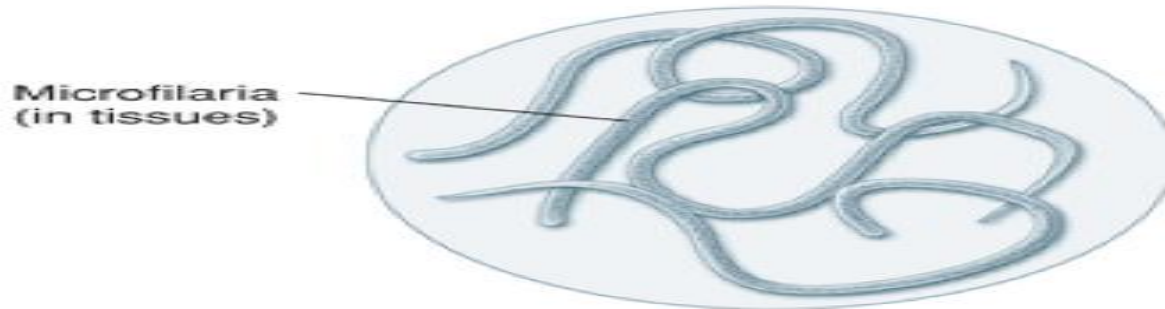
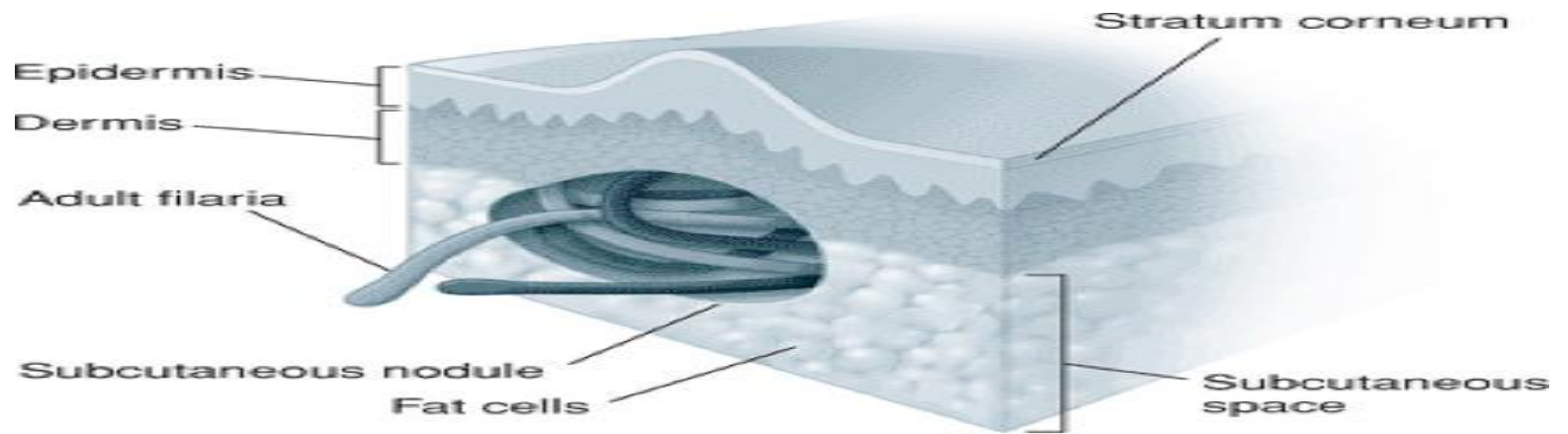


Antihelminthic Drugs

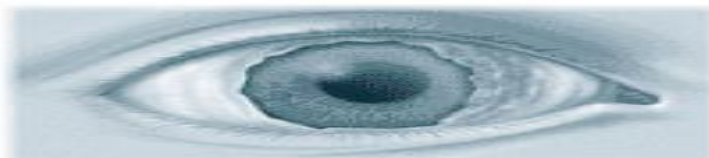
1. Nematodes (Roundworms)
2. Trematodes (Flukes)
3. Cestodes (Flatworms)

Physiology of Helminths

1. Humans can become infected with helminths when they ingest food or water contaminated with eggs or larvae.
2. In addition, larvae in soil can penetrate human skin, and insects can transmit still other larvae through bites. If humans are the definitive host, the eggs or larvae develop into adult worms that can migrate through tissues and enter the sexual stage.
3. During the sexual stage, adult worms release additional eggs or larvae, which can then pass out of the host through the gastrointestinal or urinary tracts. Larvae in humans can also be ingested by insects during a blood meal.
4. In the environment or within vector hosts, eggs or larvae then become infective for humans, and the cycles start over



Ivermectin



Corneal inflammation with sclerosing keratitis



Dermatitis

Antihelminthic Drugs

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graph TD; A[Antihelminthic Drugs] --> B[Drugs active against nematodes]; A --> C[Drugs active against trematodes]; A --> D[Drugs active against cestodes]; B --> B1[Albendazole]; B --> B2[Diethylcarbamazine]; B --> B3[Ivermectin]; B --> B4[Mebendazole]; B --> B5[Pyrantel pamoate]; C --> C1[Praziquantel]; C --> C2[Bithionol]; C --> C3[Metrifonate]; C --> C4[Oxamniquine]; D --> D1[Niclosamide]; D --> D2[Praziquantel]; D --> D3[Albendazole]; D --> D4[Mebendazole];
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Drugs active
against
nematodes

Albendazole
Diethylcarbamazine
Ivermectin
Mebendazole
Pyrantel pamoate

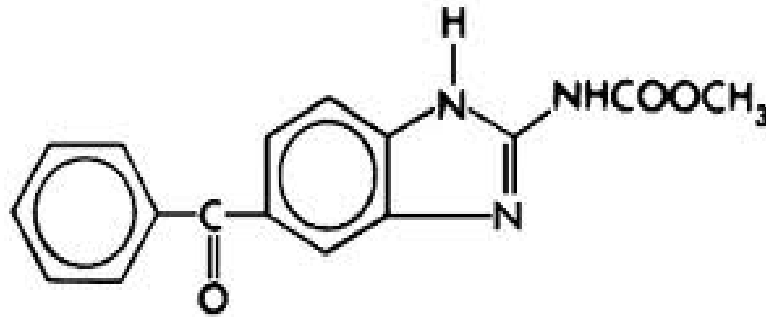
Drugs active
against
trematodes

Praziquantel
Bithionol
Metrifonate
Oxamniquine

Drugs active
against
cestodes

Niclosamide
Praziquantel
Albendazole
Mebendazole

Pharmacology of Mebendazole



Pharmacokinetics

Absorption: Only 10% of mebendazole is absorbed after oral administration, but a fatty meal increases absorption.

Metabolism: It is rapidly metabolised,

Excretion: The metabolic products being excreted in the urine and the bile within 24-48 h. It is generally given as a single dose for threadworm, and twice daily for 3 days for hookworm and roundworm infestations.

Mechanism of action

1. It inhibits tubulin polymerization by binding to β -tubulin.
2. Inhibition of tubulin polymerization disrupts nematodal motility and DNA replication, leading to degenerative changes in integumental and intestinal cells of helminths, and, eventually, causing immobilization and death of the worms.

Adverse effects:

It is a well tolerated drug. Diarrhoea, nausea and abdominal pain are frequent side effects. Mebendazole is unsuitable for pregnant women or children less than 2 years old.

Uses

Mebendazole is a primary drug for treatment of ascariasis and for pinworm and whipworm infections. Mebendazole has also been used as a backup drug in visceral larval migrans.

Brands

1. MEBEX, WORMIN 100 mg chewable tab