



# Sponges, Cnidarians, Flatworms, and Roundworms

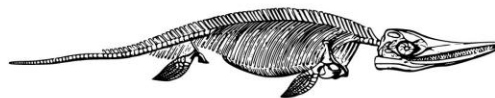
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# Classification of Animals

## Vertebrates

Animals **with** a backbone

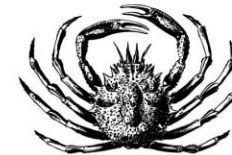
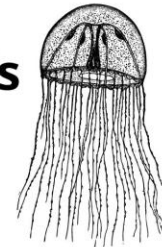
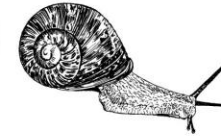
- Mammals
- Reptiles
- Fish
- Amphibians
- Birds



## Invertebrates

Animals **without** a backbone

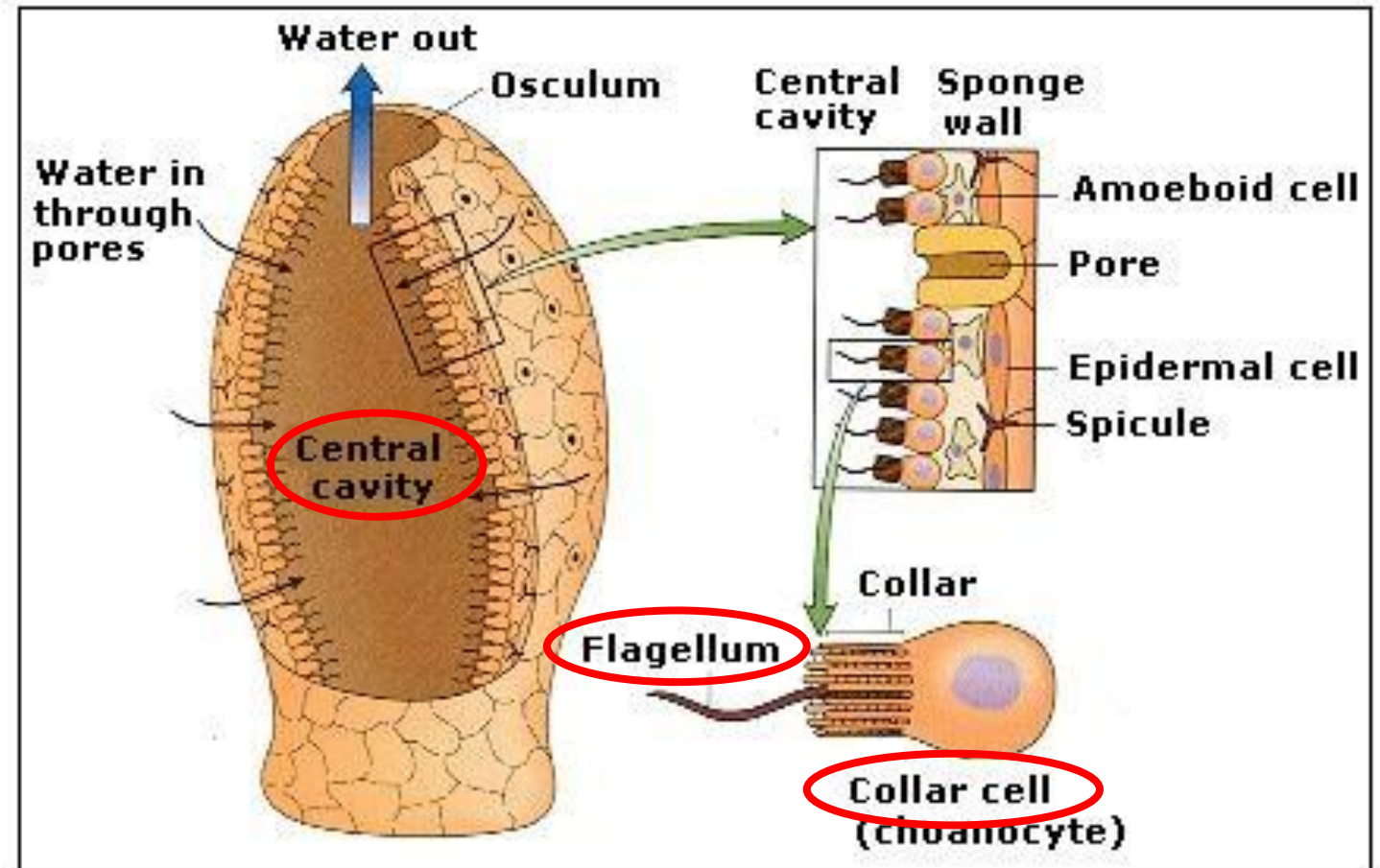
- Molluscs
- Worms
- Sponges
- Arthropods
- Jellyfish & Starfish





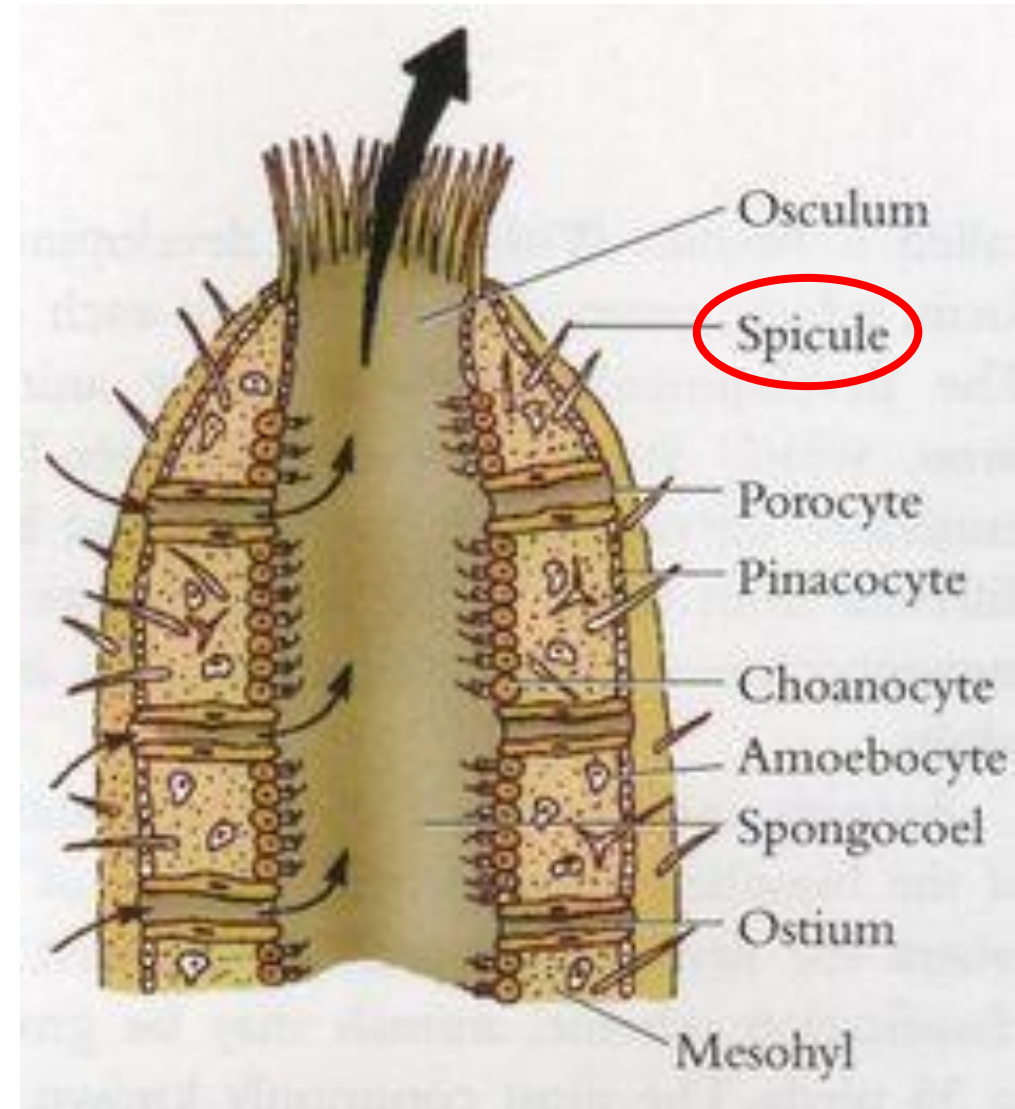
# Sponges

- Filter feeders – all sponges are filter feeders
- They have **collar cells** and **specialized cells**.
- **Collar cells** – contain flagella and they move water up and down through **central cavity**.
- **Specialized cells** – digest the food and deal with excretion.



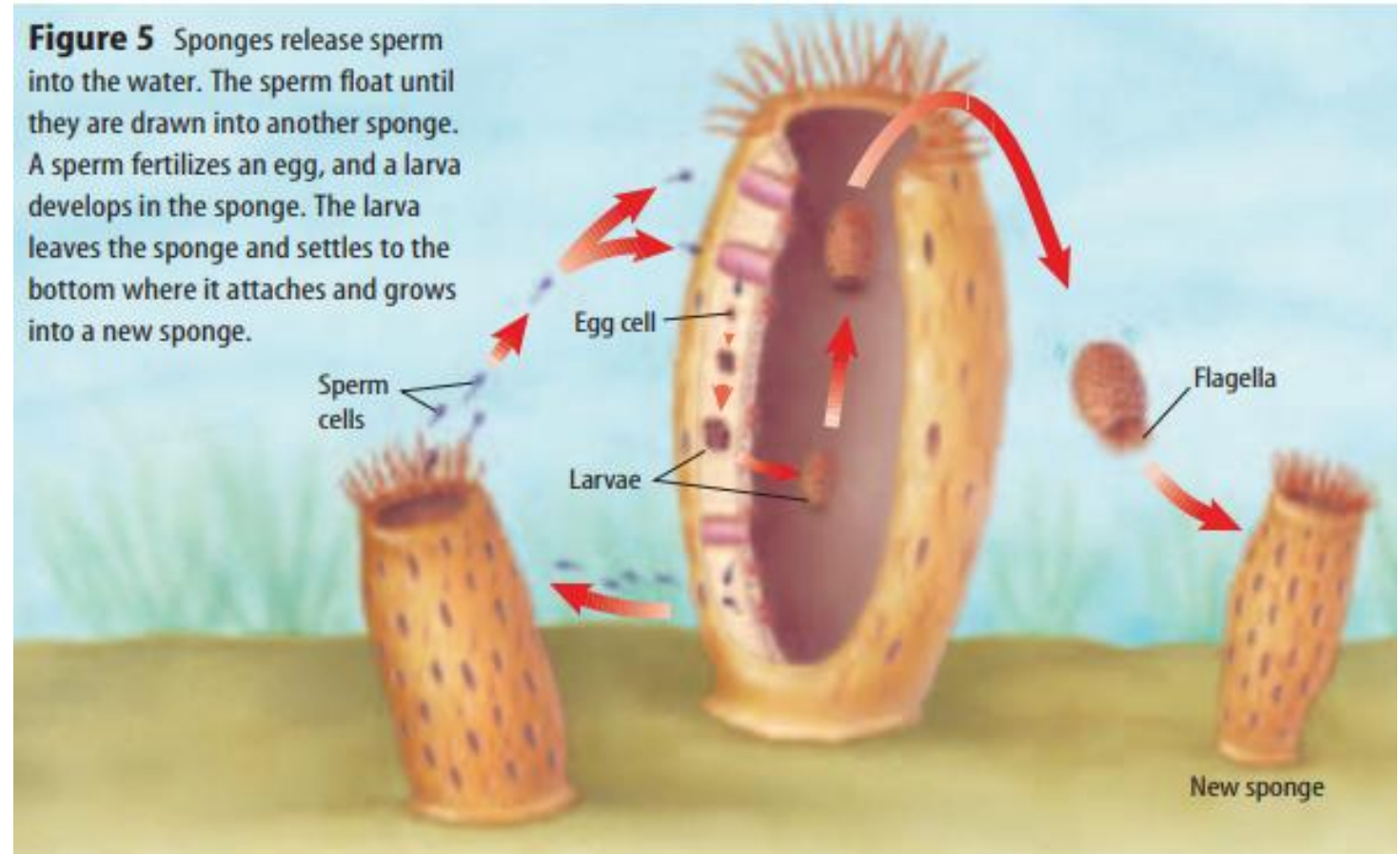
# Sponges

- The soft bodies of many sponges are supported by **sharp, glass-like structures** called **spicules**.



# Sponges

- **Asexual reproduction** occurs when a **bud** on the side of the parent sponge develops into a small sponge. The small sponge breaks off, floats away, and attaches itself to a new surface. New sponges also may grow from **pieces of a sponge**. Each piece grows into a new, identical sponge.
- Most sponges that **reproduce sexually** are **hermaphrodites**. This means that one sponge produces both eggs and sperm





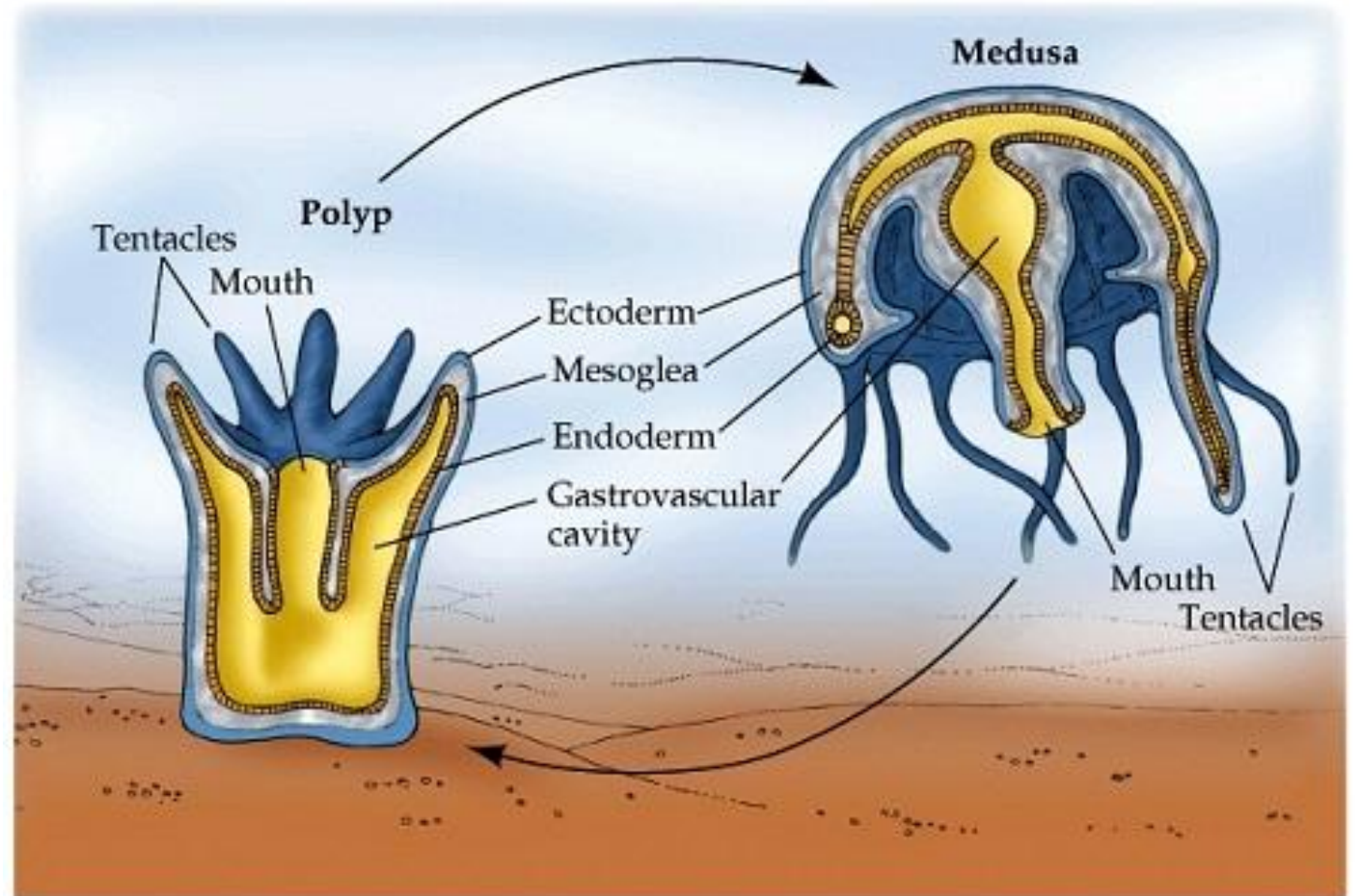
# Cnidarians

Jellyfish, sea anemones, hydra and corals.

- Tentacles
- Hollow-bodied animals

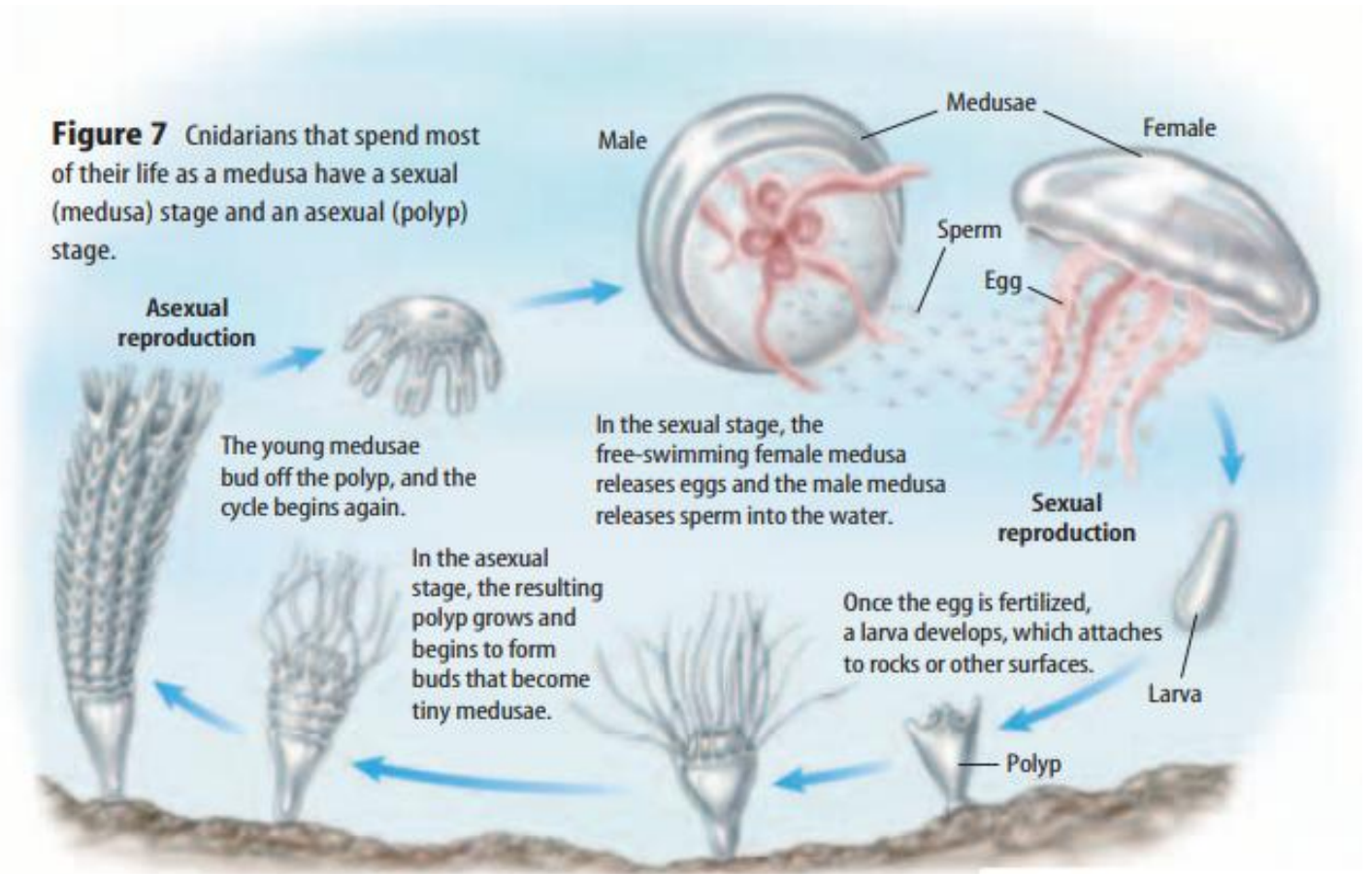
Body forms:

- **Polyp**
  - Vase-shaped body
- **Medusa**
  - Free-swimming, bell-shaped body.



# Cnidarians

- Asexual reproduction by budding
- Sexual reproduction by sperm and egg cells from different parents of medusa.



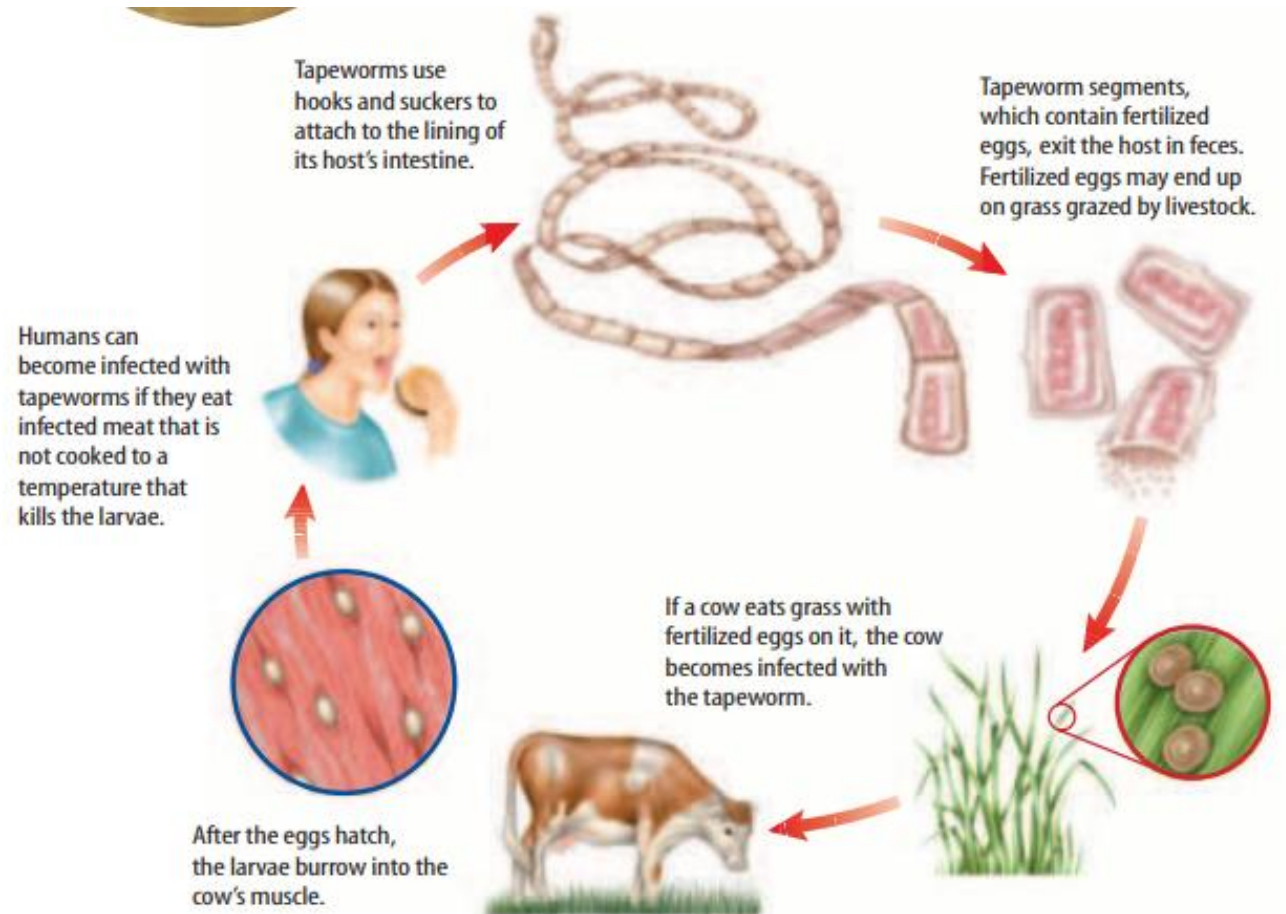
# Flatworms

They have a long, flattened bodies.

## 1. Tapeworms

- They live in the intestines of the host.

A tapeworm grows by adding sections directly behind its head. Each body segment has both male and female reproductive organs. The eggs and sperm are released into the segment. After it is filled with fertilized eggs, the segment breaks off.





# What is a Tapeworm Infection?



**Tapeworm infections are caused by poor sanitation and uncooked meat**



**Diagnosis includes stool tests and checking for eggs**



**Tapeworms are parasitic flatworms that infect the digestive system**



**The infection is treated with antiparasitic drugs**



# Roundworms

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If you have a dog, you may know already that heartworm disease.

In most areas of the United States, it's necessary to give dogs a monthly medicine to prevent heartworm disease. Heartworms are just one kind of the many thousands of roundworms that exist.

Roundworms are the most widespread animal on Earth. Billions can live in an acre of soil. Many people confuse earthworms and roundworms.

**Roundworms are more complex than flatworms because their digestive tract has two openings. Food enters through the mouth, is digested in a digestive tract, and wastes exit through the anus.**

