Chapter 17

General Pharmacology

Overview

- Medication Information
  - Types of Medication
  - Medication Names
  - Medication Forms
- Medication Administration
  - Indications and Contraindications
  - Administration Routes
- Medication Actions
  - Actions
  - Side Effects
  - Reassessment Strategies

General Pharmacology

- Pharmacology
  - The study that deals with the origins, ingredients, uses, and actions of medications (drugs)
General Pharmacology

- Drug
  - A substance that alters the body’s functions when absorbed

Medication Information

Types or Categories of Medications

Types of Medication

- Medications carried on the EMS unit
  - Oxygen
  - Oral glucose
  - Activated charcoal

- Medications prescribed by physicians
  - Inhalers
  - Nitroglycerin
  - Epinephrine autoinjectors
Types of Medication

- Oxygen

Types of Medication

- Oral glucose

Types of Medication

- Activated charcoal
Types of Medication

- Inhalers

Types of Medication

- Nitroglycerin

Types of Medication

- Epinephrine autoinjectors
Medication Names

- **Generic name**
  - The name listed in the *United States Pharmacopoeia*
    - A governmental publication listing all medications used in the United States

Medication Name

- **Trade name**
  - A copyrighted brand name assigned to a medication by the manufacturer
  - The trade name is typically capitalized and followed by the ® or ™ symbol

Medication Names

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Trade Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activated charcoal</td>
<td>SuperChar®, InstaChar®,</td>
</tr>
<tr>
<td></td>
<td>Activdose®, Liqui-Char®</td>
</tr>
<tr>
<td>Oral glucose</td>
<td>Glutose 15®, Insta-glucose®</td>
</tr>
<tr>
<td>Oxygen</td>
<td></td>
</tr>
<tr>
<td>Albuterol (inhaler)</td>
<td>Proventil®, Ventolin®</td>
</tr>
<tr>
<td>Isoetharine (inhaler)</td>
<td>Bronkosol®</td>
</tr>
<tr>
<td>Metaproterenol</td>
<td>Alupent®</td>
</tr>
<tr>
<td>Nitroglycerin</td>
<td>Nitrostat®, Nitrogynous Spray®</td>
</tr>
<tr>
<td>Epinephrine</td>
<td>Epi-Pen®</td>
</tr>
</tbody>
</table>

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**Medication Forms**

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Medication Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activated charcoal</td>
<td>Suspension, powder</td>
</tr>
<tr>
<td>Oral glucose</td>
<td>Gel</td>
</tr>
<tr>
<td>Oxygen</td>
<td>Gas</td>
</tr>
<tr>
<td>Albuterol (Inhaler)</td>
<td>Fine powder, aerosol</td>
</tr>
<tr>
<td>Isoetharine (Inhaler)</td>
<td>Fine powder, aerosol</td>
</tr>
<tr>
<td>Metaproterenol</td>
<td>Fine powder, aerosol</td>
</tr>
<tr>
<td>Nitroglycerin</td>
<td>Tablet, solution, compressed powder</td>
</tr>
<tr>
<td>Epinephrine</td>
<td>Solution</td>
</tr>
</tbody>
</table>
Medication Administration

- Assisting with a medication

Medication Administration

- Indication
  - The condition for which a medication may be used

Medication Administration

- Contraindication
  - A situation in which a medication should not be used
Medication Administration

- The 5 R’s of medication administration
  - Right patient
  - Right drug
  - Right time
  - Right dose
  - Right route

If you receive an order to administer a medication, always repeat the medication name, dose, and route back to the physician for confirmation.

Medication Administration

- Dose
  - The amount of medication that should be administered
Medication Administration

- Route of administration
  - The way the medication is administered to the patient

Medication Administration

- Inhalation
  - A route of administration for medications in the form of a fine mist or a gas that is absorbed by the capillaries of the lungs

Medication Administration

- Sublingual
  - Putting a medication under the patient’s tongue
Medication Administration

- **Oral**
  - The patient eats or drinks the medication

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Medication Administration

- **Injection**
  - The medication is injected into a blood vessel or body tissue

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Medication Administration

- **Documentation**
  - Who ordered the medication—physician and time?
  - What medication was administered?
  - What time was the medication administered?
  - What was the dose given?
Medication Administration

- Documentation
  - What was the route?
  - Who administered the drug?
  - What were the vital signs before and after administration?
  - What was the patient’s response to the medication?

Medication Actions

- Mechanism of action
  - How a medication affects the body
Medication Actions

- Side effect
  - Any action of a drug other than the desired effect

Medication Actions

- Reassessment strategies
  - What were the vital signs before and after administration?
  - What was the patient’s response to the medication?

Summary

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