

FIRST AID FOR KOI

PART TWO

PAULA REYNOLDS



Paula Reynolds is an aquatic patho-biologist. Part of her working day is spent carrying out pathology for the koi industry and hobbyists. However, research is Paula's main occupation and she admits to enjoying the painstakingly detailed work that ultimately reveals so much new information.

Parasites, fungus and bent koi – just a few of the issues highlighted by Paula Reynolds this month...

One of my koi has raised scales and its eyes protrude.

This is most likely dropsy, which is not a disease but a condition with many underlying causes.

Koi can be placed in salt at half an ounce per gallon to help reduce fluid retention. Once the scales are almost normal drugs may be required, but this depends on why the fish developed dropsy. If the cause is bacterial then antibiotics may be appropriate.

If the fish has a good appetite and mixes with the other fish when the scales and eyes are normal then the cause may not be bacterial. In such cases the fish can be observed to ensure the improvement is sustained.

When many koi all develop dropsy, this indicates serious disease and advice may be needed.

*This swelling could be caused by Dropsy, which has many causes.
Photo: Adrian Love (Sparsholt College).*

My water quality is good and my koi parasite free yet they are off colour.

Carry out small but frequent partial water changes even though the results are satisfactory. Use a pond detox product and increase the level of aeration to make the koi more comfortable whilst investigating the possible causes.

Could recent heavy rain have introduced undesirable substances to upset the fish? Has a new item of equipment or a health product been used in the pond recently? Is new water dechlorinated? Has a horticultural product been used adjacent to the pond or have new fish been introduced recently? All of these can cause problems with the water quality and, as a result, your koi will be off colour.



Fins and body inflamed and damaged by poor water quality.

Dirty white tufts are sticking to the skin and the koi are listless.

White growths are a common observation in koi and they all have very different causes. If material resembling dirty cotton wool is seen on the skin it is likely to be a fungal infection. Fungus is always secondary and only attacks skin damaged by injury, parasites, chemicals or poor water quality.

Treating the fungus will not cure the underlying problem. Establish why the skin is damaged and treat the primary problem as well as the fungus.



These white growths show that the koi has a fungal infection. Photo: Adrian Love (Sparsholt College).



There are white lumps on several young koi in my pond.

If the growths are white and wax-like then the condition is most likely to be the viral disease carp pox. This can also form a layer on the skin and does not always present as a perfect round or oval growth. No treatment is necessary; it is a disease of cold water which will diminish as temperatures rise.

Mature koi are far less likely to develop the disease, which is seldom fatal. Seek advice if the condition fails to be alleviated by warmer water or if one fish is seriously affected.

Carp pox normally disappears and only rarely causes a long term problem.

All my koi are motionless and gasping at the pond surface.

Although koi cannot obtain oxygen for circulation around the body by gasping at the surface, this usually indicates the pond water is low in dissolved oxygen. Oxygen levels drop in hot weather, in planted ponds and when chemicals have been used. Increase the level with an air pump and air stones – not with a fountain or waterfall. If this is not possible turn on the hosepipe. Whilst tap water contains chlorine this is an emergency so use a dechlorination product later.

If the fish do not improve within an hour then oxygen depletion may not be the problem. The pond may be polluted so drain a proportion of the water out and top up again. If the fish pick up repeat this but use a purifier or a dechlorination product when there is time and take care never to chill the fish – tap water is colder than the pond water for much of the year.

Investigate the source of the problem if the water changes improve the behaviour of the fish.



Koi ponds should be well oxygenated to avoid unnecessary health problems.

My koi rest on the bottom all the time.

The most likely cause is that the fish are chilled. Chilling of the swim bladder is due to temperature fluctuations rather than the water being very cold. Several koi can be affected simultaneously and can be seen resting on the pond floor, sometimes inclining to one side. The fish should be seen to swim around when the sun has warmed the pond a little.

Isolate any severely affected koi that

is never seen to swim in facilities that can be gradually heated using salt in the water at half an ounce per gallon. Moving koi prone to chilling to shallower water takes the pressure off the swim bladder. Warmer water is better still.

At higher water temperatures, when only one koi rests on the pond floor, I would suggest the fish feels unwell and the swim bladder may not be the actual problem.



When koi become chilled they can lose their equilibrium.



The koi are irritated with a soapy film all the body and the gill filaments are brown in colour.

The most likely cause is nitrite and suggests the pond is not being tested regularly. An overstocked pond, cleaning the filter, over feeding and using chemicals are all common causes of a raised nitrite level. However, there

are influences on the pond water chemistry that involve the pond filter system. For example, pH swings can kill off filter biology.

Parasites can create mucus so take smears if the water tests are satisfactory, but they are not likely to cause the gills to appear brown in colour.

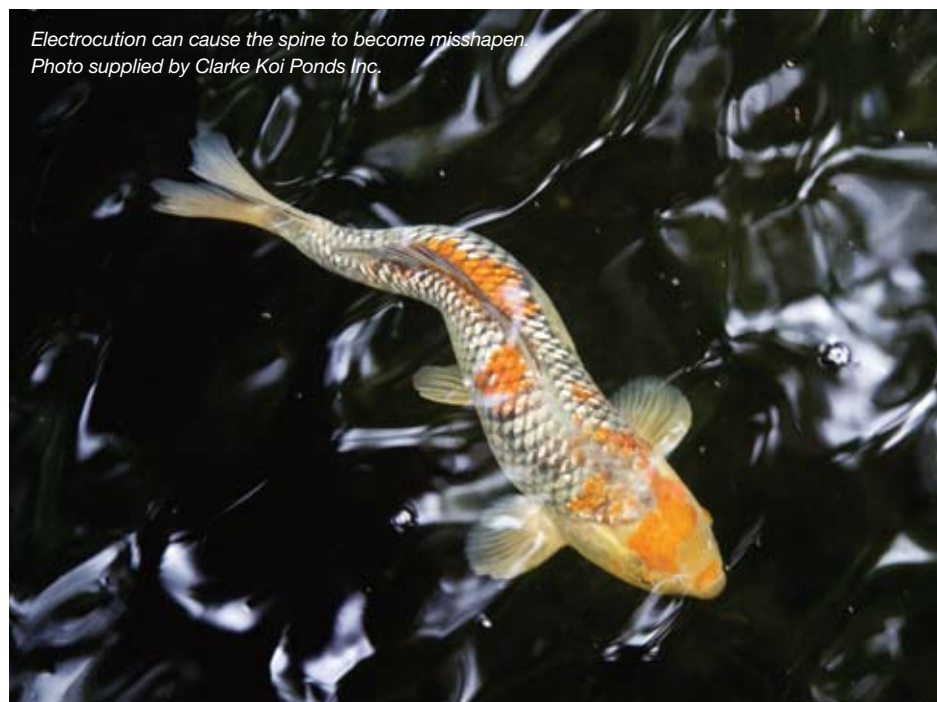
Overfeeding your koi can raise the nitrite levels.

Several of my koi are suddenly misshapen or bent.

There is a possibility of electrocution by faulty electrical equipment. Lightening can also trigger injuries, particularly to the spine. Chemically induced damage to the nervous system can lead to other

abnormalities and this is common after the use of certain chemicals, for example organophosphates such as Masoten.

The overuse of any pond remedy or injectable drug can cause damage to the body. In most cases, the damage is irreversible.



Electrocution can cause the spine to become misshapen. Photo supplied by Clarke Koi Ponds Inc.

My koi flick and scratch on objects and dart around the pond.

Parasites are the most likely cause if the irritation is continuous rather than occasional, but always test the water when koi are off colour. If possible, have mucus smears taken to avoid the guesswork that leads to needless chemical exposure. This will reveal which parasite is the problem so the most appropriate treatment can be used.



Costia is one of the smallest parasites to affect koi – it thrives in poor water conditions.