**

- Perfusion
- Membrane pH
- Surface area
- Medication type
- Chemical solubility
- Method of preparation
- Metabolism (first-pass effect)

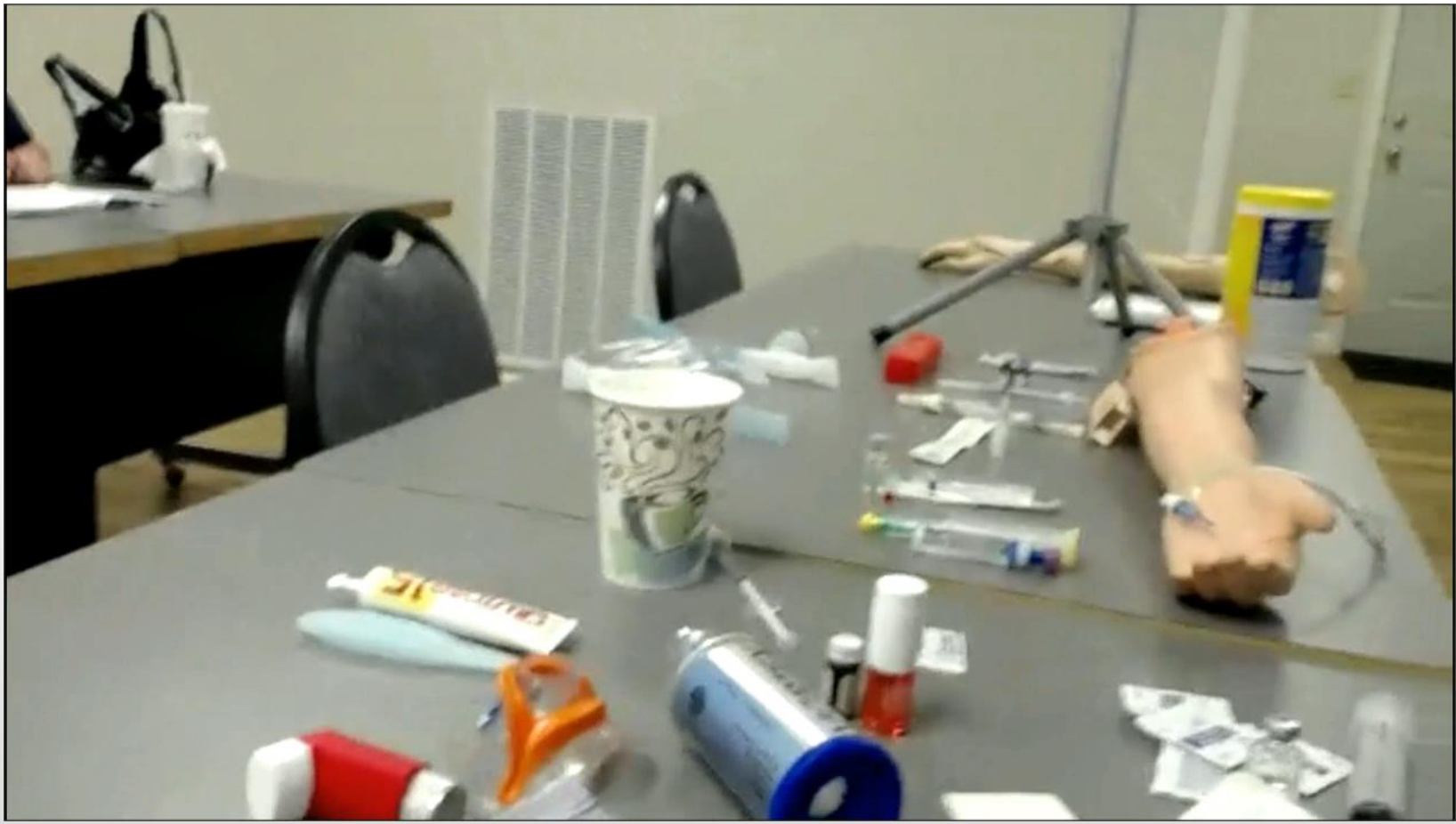
# Medication Administration

## Virtual Classroom

The following video was recorded during a live classroom discussion.

This video has been edited to remove some of the interactions between classroom students and virtual classroom participants although some discussions do remain to better maintain the integrity of the course as a whole.

# Video Presentation



Feel free to contact us.

# Questions? Need More Information?

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# References


- AAOS. Critical Care Transport, Second Edition. Chapter 7 Critical Care Pharmacology.