

What You'll Learn

1. List and explain factors that influence the effects a drug will have on a person.
2. Discuss the ways that drugs are administered to the body.
3. Identify the difference between drug misuse and drug abuse.
4. Identify information that appears on a prescription and on OTC drug labels.



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What You'll Learn

5. List guidelines for the safe use of prescription and OTC drugs.
6. Discuss the role of the FDA in regulating OTC drugs, prescription drugs, and herbal supplements.



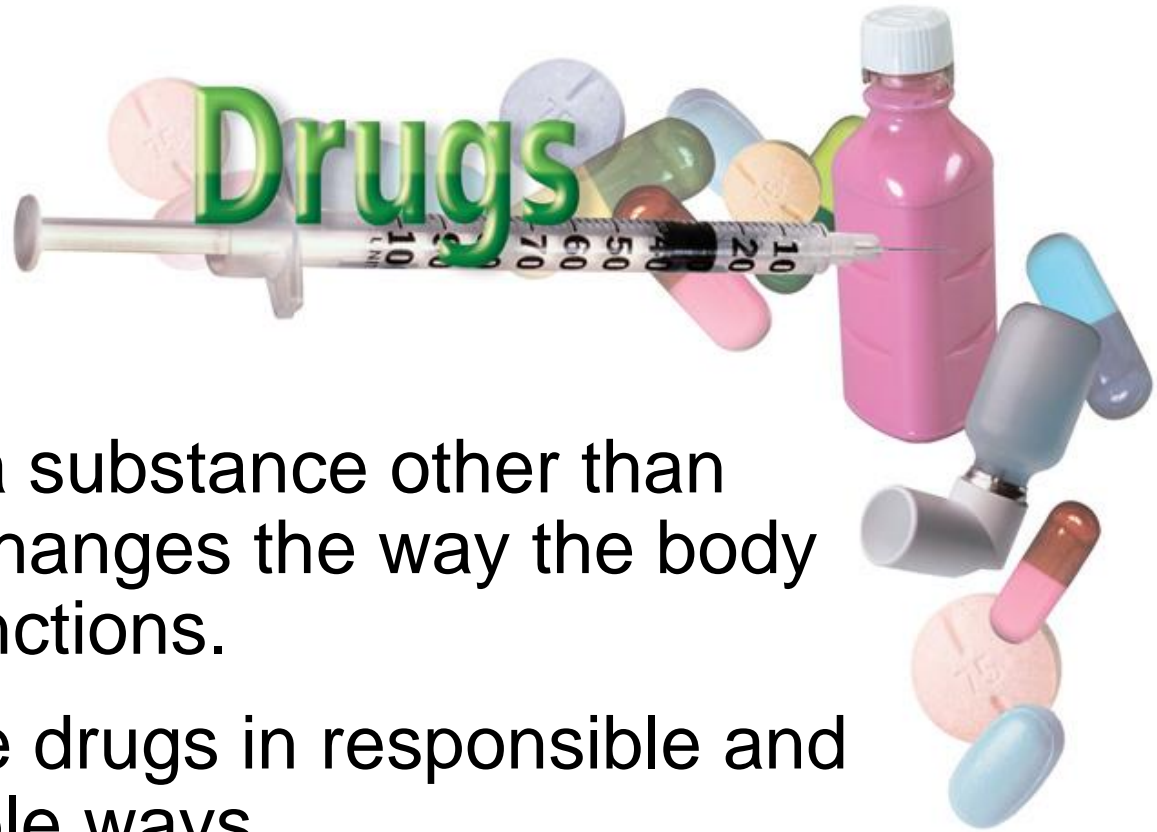
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Key Terms

- drug
- drug misuse
- drug abuse
- dose
- prescription
- brand-name drug
- generic-name drug
- over-the-counter (OTC) drug
- tamper-resistant package
- side effect



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- A **drug** is a substance other than food that changes the way the body or mind functions.
- People use drugs in responsible and irresponsible ways.
- **Responsible drug use** is the correct use of legal drugs to promote health and well-being.

What to Know About Drugs

- **Drug misuse** is the incorrect use of a prescription or OTC drug.
- **Drug abuse** is the intentional use of a drug without medical or health reasons.
 - Both legal and illegal drugs can be abused.
 - Drug misuse and abuse can destroy both health and relationships.

What to Know About Drugs

Ways Drugs Enter the Body

- **By mouth**

- The most common way of taking a drug is by swallowing it.
- A drug in the form of a pill, capsule, or liquid may be swallowed.
- After being swallowed, a drug travels to the stomach and small intestine and is absorbed into the bloodstream.

What to Know About Drugs

Ways Drugs Enter the Body

- **By injection**
 - Some drugs are injected using a syringe and a needle.
 - A drug that is injected must be dissolved in liquid.
 - The drug goes directly under the skin into a muscle or blood vessel, causing immediate results.

What to Know About Drugs

Ways Drugs Enter the Body

- **By inhalation**

- Some drugs are inhaled through the nose or mouth.
- Drugs that are inhaled produce effects very quickly by entering the bloodstream through the lungs.
- **Snorting** is sniffing drugs through the nose so that they can be absorbed through the mucous membranes of the nasal passages.

What to Know About Drugs

Ways Drugs Enter the Body

- **By absorption**

- A drug that is absorbed enters the bloodstream through the skin or mucous membranes.
- A **skin patch** is a patch worn on the body that contains a drug that is absorbed through the skin.
- A **suppository** is a wax-coated form of a drug that is inserted into the rectum.

What to Know About Drugs

Ways Drugs Enter the Body

- **By absorption**
 - **Buccal absorption** is the absorption of a drug between the cheek and gum.
 - **Sublingual absorption** is the absorption of a drug when it is placed under the tongue.

What to Know About Drugs

Ways Drugs Enter the Body

- **By implantation**

- Some drugs are implanted, or placed, under the skin where they can be released into the bloodstream.
- Other factors also determine the effects of a drug.



- A **dose** is the amount of drug that is taken at one time.
- The larger the dose, the greater the effect of the drug on the user.

LESSON 36

Using Prescription and OTC Drugs Safely



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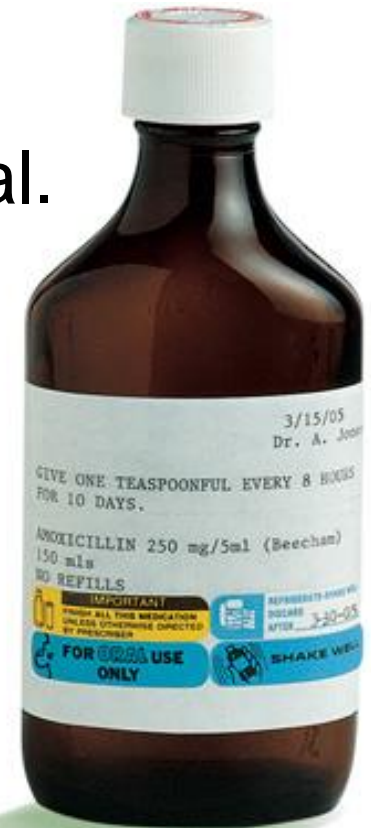
Prescription Drugs

- A drug that is used to treat, prevent, or diagnose illness is a medicine.
- A **prescription** is a written order from a licensed health professional.
- A **prescription drug** is a medicine that fights specific illnesses and infections and can be obtained only with a prescription.

What to Know About Prescription Drugs

- **Legal matters**

- Obtaining or using prescription drugs without a prescription is illegal.
- Licensed **pharmacists** are allied health professionals who dispense medications that are prescribed by physicians.
- A **pharmacy** is a place where prescription drugs legally are dispensed.



What to Know About Prescription Drugs

- **Brand-name v. generic**

- A **brand-name drug** is a drug with a registered name or trademark given to it by a pharmaceutical company.
- A **generic-name drug** is a drug that contains the same active ingredients as a brand-name drug.
- Generic and brand names of a particular drug usually have **therapeutic equivalence**, which means two drugs are chemically the same and produce the same medical effects.

What to Know About Prescription Drugs

- **Guidelines for the safe use of prescription drugs**
 - It is important to follow guidelines when using a prescription drug.
 - Contact your physician if the drug does not seem to be working or if you are experiencing new or unexpected symptoms.
 - Keep all prescription drugs out of the reach of children.
 - Never take prescription drugs that appear to have been tampered with, are discolored, or have a suspicious odor.

What to Know About Prescription Drugs

- **Guidelines for the safe use of prescription drugs**
 - Do not stop taking a prescription drug if you start to feel better; follow the instructions on the label.
 - Never take prescription drugs that have been prescribed for another person.

What to Know About Prescription Drugs



Why do you think it is dangerous to take prescription drugs that were prescribed for someone else?

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OTC Drugs



- There are many different kinds of over-the-counter drugs, including aspirin, vitamins, and cold medicines.

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What to Know About Over-the-Counter Drugs

- An **over-the-counter drug (OTC)** is a drug that can be purchased without a prescription in stores such as grocery stores and drugstores.
- **Indication for use**
 - An **indication for use** is a symptom or a condition for which the OTC drug should be used.
 - A **contraindication for use** is a symptom or a condition for which the OTC drug should not be used.

What to Know About Over-the-Counter Drugs

Guidelines for Safe Use of OTC Drugs

- There are ways to be safe when taking an OTC drug.
 - Obtain permission from your parents or guardian to take an OTC drug.
 - Do not purchase an OTC drug if the tamper-resistant packaging is broken.
- A **tamper-resistant package** is a package that is sealed to assure the buyer that a package has not been opened previously.

What to Know About Over-the-Counter Drugs

Guidelines for Safe Use of OTC Drugs

- Carefully follow the directions for use of the OTC drug.
- Stop using the OTC drug and notify a physician if you have unwanted side effects.
- A **side effect** is an unwanted body change that is not related to the main purpose of a drug.

What to Know About Over-the-Counter Drugs

Guidelines for Safe Use of OTC Drugs

- Do not take more than one OTC drug at a time without telling a pharmacist or physician.
- Do not take an OTC drug after the expiration date as the effectiveness of a drug may change with time.
- Do not participate in activities that put you at risk if you are taking an OTC drug that may cause drowsiness.



- **Dietary supplements** are nutrients that are not a part of food and that may come in the form of pills, capsules, liquids, or powders.
- When prescribed by a health professional, dietary supplements may be helpful, but sometimes they can be dangerous.

The Risks of Herbal Supplements

- **Herbal supplements** are chemicals from plants that contain nutrients and are taken in addition to or in place of foods in one's diet.
- **Safety issues**
 - Manufacturers of herbal supplements, including vitamins and minerals, do not have to provide tests that show they are safe and effective before their products are sold to consumers.

The Risks of Herbal Supplements

- **Ephedra**

- **Ephedra** is an herbal supplement known for its stimulating effect.
- Ephedra provides energy and increased metabolism.
- The effects of ephedra include changes in blood pressure, headaches, chest pain, heart attack, stroke, and death.
- The FDA banned the distribution of ephedra in 2004.

The Risks of Herbal Supplements

- **Kava**
 - **Kava** is an ingredient in plants from South Pacific islands.
 - Kava, which is promoted for relaxation, is sold as a product that is supposed to relieve stress, anxiety, and tension.
 - There appears to be evidence that kava causes liver diseases, such as hepatitis, cirrhosis, and liver failure.

Study Guide

1. Match the following terms and definitions.

- | | |
|------------------------------------|--|
| <u>E</u> suppository | A. description of two drugs that are chemically the same and produce the same medical effects |
| <u>C</u> sublingual absorption | B. nutrients that are not part of food and that may come in the form of pills, liquids, or powders |
| <u>A</u> therapeutical equivalence | C. the absorption of a drug when it is placed under the tongue |
| <u>B</u> dietary supplements | D. chemicals from plants that contain nutrients and are taken in addition to or in place of foods in one's diet |
| <u>D</u> herbal supplements | E. a wax-coated form of a drug that is inserted into the rectum |

ANSWER

Study Guide

2. Identify the following statements as true or false.

false

Manufacturers of herbal supplements have to provide tests that show they are safe and effective before their products are sold to consumers.

true

Obtaining or using prescription drugs without a prescription is illegal.

false

A drug that is used to treat, prevent, or diagnose illness is a dietary supplement.

ANSWER

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Study Guide

3. Ephedra is an herbal supplement that recently was banned by the FDA. Identify the positive and negative effects of ephedra.

The positive effects of ephedra include energy and increased metabolism.

The negative effects of ephedra include changes in blood pressure, headaches, chest pain, heart attack, stroke, and death.

ANSWER

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