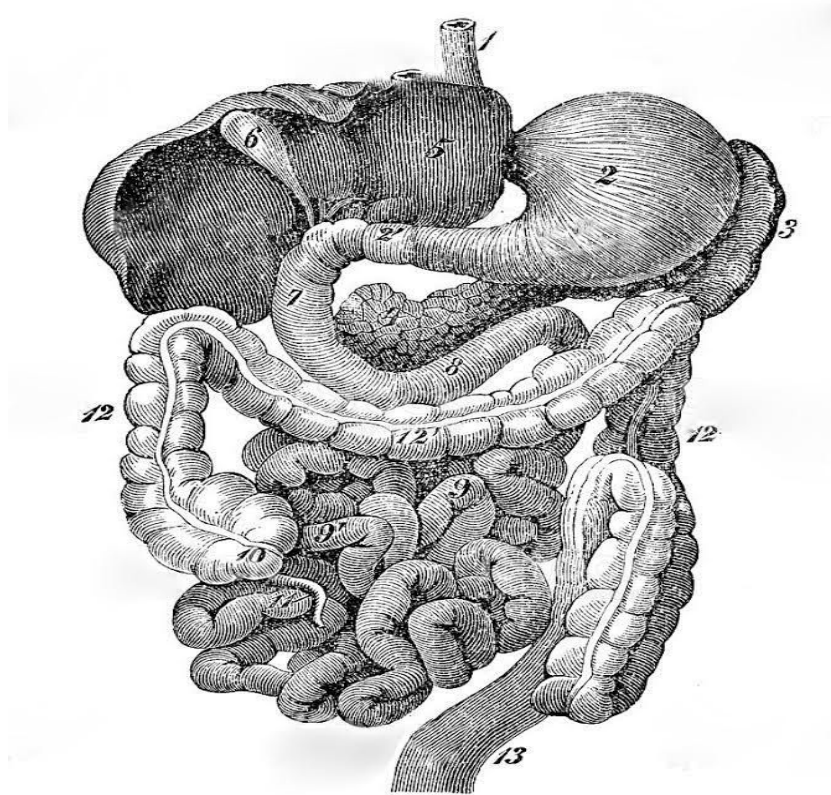


Microbiology

435's Teamwork
GastroIntestinal & Nutrition Block



- Please contact the team leaders for any suggestion, question or correction.
- Pay attention to the statements highlighted in **red**.
- Extra explanations are added for your understanding in **grey**.
- **Footnotes color code:** General | **Females** | **Male**

Revised by

خولة العماري & هشام الغفيلي



Schistosomiasis

Resources: Sherris Medical Microbiology, LIR Microbiology,...



Recall:

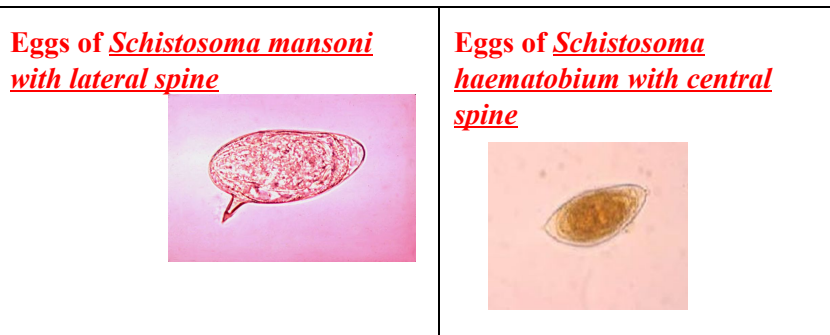
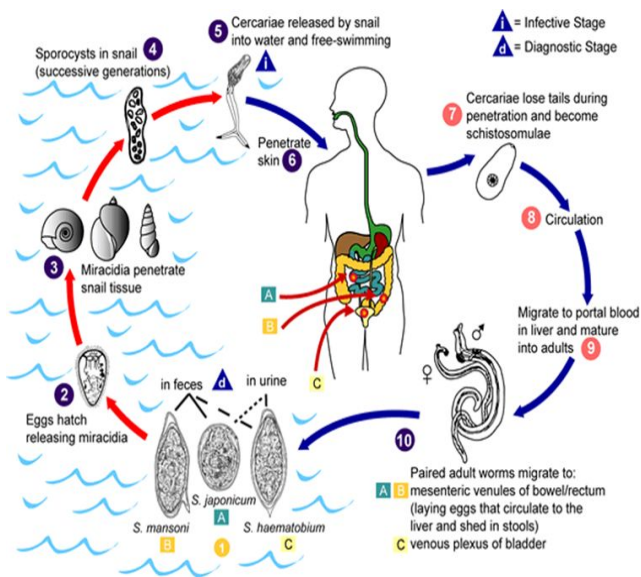
Protozoa	Helminths
<p>Unicellular Single cell for all functions</p>	<p>Multicellular Specialized cells</p>
<p>Types: 1- Aeobae: move by pseudopodia 2- Flagellates: move by flagella 3- Ciliates: by cilia 4- Apicomplexa (Sporozoa): tissue parasites</p>	<p>Types: 1- Round worms (Nematodes): Elongated, cylindrical & unsegmented. 2- Flat worms: - Trematodes: leaf-like & UNsegmented. - Cestodes: Tape-like & segmented.</p>

Schistosoma

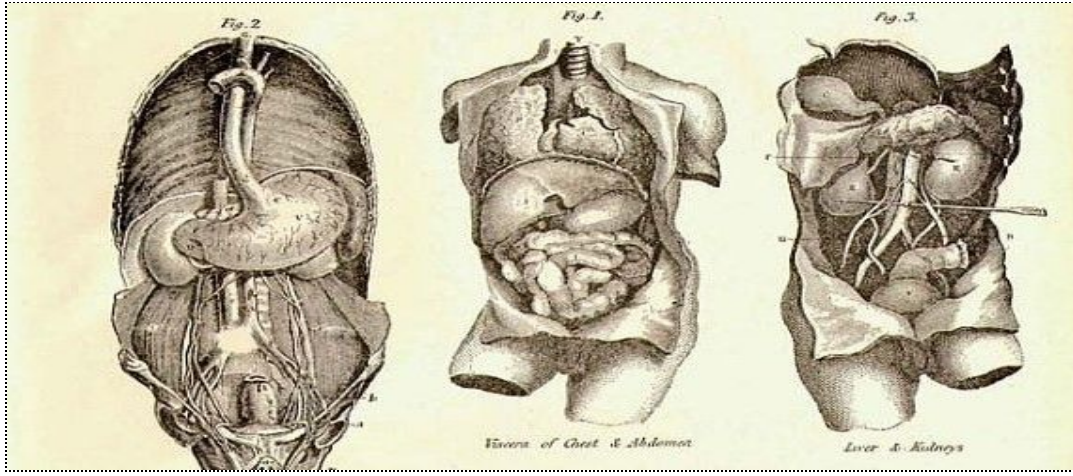
one of blood flow trematode (**blood-flukes**)_ second most socioeconomically devastating parasitic disease (after malaria)

Type	<i>Schistosoma mansoni</i>	<i>Schistosoma haematobium</i>
habitat	Mesenteric plexus(liver)	vesical plexus of the bladder
Life cycle (for more clarification see the pic in the next page)	the eggs of the human-infected with S.mansoni & S.japonicum are passed in the feces	the eggs are passed during micturition from host infected with S.haematobium
	into the water → the eggs search for a suitable freshwater snail to act as an intermediate host → In the snail the egg develops to cercaria → Cercaria emerge from snail in the water and penetrate the skin of the human → cercaria lose tails during penetration and become schistosomula → The schistosomula first enters the systemic circulation and then finds its way into:	
	the portal circulation worms mature remains in the mesenteric veins of the portal circulation → discharges eggs into → bowel → feces ↓ Blood → go to multiple organs (mainly LIVER)	worms generally remain in the systemic circulation and mature in the blood vessels of the vesical plexus → discharges eggs into → bladder → urine
Diagnostic stag	Egg in the feces	egg in urine
Infective stage	cercaria	
pathology	The EGG is the main cause of pathology in schistosomiasis. how? Many eggs become stranded in the tissues or are carried by the blood stream to other organs mainly the LIVER . The host reaction to the eggs may vary from small granulomas to extensive fibrosis .The extent of damage is generally related to the number of eggs present in the tissues.	

clinical features		Schistosome dermatitis, or "swimmers itch" : occurs when skin is penetrated by a free-swimming, fork-tailed infective cercaria . The dermatitis develops 24 hours after exposure and last for 2 to 3 days and then spontaneously disappears.		  often
		<ul style="list-style-type: none"> ● Portal hypertension:hepatomegaly splenomegaly ● dysentery (blood and mucus in stools), 	<ul style="list-style-type: none"> ● painless haematuria مره مهمه ● Inflammation of bladder and burning micturition 	
		<ul style="list-style-type: none"> ● CNS involvement (rare) 		
Dx	Parasitologica l:	Examination of stools	Examination of urine	
	Immunologica l:	serology		
	Indirect:	–Radiological –endoscopy	–Radiological –Cystoscopy	
treatment		Praziquante		



Fasciola hepatica	
Pathology and clinical picture	True infection occur when man accidentally ingests water plant (watercress) contaminated with METACERCARIA(infective stage) , the adult worm can causes mainly biliary colic with biliary obstruction, jaundice
Infective stage	METACERCARIA
Diagnosis	eggs in stools or duodenal aspirate.



إِنَّا كُلُّ شَيْءٍ خَلَقْتَهُ بِقَدْرِ ٤٩

Team Leaders

Rawan Aldhuwayhi & Ali Alzahrani

Heartful thanks to our phenomenal team members

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 Reem Alageel
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