FISH DISEASES

Presentation on

FISH DISEASES

Introduction

- **How** do you recognise that a fish might be ill?
- **What** are the causes of fish disease?
- **How** do you know that a fish has a parasite?
- **What** can you do to prevent a disease / parasite?
- **How** do you treat diseased fish?

Fish Diseases

How do you recognise that a fish might be ill?

- Colour may fade out / change
- Body shape, condition and / or behaviour will be abnormal
- The fish may refuse to feed or overfeed and trailing faeces appear at vent.
- Condition of the fins and gills will deteriorate. Fins may be clamped close to body.
- The fish may not keep its swimming position.
- There may be signs of injuries, growths or abnormalities.

Fish Diseases

What are the causes of fish disease?

- Bad water quality
- Inappropriate diet
- Temperature (too high or too low)
- Stress
- Bullying
- Viral diseases
- Fungal infections
- Bacterial infections
- Parasites

Parasitic conditions: What is a parasite?

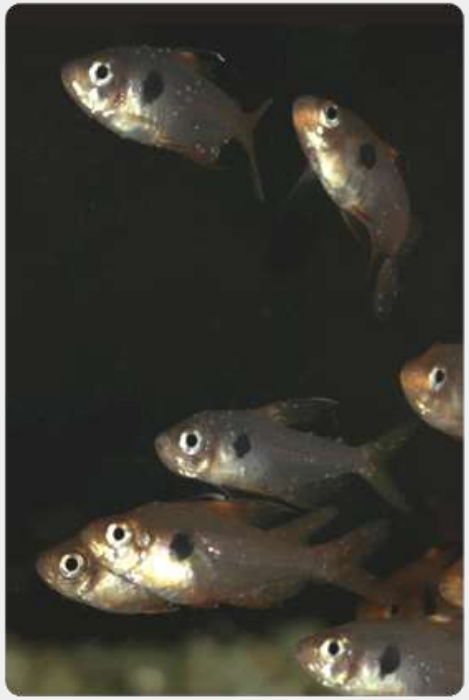
A parasite is an organism that lives off another often to the detriment of the hosts health. These can be internal (endoparasites) or External (ectoparasites).

They can be:

- Protozoan (single celled)
- Nematodes/ cestodes / trematodes (worms)
- Crustacean (e.g.louse)

Fish Diseases

Itch or White Spot Disease (*Ichthyophthirius*)



Cause

- Protozoan parasite either free swimming in the water or carried in with new fish or plants.
- Fish under stress from bad water conditions are more susceptible.

Symptoms

- The fish's skin and fins are covered in tiny white spots
- A badly affected fish may make rapid gill movements

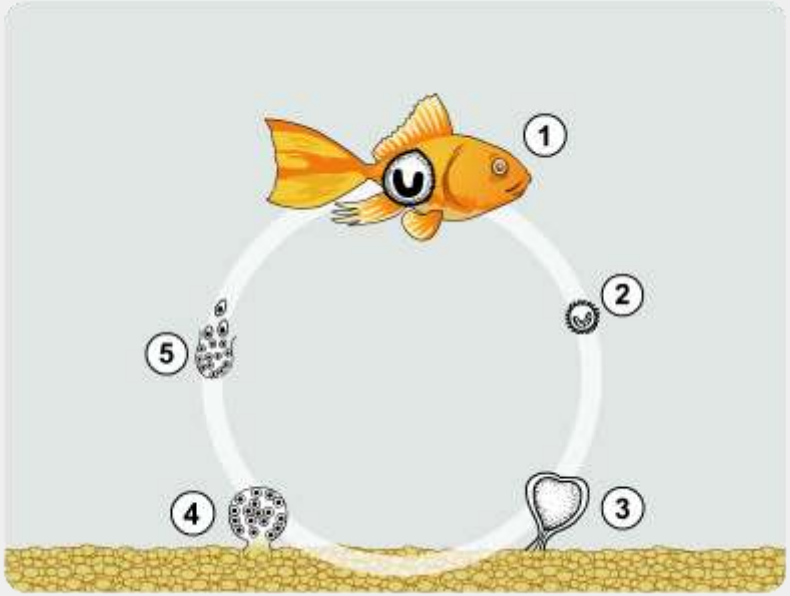
Treatment

- Remove plants and the activated carbon from filters as they can affect / be affected by the medicine.
- Treat with a methylene blue based medicine which kills the free swimming larval stage (theronts)

Fish Diseases

White Spot Lifecycle

1. After finding their new host, they will eat into the fish's skin.
2. Adults fall from the fish and become free swimming till it settles on the gravel.
3. Once settled it forms a cyst which begins to reproduce by dividing itself up to as many as 2,000 times.
4. The result of this division produces what is called Tomites.
5. These emerge from the cyst when it bursts as free swimming Theronts ready to reinfect the fish.



To see the lifecycle, view the animation in the fish diseases section.

N.B. If a Theronts is unable to find a new host within 24 – 48 hours they will usually die.

Fish Diseases

Gill flukes and skin flukes (*Dactylogyrus*)& *Gyrodactylus*)

Cause

- Trematode (flatworm / flukes) parasites, caught by direct contact with contaminated fish, free swimming larval stages can attach to the bottom and side of housing. Flukes attach themselves to the body and eat skin / gill tissue and blood.

Symptoms

- The gills may move rapidly and fish may gasp at the water surface
- The fish may scrape itself against objects
- Colours fade as damaged areas are covered in mucus.
- The skin may redden in places
- The fins may become ragged

Treatment

- These parasites can be treated with a formalin based medicine.

Fish Diseases

Anchor Worm *(Lernaea)*

Cause

- The crustacean parasite *Lernaea* it can grow up to 12mm.Usualy brought in by non quarantined fish.

Symptoms

- Whitish-green threads hang out of the fish's skin, with an inflamed area or ulcer at the point of their attachment.

Treatment

- The water can be treated with insecticide. The adult parasite can be removed manually and the wound treated with antiseptic to prevent bacterial infection.

Fish Diseases

Fungal infections: What is a fungus?

Fungus are multicelluar, spore producing organisms that live off other organisms, and dead matter, some are parasitic.

- Fungal spores are commonly found in aquarium water.
- Healthy fish have a protective mucus covering which can prevent infection by fungal spores.

Fish Diseases

Fish fungus

Cause

- Aquatic fungi e.g. *Saprolegnia*. Fish that are in poor health and have damaged mucus membranes through bad water quality, rough handling, fighting or physical injury are more prone to infection. Fungus can be a secondary infection to other conditions.

Symptoms

- Grey white or brown cotton wool like growths on the skin or fins.

Treatment

- Medicines containing malachite green can be used and salt baths help recovery.

Fish Diseases

Bacterial Infections : What are Bacteria?

- Bacteria are microscopic single celled organisms that can reproduce rapidly.
- They are naturally present in aquarium water.
- Fish in good health kept in good water conditions can fight bacterial infections.
- Fish are most prone to such infections if in poor condition as a result of bad or sudden changes in water quality, over crowding or bullying, bad handling or transportation.
- A poor diet lacking in sufficient protein, fatty acids and vitamins can reduce fish resistance to such disease.

Fish Diseases

Fin Rot / Mouth Fungus

Cause

- Bacteria such as *Aeromonas, Pseudomonas (fin rot) and Flavobacterium (mouth fungus)*

Symptoms

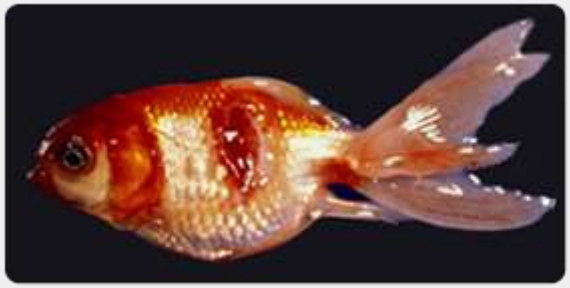
- Damaged, split or ragged looking fins (fin rot)
- Cotton wool like tufts around the mouth (mouth fungus)
- May cause loss of appetite and listlessness
- When chronic may develop ulcers on the body.

Treatment

- Aquarium antibacterial medicines are available and in serious cases veterinary treatment is needed.
- It is easier to prevent bacterial infections than cure them.

Fish Diseases

Ulcer Disease & Haemorrhagic Septicaemia



Cause

- A number of different bacteria including *Aeromonas* and *Pseudomonas*. These could be transmitted from other infected fish, and /or bad water conditions.

Symptoms

- Open sores and ulcers, reddening of fins and vent, may lose their appetite and colour may change.

Treatment

- Fish can be fed antibiotic medicine in feed. If severe fish should be isolated and antiseptic applied to infected areas. May require veterinary injection of antibiotics.
- Ensure tank conditions are correct.

Fish Diseases

Viral infections: What is a virus?

- A virus is a microscopic organism that can only reproduce by inhabiting host cells and using the genetic material in the cells of a host.

- Healthy fish that have a balanced diet and good water conditions have strong immune systems to fight off such infections.

Fish Diseases

Cyprinid Herpes Virus

Causes

- A herpes virus

Symptoms

- Causes growths that are white or grey in colour and look like melted candle wax.

Treatment

- Fish with a strong immune system can fight off the infection but retain the virus within the body.
- When in poor health the virus symptoms can re – appear.

Fish Diseases

Spring Viremia of Carp: this is a notifiable disease

Cause

- A viral infection caused by *Rhabdovirus carpio*.

Symptoms

- Darkening of skin, pale gills, pop eye, protruding vent, bleeding in gills skin and eyes. Lethargy, abnormal swimming positions, sitting on bottom of the tank.

Treatment

- No known treatment .

N.B. DEFRA must be informed of fish identified as having this disease.

Fish Diseases

What is a Swim Bladder problem?

Cause

- This can be caused by a number of things, from internal swellings, tumours, viral and bacterial infections, internal deformities, constipation, parasites etc, to overfeeding.

Symptoms

- Bobbing to the surface, swimming upside down or listing to one side with abnormal swimming patterns.

Treatment

- Unless the cause can be identified this is difficult to treat. Starvation of fish for a few days might correct the problem if it is as a result of overfeeding. If this does not work a vet should be consulted.

Fish Diseases

What can cause growths and abnormalities?

Abnormalities can be brought about by :

- Inbreeding and congenital deformities
- Tumours and swellings
- Viral growths
- Malnutrition or inappropriate diet
- Internal disorders / parasites that cause fluid retention & swelling.

Fish Diseases

What can happen if a fish is injured?

- Injured fish have often been bullied by tank mates.
- Injuries can be the site of secondary infections, bacterial and fungal.
- Stress caused by bullying, injuries and infections can lower their immune system further which can in some cases be fatal.

Fish Diseases

How do you prevent disease and parasites affecting fish?

- Provide an appropriate well filtered tank with suitable water conditions for the species, i.e. correct temperature, pH, water hardness, low nitrate levels etc.
- Provide appropriate diet and décor to meet species needs.
- House only suitable species together, make sure they are compatible and not likely to bully or eat each other.
- Only select healthy looking fish to add to the tank and do not overstock.
- Quarantine new fish to ensure they are healthy before introducing them to an established tank.
- Sterilize décor and clean new plants to ensure they are not carrying parasite eggs / larvae.