



### Fluke (*Fasciola hepatica*)

#### Fluke Life cycle

The life cycle of the British liver fluke (*Fasciola Hepatica*) involves mud snails and a variety of mammalian species including sheep, cattle, goats, deer and rabbits.

Animals ingest encysted fluke on the pasture which hatch in the small intestine.

These immature fluke then eat through the intestinal wall and migrate through the abdomen to the liver over 24 hours.

They then migrate through the liver for 4-8 weeks before finding their way to the bile ducts and maturing to adults. This migration causes severe damage to the liver in acute disease which is more common in sheep.

Once in the bile ducts, adult fluke lay eggs from about 12 weeks post infection and can lay up to 5000 eggs per day which are passed out onto pasture.

The intermediate stage of fluke develops within the egg at varying rates dependent on the temperature and hatches out after a period of 10 days to 6 weeks where they swim around until they find a snail.

Flukes then develop in the intestinal tract of the snail over about 5 weeks before leaving the dying snail and encysting on blades of grass for animals to ingest.

The total life cycle can take on average 20 weeks.

Optimum conditions for both fluke and snails tend to only occur between April and November in the UK.

#### Clinical Signs

Disease can present in three main ways:

**Acute** - Often sudden death, or animals that are pale with abdominal pain and reduced appetite.

This happens when great numbers of immature fluke burrow through the liver destroying it.

Acute disease is more common in sheep, but can affect cattle when infestation is great enough.

Sudden death can occur in cattle when secondary infection with *Clostridium* bacteria causes black disease.

**Sub acute** - ingestion of cysts over weeks and months (December onwards). Poor body condition, anaemia, milk drop

**Chronic** - Adult fluke in the bile duct (February - March). Poor body condition, poor fleece condition in sheep, anaemia, milk drop and bottle jaw (pendulous skin under jaw) in cattle.

#### Treatment

All flukicide products are effective against adult flukes but not all will kill young immature flukes. It is therefore important to select the correct treatment.

Fluke Stage	Drug Name	Product Examples
Adult	Oxyclozanide Albendazole Ivermectin	Levafas Diamond Fluke and worm drench, Ivermectin super, Albex, Albensure
Adult and Immature	Triclabendazole Closantel Nitroxynil	Fasinex, Combinex, Tribex 5%, Fasimec Duo, Triclafas Drench, Flukiver, Trodax 34%