

JBL

Pond fish diseases

Causes
Diagnosis
Treatment

- *Objects (parasites) on the body and fins*
- *Ulcers, open wounds on the body*
- *Fins rot away*
- *Bulging eyes*
- *Bloated or emaciated body*
- *Fungal infections on the skin and fins*
- *Frayed mouth, rot*

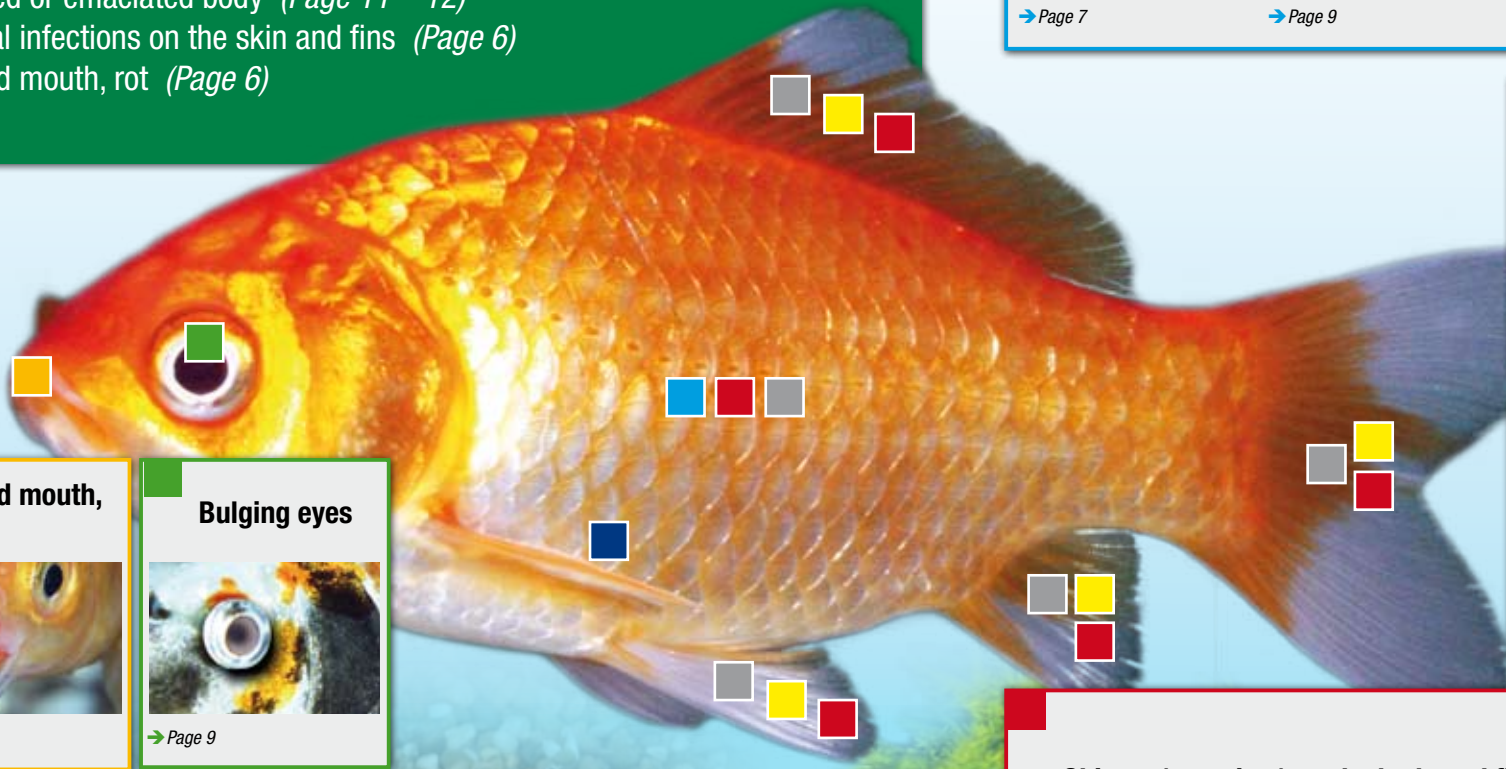


Vorsprung
durch Forschung
Ahead through research
L'avancée par la recherche



Which type of problem do your pond fish show signs of?

- Objects (parasites) on the body and fins (Page 4 - 6)
- Ulcers, open wounds on the body (Page 7 - 9)
- Fins rot away (Page 6 - 7)
- Bulging eyes (Page 9)
- Bloating or emaciated body (Page 11 - 12)
- Fungal infections on the skin and fins (Page 6)
- Frayed mouth, rot (Page 6)



Frayed mouth, rot

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Bulging eyes

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Bloated or emaciated body

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Ulcers, open wounds on the body

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Fungal infections on the skin and fins

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Fins rot away

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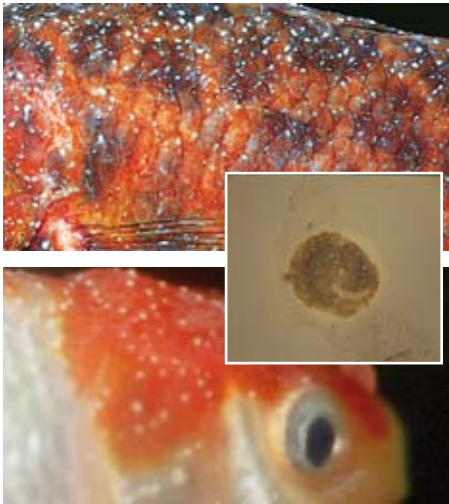
Objects (parasites) on the body and fins

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Parasites:

A: Spot disease, scientific term: Ichthyophthirius multifiliis, also known as white spot, ichthyo or white spot disease.

This is a parasite from the ciliate group which can be quickly and successfully eliminated with **JBL**



MedoPond. This parasite has a life-cycle which includes several stages at which the parasite cannot be eliminated. Successful elimination is only possible in the free-swimming "swarming" stage. Treatment must therefore be carried out over a period of a week and should be rounded off with **JBL AccliPond** to build up the damaged mucous membrane of the fish and provide long-term protection.

Can be mistaken for:

- Spawning rash



B: Fish leech, Hirudinea, Piscicola geometra

The leeches, up to 5 cm long, attach themselves to the skin of the fish, suck blood and subsequently cause bacterial or fungal infections. Leeches cannot be combated with conventional medication. Even prescription medicines do not



recommended.

destroy leech eggs. Mechanically removing the eggs with tweezers is one possibility. The water should then be treated with **JBL FuraPond** against a probable bacterial secondary infection.

Alternatively the fish can be bathed in a 2 to 3 % solution of sodium chloride (cooking salt) for a few minutes. This will detach the leeches from the fish. Follow-up treatment to prevent a bacterial infection is



← Spawning rash

C: Lernaea, Anchor worm, Copepodes

Although this 20 mm long parasite is called a "worm" it belongs to the crustacea family. In the young stages, this parasite can survive for about



5 days without a host. Treatment with **JBL ArguPond** is fast and highly effective. To follow up, the application of an anti-bacterial medication such as **JBL FuraPond** is recommended to prevent bacterial infection of the „wound“. Infection with *Lernaea* crustacean weakens the host fish and involves a danger of a fungal or bacterial infection.



D: Carp louse, Argulus

Argulus, the carp louse, can be easily identified on the infected fish. The parasite can grow up to one centimeter long with a flat, round body. The



carp louse is one of the approx. 70 species of fish louse (*Brachiura*) which are parasitic. They tunnel into the fish to suck blood. The puncture wound can become inflamed and infected. Fish which are heavily infected may become emaciated. At night the fish can often be observed leaping. Vitamin supplements should be given in autumn in order that the fish can store energy reserves for the winter. Fish never stop eating – they just eat less in winter! When selecting food, the fact that metabolism is slower in the cold season should be taken into account and special low-temperature food such as **JBL PondEnergil** should be given.

Treatment: **JBL ArguPond** was specially developed to combat carp louse and lernaea. Bathing in cooking salt or potassium permanganate both have practically no effect. Carp louse may also be removed from the fish using tweezers. As a follow-up, the use of an anti-bacterial medication such as **JBL FuraPond** is recommended to prevent any bacterial infection of the „wound“.

Fungal infections:

Fungal infections are easily identified on fish by the cotton wool-like growths. Fungal infections can be easily and successfully treated with **JBL MedoPond**. It is important that treatment is started promptly, as the fungus releases toxic metabolic substances into the organism of the fish. This toxic contamination is actually the main problem. The fish is able to regenerate, repairing



the destruction of the skin and surrounding tissues in the course of healing. Often the visible fungal infection is a secondary one. The primary infection may be

of a bacterial nature, for example. So combination treatment is recommended: **JBL FuraPond** against the primary bacterial infection, rounded off with **JBL AccliPond** to build up the damaged mucous membrane of the fish and provide long-term protection.

Can be mistaken for:

- Mouth rot

Mouth and fin rot:

These two infections can be identified by the fraying, rotting away and later the complete loss of the part of the body affected by this extremely disfiguring disease. The disease can be quickly halted by the application of **JBL FuraPond** and the fish is able to fully regenerate the parts of the body infected. In order to build up sufficient energy reserves, we recommend giving the fish **JBL KoiVital** twice a week on the food.



Mouth and fin rot are caused by problems in the quality of the water, even if the pathogen is a bacteria. The bacteria from the aeromonas and pseudomonas group which are responsible for this infection increase dramatically in the pond if the water quality is poor. In order to permanently

combat the disease, it is not only necessary to administer the correct remedy, but also to improve the water values. The most important values



which need to be corrected are: carbonate hardness (CH), pH (pH level), ammonium (NH₄) / ammonia (NH₃) and nitrite (NO₂). Information on these water values and instructions on how to improve them can be found in the **JBL Online Laboratory** (www.jbl.de)

Can be mistaken for:

- Fungal infection



Open sores, ulcers etc.

A: Bacterial infections

Internal and external bacterial infections can show a wide range of symptoms which can be combated very quickly and successfully with **JBL FuraPond**. Often a whitish coating is visible on



the skin, or bloodshot patches or completely different symptoms may occur. A clear diagnosis can practically only be made with a microscope. The initial assumption is often a parasitic infection, a suitable remedy such as **JBL MedoPond** is selected and, if no improvement appears, treatment is continued with **JBL FuraPond** against bacterial infections, rounded off with **JBL AccliPond** to build up the damaged mucous membrane of the fish and provide long-term protection.

B: Spring viraemia, SVC / Viraemia / Erythrodermatitis

These are virus infections of fish (particularly in carp species, such as koi). The trigger is a virus

called Rhabdovirus carpio (RNS virus). The disease occurs mostly in spring in ponds with water temperatures between 10 and 20 °C. The symptoms are: bloodshot areas of skin (at the base of the fins), apathetic behavior and distended abdomens. Fish which survive the disease can remain carriers of the illness for life, without displaying



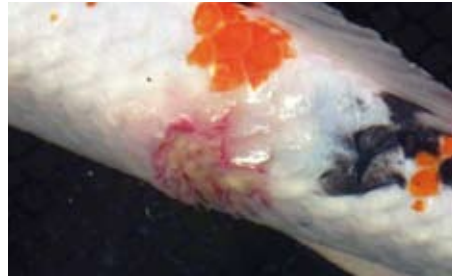
any symptoms themselves. At present, direct treatment with medication is not possible. It is important that the conditions under which the fish are kept are improved. Adding vitamins to the food with **JBL KoiVital** is very beneficial and treatment should be rounded off with **JBL AccliPond** to build up the damaged mucous membrane of the fish and provide long-term protection. Increasing the temperature of the water to 20 °C is also reported to be of benefit (Dr. Sandra Lechleiter: Krankheiten der Koi, DATZ Aquarienbücher).

C: Ulcerous growths on the body, skin ulcers

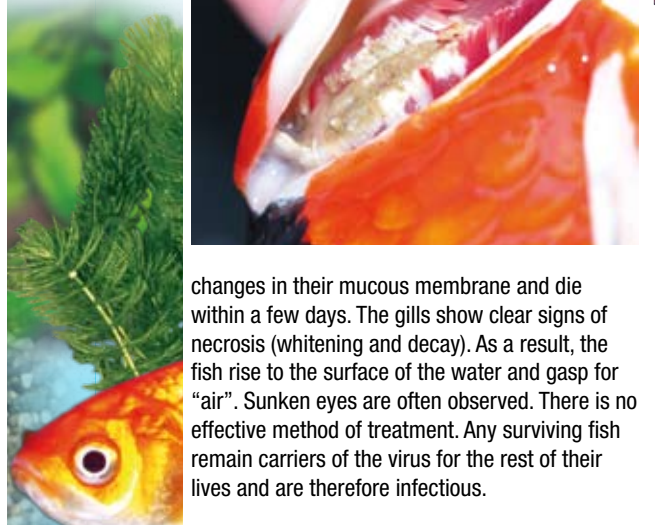
Ulcers and open sores on the body of the fish are triggered by bacteria which are always latent in the water or in the body of the fish. Under suitable conditions, these can explode in number, leading to problems. An anti-bacterial remedy such as **JBL FuraPond** is extremely effective against the bacteria, but not against the cause. It is vital that the causes are identified: water pollution, fish stocking, planting, food and oxygen content should all be checked.

In the garden pond these problems often occur

in spring. Increasing temperatures coupled with increasing activity in the fish and a lack of energy reserves often lead to an outbreak of the disease. Help and prevention is very simple: as soon as the fish start feeding again after the winter rest, the correct low-temperature food should be given (**JBL Pond Energil**). A weekly supplement of **JBL**

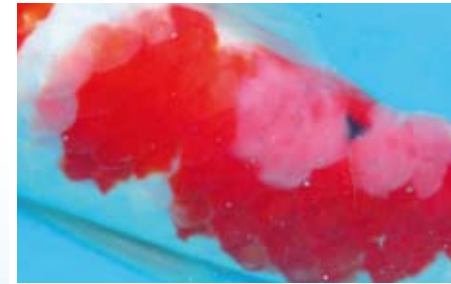


KoiVital provides the fish with the restorative vitamins required to prevent an outbreak of the disease.



D: Koi herpes virus, KHV, Koi pox

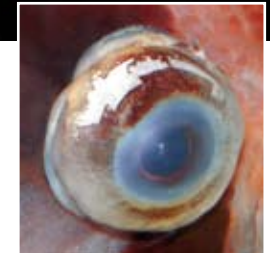
Often occurs in summer, even amongst fish kept under the best conditions, and is highly contagious. It is caused by a virus which only multiplies at temperatures above 10 and below 30°C and which only affects koi. The fish exhibit serious



changes in their mucous membrane and die within a few days. The gills show clear signs of necrosis (whitening and decay). As a result, the fish rise to the surface of the water and gasp for "air". Sunken eyes are often observed. There is no effective method of treatment. Any surviving fish remain carriers of the virus for the rest of their lives and are therefore infectious.

Popeyes , Exophthalmus:

One or both of the eyes protrude unnaturally from the head. The reasons for this clearly identifiable disease can be many. In most cases, the disease is due to deterioration in the water



quality. Checking the pH, KH, ammonium, nitrite and nitrate is urgently recommended. It has also been observed that vitamin deficiency can lead to protruding eyes. Please check whether the fish are getting a varied diet and whether open cans of food are used up within a maximum of 3 months. Hardly any vitamins remain in a can of food 3 months after being opened. Vitamin supplements should be added to the food with **JBL KoiVital**. If only one single fish is affected, it may be a bacterial infection. In this case, prompt treatment with **JBL FuraPond** is necessary to combat the disease and prevent it spreading further. Unfortunately it could also be an incurable fish tuberculosis.

Poisoning, water problems:

A: Oxygen deficiency

Fish breathing heavily at the surface of the water may be a sign of a lack of oxygen or symptoms



of poisoning. Many pond owners mistakenly believe that the fish are gasping for air. This is not correct. The fish are snapping at the thin layer of water directly under the surface because this layer has the highest oxygen content. Using an oxygen test (**JBL O₂-Test**) you can quickly and simply establish whether there is an oxygen problem. Increased breathing activity can be observed in most fish only when the oxygen content drops below 4 mg/l. Help is relatively simple. The oxygen level can be raised within a few hours using an aerating pump and airstones (**JBL PondOxi-Set**). The oxygen level can also be raised with the aid of the water flowback from the filter. As a basic principle: the stronger the movement at the surface of the water, the more oxygen can be



absorbed by the water. At the same time, the warmer the water, the less oxygen that can be absorbed.

Identifying why the oxygen level is so low is more difficult. Dead organisms (fish, algae, plants) use up large quantities of oxygen when they are broken down by bacteria. Measures to combat algae often lead to rapidly decreasing oxygen levels, which have to be counteracted.

B: Metal poisoning

As a basic principle, pond water is no place for metal! Many metals release free metal ions (charged particles) into the water which act as a poison to invertebrates, fish and microorganisms. The more acidic the water (pH-level below 7) the higher the percentage of soluble metal ions in the water. An extreme situation occurs with (acid) rain, when the rainwater is collected from roofs and is used: the low pH level of the rainwater dissolves large amounts of copper ions from the drainpipes, which often contain copper, which can then lead to symptoms of copper poisoning. Using a good water conditioner (**JBL CondiPond**) binds (chelates) the metal ions. The water should be changed when symptoms of poisoning are observed. Care should be taken with mains water: lead, copper or zinc (from the pipes) is often to be found in mains water. Therefore it is important

to use a good water conditioner when changing the water. The use of warm water boilers can also be a problem if there is metal pipping.



C: Nitrite poisoning

External symptoms are similar to those of oxygen deficiency, with rapid breathing, vigorous gill movements and hanging around at the surface of the water. Rubbing is also a frequent symptom! The reason is the toxicity of the nitrite (NO₂) (measured using a **JBL Nitrite Test Set**) which leads to the fish suffocating internally. It blocks the transport of oxygen in the blood. Nitrite levels above 0.1 mg/l are critical and should be corrected. The reasons for increased nitrite levels are: an imbalance in the bacteria in the aquarium due to bactericide



medications, very low or high pH levels (below 6 or over 8), over-stocking with fish, insufficient filter capacity or overfeeding. Remedy: Immediately change 1/3 water, never at the same time as cleaning the filter, but not until a week later (add **JBL ActivoPond**), add **JBL BactoPond** (nitrite eliminating bacteria) to the water.



Nutritional problems:

A: "Head-stands"

This head-down position often occurs in goldfish, fan-tails and other varieties of goldfish for the following reason: when feeding at the surface of the water they often swallow air, causing their body



to float upwards. Since this is not an illness, it is sufficient to feed the fish sinking food e.g. **JBL GoldPearls**. The fish should not be fed floating food!

B: Vitamin deficiency

It is not only people who struggle with this problem. In the case of fish, the greatest risk is that they are fed with only one sort of food for a long period or that the food has been open for a long time and the vitamin content has shrunk to zero. Please check whether the fish are receiving an adequate diet and whether open food cans are used up within a max. of 3 months. Hardly any vitamins remain in a can of food 3 months after being opened. Vitamin supplements should be added to the food with **JBL KoiVitol**. There is no objection to additional feeding with vegetables such as lettuce, cucumber or peas.

Feeding this “unaccustomed” food too often is not recommended as deficiency symptoms will eventually appear. It has been proved that algae and aquatic plants have a different composition to garden vegetables which are therefore unsuitable as long-term food for fish. Gardens are not the natural habitat of fish!

C: Over- or under-feeding

Feeding fish is often so much fun that it is done to excess. Unlike humans, fish continue to feed even though they have actually had enough food. Regular overfeeding leads to an accumulation of fat, recognisable by corpulence. The distended body is often mistakenly diagnosed as dropsy (which is incurable). Incorrect feeding can also cause the same problems. Goldfish and koi are not predators and therefore require the correct food for their species. Cheap food and large packs from non-specialist retailers often contain food for trout farms. This food is cheap, but is designed to fatten trout (= predators) quickly. Fed to pond fish,



Opened abdominal cavity from a Koi who has suffered from a strong fatty degeneration (due to inappropriate feed).

it results in fatty livers and death! **JBL Koi mini, midi and maxi** have been designed to meet the specific needs of koi at different stages of life and contain the optimum protein-fat ratio of



4.1. Varieties of sturgeon require special sturgeon food such as **JBL Pond Sterlet**.

Pond fish can starve in some circumstances. Particularly in spring and autumn when temperatures are still low, owners are often incorrectly (!) advised not to feed the fish. By feeding your fish with the correct low-temperature food (**JBL Pond Energi**) you can give your fish the energy they desperately need for the beginning of the warmer season. Only give the fish as much food as they can eat up in a few minutes. It is better to feed small amounts three times a day than a large amount once a day!



JBL GmbH & Co. KG
67141 Neuhofen
Germany
www.**JBL**.de



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