



BODY CAVITY

V. JEMIMA FLORENE BORGIA

ASSISTANT PROFESSOR

PG & RESEARCH CENTRE OF ZOOLOGY

I UG ZOOLOGY (REGULAR)

BODY CAVITY

➤ The cavity located between the body wall and the alimentary canal is called coelom.

There are four types of coelom.

They are

1. Acoelom
2. Pseudocoelom
3. Eucoelom
4. Haemocoelom

1. ACOELOM

* The cavity lying between the body wall and the alimentary canal is filled with parenchyma.

* Hence there is no coelom.

* This condition is called acoelom and such animals are called acoelomata.

Eg. Platyhelminthes.

2. PSEUDOCOELOM

- * Pseudocoelom or false coelom is the cavity lying between the body wall and the gut.

- * It is lined externally by the muscle layer and internally by the cuticle.

- * It is not lined with coelomic epithelium.

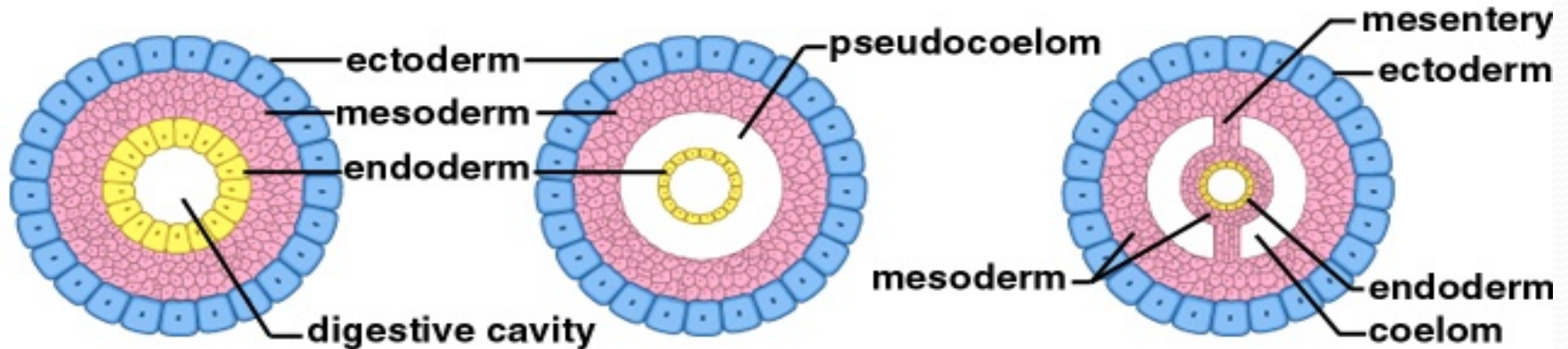
* The pseudocoel is filled with a fluid called pseudocoelomic fluid.

* The pseudocoelomic fluid contains amoeboid cells called pseudocoelomocytes.

* The animals possessing a pseudocoelom are called pseudocoelomata.

Eg. Nematoda

Acoelomate, pseudocoelomate, coelomate comparison



a. **Acoelomate flatworms**

b. **Pseudocoelomate roundworms**

c. **Coelomate molluscs
annelids
arthropods
echinoderms
chordates**

3. EUCOELOM

- It is the true coelom.
- Lying between the body wall and the gut.
- It is lined with coelomic epithelium.
- It opens to the exterior through ducts called coelomoducts, gonoducts and nephridia.



* The gonads develop from the coelomic epithelium.

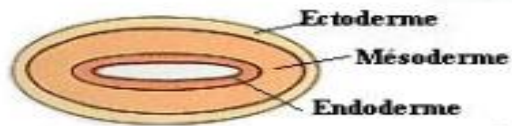
* The coelom is filled with a fluid called coelomic fluid.

* It contains amoeboid cells called coelomocytes.



➤ The animals possessing a true coelom are called coelomata.

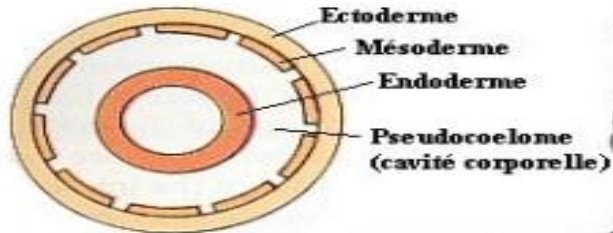
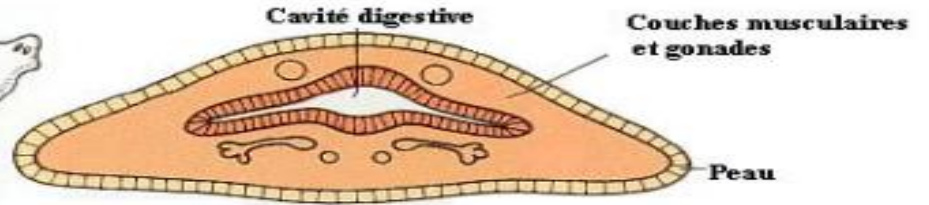
Eg. Annelida, Arthropoda, Mollusca, Echinodermata and Chordata



(a) Acoelomate
(pas de cavité corporelle)



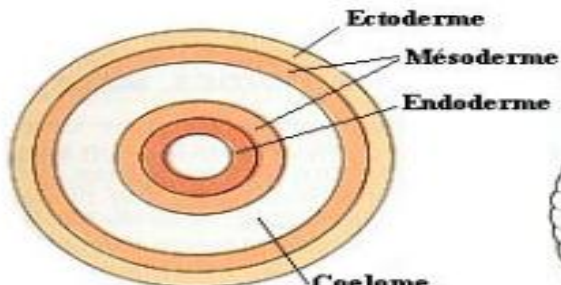
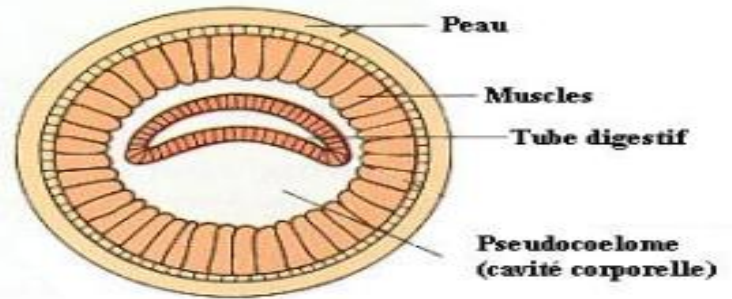
Plathelminthes



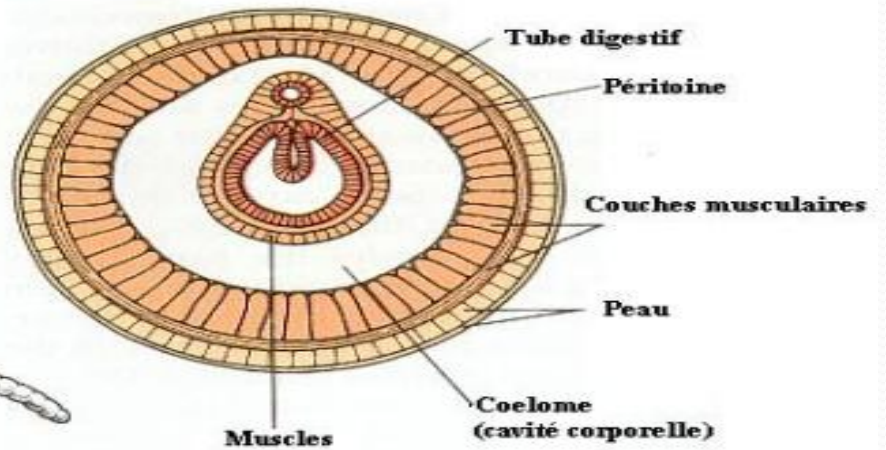
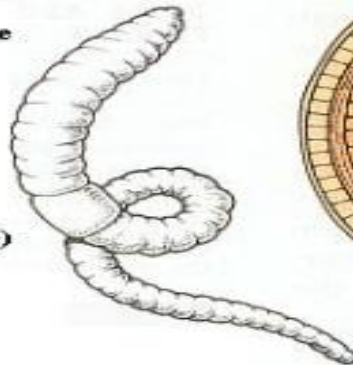
(b) Pseudocoelomate



Némathelminthes



(c) Coelomate



Eucoelom is of two types

- * Enterocoelom
- * Schizocoelom

*

Enterocoelom

* The coelom develops from the gut.

Eg. Echinodermata, Chordata

Schizocoelom

* The coelom develops by the splitting of mesoderm

Eg. Annelida, Arthropoda and Mollusca

4. HAEMOCOELOM

- * The true coelom is much reduced.
- * It is represented by small cavities around the gonads.
- * They are filled with a fluid resembling blood, called haemocoelic fluid.
- * This contains plasma, amoebocytes and haemoglobin.



❖ They circulate throughout the body and do the function of blood.

Eg. Annelida (leech),
Arthropoda, Mollusca and
Echinodermata.

