18.1 Define key terms introduced in this chapter. Slides 13–20, 26, 34
18.2 List the drugs in your scope of practice. Slides 13–22

continued

18.3 For each medication you may administer or assist a patient in self-administering, describe the following: generic and common trade names; indication(s); contraindications; side effects and untoward effects; form(s); route(s) of administration. Slides 25–26, 32–33

continued
OBJECTIVES

18.4 Follow principles of medication administration safety, including the five rights of medication administration. Slides 27–30

18.5 Discuss the importance of looking up medications and requesting information from medical direction when needed. Slides 26–28, 37

continued

18.6 Identify the type of medical direction (on-line or off-line) required to administer each medication in the scope of practice. Slide 28

18.7 Describe the characteristics of the oral, sublingual, inhaled, intravenous, intramuscular, subcutaneous, and endotracheal routes of administration. Slides 32–33

continued

18.8 Identify special considerations in medication administration related to patients’ ages and weights. Slide 34

18.9 Explain the importance of accurate documentation of drug administration and patient reassessment following drug administration. Slide 35

continued
OBJECTIVES

18.10 Discuss the importance of having readily available references to identify drugs commonly taken by patients. Slide 37

18.11 Discuss the steps an EMT may take in assisting with IV therapy. Slides 41–49

MULTIMEDIA

• Slide 23 Oral Glucose Administration Video

CORE CONCEPTS

• Which medications may be carried by the EMT
• Which medications the EMT may help administer to patients
• What to consider when administering any medication

continued
CORE CONCEPTS

• The role of medical direction in medication administration
• How the EMT may assist in IV therapy

Topics

• Medications EMTs Can Administer
• General Information About Medications
• Medications Patients Often Take
• Assisting in IV Therapy

Medications EMTs Can Administer
Activated Charcoal

Bronchodilator Inhaler

Prescribed Bronchodilator Inhalers
- Used in patients with asthma, emphysema, and chronic bronchitis
- Enlarges constricted breathing tubes
- Side effects: increased heart rate, patient jitteriness
Nitroglycerin

Prescribed Nitroglycerin

- Taken by patients with history of chest pain of cardiac origin
- Helps dilate coronary vessels
- Contraindications: low blood pressure or taking medications for erectile dysfunction (Viagra, Levitra, Cialis, or similar)
- Vasodilator
- Side effect: dropping blood pressure

Epinephrine Auto-Injector
Prescribed Epinephrine Auto-Injectors

- Prescribed and used for patients with severe allergic reactions classified as anaphylaxis
- Vasoconstrictor; relaxes smooth muscles and airway passages
- Side effects: increased heart rate and blood pressure

Oral Glucose Administration Video

Click here to view a video on the subject of oral glucose administration.

General Information About Medications
Drug Names

• Each drug is listed by a generic name
• Each drug has at least three names
  – Chemical name
  – Generic name
  – Brand name (one or more trade names given to the drug by manufacturers)

What You Need to Know When Giving a Medication

• Indications
• Contraindications
• Side effects
• Untoward effects

Medication Safety and Clinical Judgment

• Administering or assisting with medications is a serious responsibility
• Know the medication
• Use good judgment
Medication Authorization

• Off-line medical direction
  – Do not speak to physician
  – Use standing orders
• On-line medical direction
  – Speak directly to physician
  – Listen to order; then repeat order back
  – Ask for clarification if necessary

The Five Rights of Medications

The Five Rights

1. Do I have the right patient?
2. Is it the right time to administer this medication?
3. Is this the right medication?
4. Is this the right dose?
5. Am I giving this medication by the right route of administration?
Think About It

• What would be the potential risk to the patient if each of the “five rights” were not checked prior to administration?

Routes of Administration

• Oral (swallowed)
• Sublingual (dissolved under tongue)
• Inhaled (breathed into lungs), usually as tiny aerosol particles such as from an inhaler or as a gas such as oxygen
• Intravenous (injected into vein)

continued

Routes of Administration

• Intramuscular (injected into muscle)
• Subcutaneous (injected under skin)
• Intraosseous (injected into bone marrow cavity)
• Endotracheal (sprayed directly into tube inserted into trachea)
Age- and Weight-Related Considerations

- Pharmacodynamics
  - Study of effects of medications on body
  - What effect will medication have on this patient?
  - Patient-specific factors change how medication works

Reassessment and Documentation

- After administering medication, reassess patient
- Clearly document medications administered

Medications Patients Often Take
Herbal Agents and Basic Uses

<table>
<thead>
<tr>
<th>HERBAL AGENT</th>
<th>SOMETIMES USED FOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garlic</td>
<td>High cholesterol</td>
</tr>
<tr>
<td>Ginger root</td>
<td>Nausea and vomiting</td>
</tr>
<tr>
<td>Sage leaves</td>
<td>Swollen prostate</td>
</tr>
<tr>
<td>Hawthorn leaf</td>
<td>Heart failure</td>
</tr>
<tr>
<td>Evening primrose</td>
<td>Premenstrual syndrome</td>
</tr>
<tr>
<td>Feverfew leaf</td>
<td>Migraine prevention</td>
</tr>
<tr>
<td>Kava kava</td>
<td>Anxiety</td>
</tr>
<tr>
<td>Valerian root</td>
<td>Insomnia</td>
</tr>
</tbody>
</table>
Assisting in IV Therapy

Ways of Administering IV Fluids

- Heparin (saline) lock
  - Catheter placed into vein
  - Cap (lock) placed over end of catheter
  - Lock has port for administering medications
- Traditional IV bag
  - Hangs above patient
  - Constantly flows fluids and medications into patient

IV Fluid Administration Set

- Clear plastic tubing connecting fluid bag to needle or catheter
- Three important parts
  - Drip chamber
  - Flow regulator
  - Drug or needle port
- Extension set (extra tubing)
Setting Up an IV Fluid Administration Set

continued

Setting Up an IV Fluid Administration Set

continued

Setting Up an IV Fluid Administration Set

continued
Maintaining an IV

- Troubleshoot flow problems
  - Constricting bands left in place by mistake
  - Flow regulator left closed
  - Clamp closed on tubing
  - Tubing kinked
  - Line pinched under backboard (trauma)
- Adjust flow rate properly
- Monitor IV sites for infiltration

Chapter Review

- Aspirin, oral glucose, charcoal, and oxygen are medications carried on the ambulance that the EMT may administer to a patient under specific conditions.
- Inhalers, nitroglycerin, and epinephrine in auto-injectors are medications that, if prescribed, the EMT may assist the patient in taking.

continued
Chapter Review

- You may need to have permission from medical direction to administer or assist the patient with a medication. Follow local protocols.

Chapter Review

- Find out what medications a patient is taking when you take the SAMPLE. Your main purpose in finding this out is to report this information to your Medical Director or hospital personnel.

Remember

- EMTs administer aspirin, oral glucose, activated charcoal, and oxygen as part of patient care.
- EMTs may assist with inhaled respiratory medications, nitroglycerine, and epinephrine auto-injectors.
Remember

- EMTs should understand the names, indications, contraindications, and side effects of medications that they intend to administer.
- EMTs must have appropriate authorization to give a drug and always must follow the “five rights” of medication administration.

Questions to Consider

- Should I administer a medication?
- How can I get more information about a drug?
- What are the necessary steps that must occur after medication administration?

Remember

- Reassessment and documentation are important elements of medication administration.
Critical Thinking

- A patient is complaining of chest pain. Here’s some nitroglycerin,” says a family member. “Give him that.” What do you do?

Please visit Resource Central on www.bradybooks.com to view additional resources for this text.