

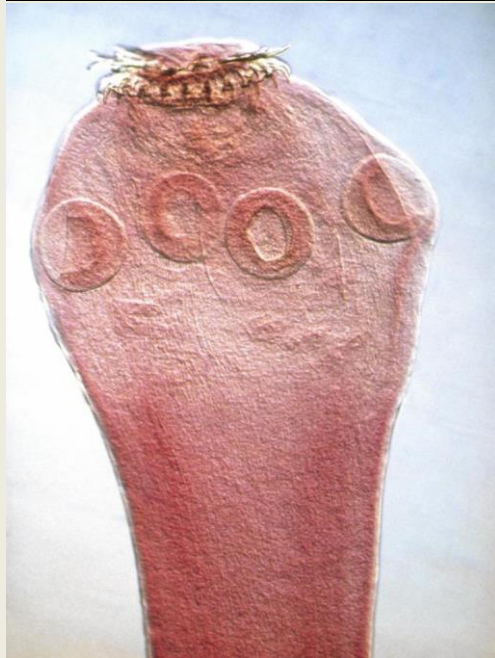
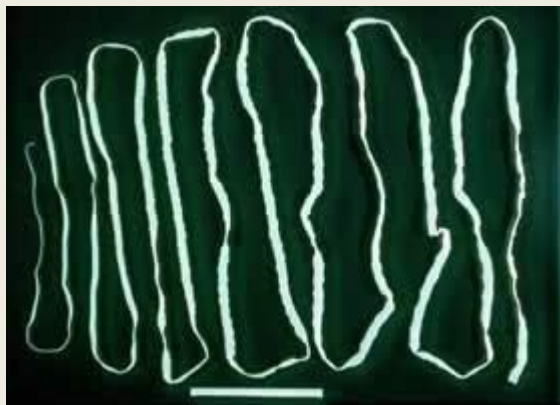


Medicine for Managers

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Tapeworm!

Mercifully tapeworm infections are rare in the United Kingdom but remain common in many developing countries. They are long, flat parasites, which may grow up to thirty feet in length and which are composed of segments. Some cause no symptoms whilst others produce a variety of complications. To sound knowledgeable, the species is cestoda and larvae are called coenuri.



There are a number of different types of tapeworm which can infect humans. **Pork** and **beef tapeworms** are found in uncooked or undercooked pork and beef which contain tapeworm larvae.

The larvae grow in to tapeworms in the intestine. They may be acquired more commonly in Africa, South-East Asia and South America. **Fish tapeworm** is acquired by eating some types of raw fish such as salmon. It is more common in Japan and Scandinavia. **Dog tapeworm** is occasionally caught by children who are in close contact with dogs or who touch dog faeces followed by oral contact.

The tapeworm is very rare in the UK but common in Asia, Africa, parts of America and countries such as Greece and Turkey.

The transmission is faecal. Animals swallow tapeworm eggs from human faeces as a result of sewage pollution.

The eggs hatch into larvae inside the infected animal and spread through the blood stream to muscles where they form cysts (sacs with the

larvae inside). The cysts are consumed by humans who eat the raw or undercooked meat or fish and the larvae hatch and form worms which anchor themselves to the wall of the intestine by hooks on the head and develop into the full length parasites, which then produce eggs. These are in turn passed out with the faeces, so perpetuating the cycle.

Symptoms of tapeworm infection

Sometimes tapeworms produce no discernible symptoms or perhaps only an occasional abdominal discomfort and some looseness of stools. More likely however, they will produce:

- Abdominal pain
- Diarrhoea
- Nausea and vomiting
- Weight loss
- Occasionally malnutrition, dizziness or jaundice.

The symptoms may become more varied and serious if tapeworm larvae burrow through the intestine and spread in the blood stream to other parts of the body where they form cysts. Depending on the part of the body they may cause cough or infection (lungs), seizures (brain) or muscle pains.

Diagnosis of tapeworm

Once suspected, it may be diagnosed by finding eggs larvae or tapeworm segments in faeces. The patient can then be examined by endoscopy, CT or MRI scan or by blood test to identify antibodies to infection.

The problem is commonly that the symptoms are non-specific, the association with consuming undercooked food may not be recognised and the tell-tale faecal signs are easily missed.

Treating a tapeworm

Essentially treatment is directed at either:

1. Killing the worm and its larvae
2. Causing the worm to pass from the intestine.

Treatment of the larvae is more difficult than treating a mature tapeworm because the larvae, via access to the blood stream, may have lodged in a variety of bodily structures and, if encysted, the larva may be resistant to access by any medication.

Niclosamide or ***praziquantel*** may be prescribed by the GP or at the hospital as a single dose.

The drug should cause the head to die and the tapeworm may then be passed. It should be remembered that, if a length of tapeworm segments are passed, it does not necessarily mean that the tapeworm infestation is eliminated because, if the head is still attached in the small intestine, it will simply grow again.

Following a treatment to destroy the tapeworm, any patient who has had a tapeworm will be required to provide regular stool specimens for up to six months to ensure that the tapeworm has gone and does not develop again.

Larval infections are treated in specialist infectious disease units with courses of medication. Occasionally a larval cyst may require surgical removal.

Particular attention to hygiene is necessary with a tapeworm or during the elimination phase following treatment. This is because the treatment does **not** kill eggs and, if the patient ingests the eggs through the faeco-oral route, a

new tapeworm grows. Handwashing must be thorough and all members of the household must be involved in the process.

Prevention of tapeworm infection

Fortunately tapeworms are relatively rare in the UK. The simplest prevention is to ensure that sewage is properly managed by avoiding pollution of seas and rivers. Although meat is carefully inspected in the UK, it must still be thoroughly cooked throughout to ensure that any tapeworm larvae are destroyed. Raw meat and fish should be kept well away from cooked meats for consumption.

After all this, it is hard to believe that it has been suggested that a tapeworm is a way of losing weight. It is true that weight loss is a complication of tape worm infestation but the idea of deliberately infecting oneself seems abhorrent. I leave you with the thought of Dr Kwak's (perhaps pronounced 'Quack') tapeworms 'for weight loss without exercise'.

Please don't try this at home!!

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