THE ROLE OF MEDICINES

Chapter 19, Section 1

GLENCOE HEALTH (2011)

BIG IDEA:

Medicines are divided into  and have different  on different people.

NEW VOCAB

* Medicines
* Drugs
* Vaccine
* side effects
* additive interaction
* synergistic effect
* antagonistic interaction

Types of Medicines

 Medicines are  based on how they work in your body.

 People use medicines to help  their health when they are ill.

 All medicines are drugs, but not all drugs are .

 Drugs that are used to treat or prevent diseases or other conditions

Drugs are effective in treating illness when taken as  by a physician or according to the label instructions.

 Substances other than food that change the structure or function of the body or mind

Four Categories of Medicines that Treat or Prevent Illness

1. Medicines that help prevent disease
2. Medicines that fight pathogens
3. Medicines that relieve pain and other symptoms
4. Medicines that manage chronic conditions, help maintain or restore health, and regulate body’s systems

Preventing Disease

Today, we have medicines that prevent disease. About  percent of children receive vaccines.

 A preparation that prevents a person from contracting a specific disease

Vaccines

 Vaccines contain weakened or dead that cause the disease.

 When injected into your body, the vaccine produces  that fight those pathogens.

Your body also produces  cells that recall how to make these antibodies.

 This provides you with long-lasting  against these specific pathogens.

 Your body also produces memory cells that  how to make these antibodies.

 This provides you with long-lasting protection against these specific pathogens.

Antitoxins

 Antitoxins prevent disease and  the effects of toxins.

 Antitoxins fight the bacteria that produce substances  to the body.

Fighting Pathogens

Medicines can also help your body fight the  that cause illness

Antibiotics

 *Antibiotics* are a class of drug that destroy disease-causing microorganisms, called

Antibiotics work either by  harmful bacteria in the body or by

  bacteria from reproducing.

The bacteria that antibiotics kill have  to the drug over time.

Bacteria can develop a  to antibiotics when antibiotics are overused.

If you do not  taking all of a prescription, you may not kill all of the bacteria.

The remaining bacteria may develop a resistance, or , to treatment.

is a bacterial infection that is treated with antibiotics prescribed by a doctor.



Antivirals and Antifungals

Antiviral drugs are used to treat some  illnesses, such as the flu. They suppress the virus, but do not kill it.

Like bacteria, viruses can develop a  to medications.

Fungi are another type of  that can infect the body.

 can suppress or kill fungus cells, such as athlete’s foot and ringworm.

Relieving Pain

 The most commonly used medicines are *,* or pain relievers.

Aspirin is used to relieve pain and reduce fever. Other analgesics fight

 *,* or redness, swelling, and pain.

Children who take aspirin when they have a fever risk developing , a potentially life-threatening illness of the brain and liver.

For that reason,  should not be given to anyone under the age of 20 unless directed by a health care professional.

Pain Reliever Dependence

 Certain types of medicines that relieve pain can be .

 These medicines, usually called , require a doctor’s prescription.

Managing Chronic Conditions

 Some medicines are used to treat  conditions.

 These medicines  or restore health, and offer people with chronic diseases a higher level of .

Allergy Medicines

 reduce allergy symptoms such as sneezing, itchy or watery eyes, and a runny nose.

They block the chemicals released by the immune system that cause an  response.

Regulate the amount of sugar in the blood=

Control symptoms and prevent attacks=

Regulate functions of the cardiovascular system=

Antidepressant and Antipsychotic Medicines

Medications can also help people suffering from

These medicines can help regulate brain , or stabilize moods.

Cancer Treatment Medicines

Some medicines are used to treat .

These medicines can reduce  cell growth and help stop the spread of cancer cells.

Taking Medications

Medicines enter the body in a  of ways.

Factors that determine how a medicine is taken include what the medicine is used for, and how it will most quickly and  help a person.

 Taken by mouth

 Applied to the skin

 Delivered in a fine mist or powder

 Delivered through a shot

Medications help many people with  such as asthma and diabetes live active, normal lives.



Reactions to Medications

 The  of medicine depends on many factors.

 Medicines can have a  of effects.

Some side effects may be mild, such as drowsiness, but others may be more severe, and can even cause

 Reactions to medicine other than the one intended

Medicine labels include important information about possible and interactions.



One example of an additive interaction is when an anti-inflammatory and a muscle relaxant are prescribed to treat joint pain.

 When medicines work together in a positive way

When one medicine increases the strength of another it is a synergistic effect.

 The interaction of two or more medicines that results in a greater effect than when each medicine is taken alone

When one medicine the strength of another it is an antagonistic interaction.

 The effect of one medicine is canceled or reduced when taken with another medicine

Tolerance and Withdrawal

 is a condition in which the body becomes used to the effect of a medicine.

 occurs when a person stops using a medicine on which he or she has become physiologically dependent.