

Physiology Unit Test 6-9

Review

This study guide reviews everything you learned in physiology this unit. It will help you get ready for your post-assessment by reminding you of the most important ideas in a simple, easy-to-understand way.

Week 1: Your Body, Organization & Balance

Physiology means how your body works.

Anatomy is what your body looks like.

Physiology is how your body works to keep you alive and healthy.

Your body is organized like a team:

• Cells → Tissues → Organs → Body Systems → You

Cells are tiny building blocks of your body.

Most cells have:

- A cell membrane (outer skin of the cell)
- Cytoplasm (jelly inside the cell)
- A nucleus (control center)

Red blood cells do NOT have a nucleus.

Tissues are groups of cells that work together.

Organs are made of different tissues working together.

Examples of organs: heart, lungs, stomach, skin.

Body systems are groups of organs that work together:

- Respiratory – breathing
- Circulatory – blood
- Digestive – food
- Urinary – waste
- Nervous – control
- Endocrine – hormones
- Immune – fighting germs

- Muscular and Skeletal – movement and support

Homeostasis means your body keeps things just right inside.

Examples:

- You sweat when hot
- You shiver when cold
- You get thirsty when you need water

Week 2: Heart, Blood & Breathing

Your heart and lungs work together.

The heart pumps blood.

The lungs add oxygen and remove carbon dioxide.

Blood is a liquid tissue with four parts:

- Plasma – liquid that carries things
- Red blood cells – carry oxygen
- White blood cells – fight germs
- Platelets – help stop bleeding

Red blood cells carry oxygen using hemoglobin.

Hemoglobin has iron that oxygen sticks to.

When you get a cut:

- Platelets make a plug
- A scab forms

Basic blood path:

Heart → Lungs → Heart → Body

Your heart beats using electricity inside the heart.

Diffusion means things spread out evenly.

Oxygen goes into the blood in the lungs.

Carbon dioxide leaves the blood in the lungs.

Week 3: Food & Waste

The digestive system breaks food into nutrients.

Digestion starts in the mouth.

Teeth chew food and saliva starts digestion.

Path of food:

Mouth → Esophagus → Stomach → Small Intestine → Large Intestine → Rectum → Anus

The small intestine absorbs most nutrients.

The liver makes bile to break fats.

The pancreas makes enzymes.

The gallbladder stores bile.

The large intestine absorbs water and makes stool.

The kidneys clean your blood and make urine.

When you don't drink enough water, urine gets darker.

ATP is energy for your body.

Your cells use ATP to move, think, and grow.

Week 4: Muscles, Nerves & Bones

Muscles move your body by contracting.

Muscles only pull, they do not push.

Tendons connect muscles to bones.

Your nervous system is your body's control center.

Your brain helps you think, move, and feel.

Reflexes help protect your body.

You pull your hand away fast from something hot before thinking.

Your skeletal system:

- Gives shape to your body
- Protects organs
- Helps you move

Calcium and ATP help muscles move.

Week 5: Hormones & Germ Fighters

The endocrine system sends messages using hormones.

Hormones are tiny messages in your body.

The pineal gland makes melatonin.

Melatonin helps you sleep.

The immune system protects your body from germs.

White blood cells fight germs and infections.

Inflammation is part of healing.

Swelling is a sign of inflammation.

Final Study Tips

- Read over this guide a little each day.
- Think about how your body works when you play, eat, sleep, and move.
- Ask a grown-up to quiz you using your post-assessment questions.
- Get good sleep, drink water, and eat healthy foods to help your brain learn!

Test

1. What does physiology mean?

A. What our body looks like

B. How our body works

C. A kind of exercise

D. A type of plant

2. What are cells?

A. Something you use to call someone

B. Tiny building blocks that make up living things

C. A kind of food

D. A tool used in science class

3. Which list shows the body levels in the correct order?

A. Organs → Cells → Systems → Tissues

B. Systems → Cells → Tissues → You

C. Cells → Tissues → Organs → Systems → You

D. You → Systems → Organs → Cells

4. What are tissues?

A. Paper you blow your nose with

B. Muscles that help you run

C. Groups of cells that work together

D. The air inside your lungs

5. Which of these is an organ?

A. Hair

B. Bone

C. Heart

D. Muscle cell

6. Which system helps your body breathe?

A. Nervous system

B. Respiratory system

C. Muscular system

D. Digestive system

7. What is homeostasis?

A. Cleaning your house

B. Your body keeping things just right on the inside

C. Eating dinner

D. Growing taller

8. When you get too hot, what does your body do?

- A. Makes you shiver
- B. Makes you sneeze
- C. You sweat to cool down**
- D. You fall asleep

9. What is the most important job of blood?

- A. Helps you sleep
- B. Keeps your bones strong
- C. Carries oxygen and nutrients**
- D. Makes your hair grow

10. Which part of blood carries oxygen?

- A. Platelets
- B. Plasma
- C. Red blood cells**
- D. White blood cells

11. What part of blood helps stop bleeding?

- A. Red blood cells
- B. White blood cells
- C. Platelets**
- D. Plasma

12. What happens in the lungs?

- A. Food is digested
- B. Oxygen goes into the blood and carbon dioxide leaves**
- C. Blood gets colder
- D. Muscles get stronger

13. What makes the heart beat?

A. Your stomach

B. Electricity inside the heart

C. Your lungs

D. Your legs

14. What is the main job of the digestive system?

A. To pump blood

B. To make oxygen

C. To break food into nutrients

D. To control breathing

15. Where does digestion begin?

A. Stomach

B. Mouth

C. Small intestine

D. Esophagus

16. Which organ absorbs most nutrients?

A. Large intestine

B. Stomach

C. Small intestine

D. Esophagus

17. What do kidneys make to get rid of waste?

A. Sweat

B. Stool

C. Urine

D. Blood

18. What does ATP give your body?

- A. Protein
- B. Sugar
- C. Energy**
- D. Water

19. What do muscles do to make your body move?

- A. Stretch
- B. Freeze
- C. Contract**
- D. Sleep

20. What connects muscles to bones?

- A. Veins
- B. Tendons**
- C. Nerves
- D. Skin

21. What is the control center of your body?

- A. Feet
- B. Brain**
- C. Stomach
- D. Elbow

22. What does the endocrine system do?

- A. Helps you see
- B. Sends messages in your body**
- C. Makes your bones hard

D. Helps you breathe

23. What are the tiny messages in your body called?

A. Germs

B. Bones

C. Hormones

D. Muscles

24. What hormone helps you feel sleepy at night?

A. Adrenaline

B. Insulin

C. Melatonin

D. Energy

25. What is the immune system's main job?

A. To help you grow

B. To send hormones

C. To fight germs

D. To help you think