

Section 27–2 Roundworms (pages 689–693)

This section describes the defining features of roundworms. It also identifies which roundworms are important in human disease.

What Is a Roundworm? (page 689)

1. Circle the letter of each sentence that is true about roundworms.

- a. Parasitic roundworms live in plants and in animals.
- b. All roundworms are parasitic.
- c. Some roundworms are a meter in length.
- d. All roundworms develop from three germ layers.

2. A body cavity that is lined only partially with tissue derived from the mesoderm is called a(an) pseudocoelom.

3. How is a roundworm's digestive tract like a tube-within-a-tube? The inner tube is the digestive tract, and the outer tube is the body wall.

4. The posterior opening of the digestive tract is called the anus.

5. Circle the letter of each feature that a roundworm has.

- a. pseudocoelom b. mouth c. anus d. coelom

Form and Function in Roundworms (page 690)

6. Which have more complex body systems, free-living or parasitic roundworms?

Free-living roundworms have more complex body systems.

7. Is the following sentence true or false? Many free-living roundworms are predators.

true

8. Roundworms exchange gases and excrete metabolic wastes through their

body walls.

9. What can roundworms' sense organs detect? They detect chemicals given off by prey or hosts.
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10. Do roundworms reproduce sexually or asexually? Sexually

Roundworms and Human Disease (pages 690–692)

11. How do *Trichinella* roundworms cause pain in their hosts? They travel through the

bloodstream and burrow into organs and tissues.

12. Complete the table about roundworms and human disease.

DISEASE-CAUSING ROUNDWORMS

Roundworm	Disease or Condition Caused	How Disease Is Spread
<i>Trichinella</i>	Trichinosis	By eating muscle tissue of infected animal
Filarial worms	Elephantiasis	Through biting insects, especially mosquitoes
Ascarid worms	Malnutrition	In the feces of the host
Hookworms	Weakness and poor growth	Burrowing through an unprotected foot

13. What is elephantiasis? It is a condition in which a part of the body swells enormously. The swelling is caused by large numbers of filarial worms blocking the passage of fluids within the lymph vessels.

14. Circle the letter of each sentence that is true about the life cycle of *Ascaris*.

- a. Larvae in the lungs are coughed up and swallowed.
- b. The eggs develop into larvae in the lungs.
- c. Fertilized eggs leave the host's body in feces.
- d. The host ingests *Ascaris* eggs in contaminated food or water.

15. How are ascarid worms commonly spread? They are spread by eating vegetables or other foods that are not washed properly.
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16. Where do hookworm eggs hatch and develop? They hatch outside the body of a host and develop in the soil.
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Research on *C. elegans* (page 693)

17. Circle the letter of each sentence that is true about *C. elegans*.
- a. It is a free-living roundworm.
 - b. Its DNA was the first of any multicellular animal's to be sequenced completely.
 - c. It feeds on rotting vegetation.
 - d. Its DNA has 30 times the number of base pairs that human DNA has.