If you follow the advice given by your water gardening centre, and in our information brochures, it is unlikely that you will have any difficulty with your pond. However, in case you need help, this brochure tells you how to solve some common problems.

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Water clarity

Problems with water clarity are most commonly associated with green water, which is dealt with in the section on algae. However, in some cases murky / brown water may occur, which will spoil the appearance of the pond. This is usually caused by suspended debris, and should be corrected as follows:

- **Use TetraPond ClariFin** to clear the water. This clumps the particles together, causing them to settle on the base of the pond, or be trapped in the filter.

- **Remove sediment from the base of the pond.** If clarity problems are on-going, it may be the result of excessive sediment on the base of the pond. This is often re-suspended through fish activity. Occasional removal of sediment is therefore helpful, and can be achieved using a pond vacuum.
• **Make sure pond plants are properly potted.** Soil may escape from pond planting baskets if they are not lined, or if they are not covered in a layer of gravel.

• **Make sure soil is not entering the pond from the garden.** Rain can run over soil and wash it into the pond. If this is the case, you may need to dig a drainage channel around the pond and fill it with gravel.

• **Make sure your filter is working correctly.** If you don’t have a pond filter, or if it is not the correct size, it may not be able to cope with the amount of waste produced by the fish. Also, the filter should be kept reasonably clean and free from debris, as once blocked it will not work properly. **TetraPond filters** have cleaning mechanisms to make this easier.

• **Feed a good quality food.** Well-digested foods, such as those in the TetraPond range, are better utilised by the fish leading to lower waste production. This helps to keep the pond cleaner.
Algae causes two main problems in ponds – green water and blanketweed. As well as looking unpleasant, both can unbalance the health of the pond and should be treated.

**Green water**
Caused by algae suspended in the water, green water gives the pond a “pea-soup” appearance. It can be cleared quickly using TetraPond AlgoRem, with long-term control achieved by installing an ultraviolet clarifier, such as the TetraPond UVC.

**Blanketweed**
Caused by filamentous algae, blanketweed tends to grow around the sides of the pond and over rockwork and equipment. Its growth can be suppressed with TetraPond AlgoFin, which can be used alongside TetraPond PhosphateMinus for effective long-term management.

**Long-term algae control**
In addition to the methods above, long-term algae control can be achieved by the following:
- Using good quality food, such as TetraPond to keep waste production
low, and limit the build-up of algae nutrients in the water.

• Only using aquatic compost for planting, as soil and normal compost may leach additional nutrients into the water.

• Sticking to sensible fish numbers in order to limit nutrient build-up. Around 50cm per 1,000 litres is recommended.

• Keep sediment levels under control in order to reduce nutrient build-up in the water.

• Prevent run-off from reaching the pond as it may pick up nutrients from the soil.

• Restrict sunlight through the use of plants and solid structures.

• Add fast-growing plants to the pond to out-compete the algae for nutrients. Floating and oxygenating varieties are best.

For more information on dealing with algae, see our 'Beating Green Water and Blanketweed' brochure.
Herons

Although there are a range of predators that can take pond fish, herons are by far the most likely culprits. An adult heron can eat 350g of fish a day (twice this if it has young), and will make short work of a pond full of fish. Herons often arrive early in the morning, and you may never actually see one. However, if fish start disappearing or become very shy, it’s a good sign that one is visiting.

Herons are protected by law, making it illegal to kill or harm one. In any case, it is pointless killing one, as another would soon replace it. Instead, you need to create an environment that is too difficult for them to catch fish in.

Protecting the pond

There are various methods for deterring herons and other predators, and the right choice for you depends on how severe the problem is. One popular approach is to place a plastic heron by the pond. Whilst this is very unobtrusive, it is not guaranteed to work, with herons often becoming used to it over time.

A more robust approach is to place a net over the entire pond. This needs to be raised up high enough so the heron can’t push its beak through to the water. The drawback with this approach is that it can detract from the visual appearance of the pond.

A good compromise solution is to put a fence around the pond. As herons generally land on the side of the pond before entering it, this is usually sufficient to deter them. The fence should be 90cm (3ft) high, and placed about 60cm (2ft) from the edge of the pond. Either
netting or lengths of twine can be used for the fence, with the latter being less visible but not as secure.

**Other predators**

If other predators visit the pond, such as cats, mink, or foxes, protection will have to be a little sturdier. Flexible netting may be burrowed under, or pushed to one side. A good level of marginal planting around the pond can also help, and loose stones are said to deter cats.

Life can also be made harder for predators by creating hiding places for the fish. In the winter, when the plants thin out, a refuge can be created by placing a bucket on its side at the base of the pond.
Sick fish

Fish kept in a healthy environment rarely get ill, and if they do it’s important to identify any underlying causes. If the environment is not right they will be stressed, causing their immune system to weaken, leaving them open to infection.

Signs of illness

A change in the behaviour of the fish, such as loss of appetite or sluggishness, is often the first sign that something is wrong. In some cases, specific symptoms may develop that can help identify the disease, but this is not always the case. Just like humans and other animals, infections may be caused by a range of fungi, parasites, bacteria, and viruses. The more common ones can usually be treated with off-the-shelf remedies, provided any problems with the environment are corrected.

The following table offers a guide to some typical symptoms, and diseases they are likely to be associated with. Use this to try to identify the problem and the correct treatment method. For the vast majority of diseases, TetraPond MediFin offers a fast, safe, and reliable cure.
<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Likely cause</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small white spots covering skin and fins</td>
<td>White spot</td>
<td>TetraPond MediFin</td>
</tr>
<tr>
<td>Fish gasping at the surface</td>
<td>Water quality, gill disease</td>
<td>Test water, TetraPond MediFin</td>
</tr>
<tr>
<td>Thickened mucus, ‘milky’ or slightly grey appearance to skin</td>
<td>Water quality, Skin slime disease</td>
<td>TetraPond MediFin, Test water</td>
</tr>
<tr>
<td>Mucus trailing from gills</td>
<td>Water quality, gill disease</td>
<td>TetraPond MediFin, Test water</td>
</tr>
<tr>
<td>Cloudy eyes</td>
<td>Water quality, physical damage, bacterial infection</td>
<td>Test water, TetraPond MediFin</td>
</tr>
<tr>
<td>Red streaks in fins and on body</td>
<td>Bacteria, water quality</td>
<td>TetraPond MediFin, Test water</td>
</tr>
<tr>
<td>Ragged fins</td>
<td>Physical damage, fin rot</td>
<td>TetraPond MediFin</td>
</tr>
<tr>
<td>Ulcers</td>
<td>Bacteria</td>
<td>TetraPond MediFin</td>
</tr>
<tr>
<td>Cotton wool like growths on body</td>
<td>Fungus</td>
<td>TetraPond MediFin</td>
</tr>
<tr>
<td>Darkening in colour/lethargy</td>
<td>Water quality, bacteria, poss. parasites</td>
<td>Test water, TetraPond MediFin</td>
</tr>
<tr>
<td>Rapid gill movements</td>
<td>Water quality, gill disease</td>
<td>Test water, TetraPond MediFin</td>
</tr>
<tr>
<td>Swollen body and/or raised scales</td>
<td>Dropsy (poss bacteria)</td>
<td>TetraPond MediFin</td>
</tr>
<tr>
<td>Protruding eyes</td>
<td>Physical damage, bacteria</td>
<td>TetraPond MediFin</td>
</tr>
<tr>
<td>Waxy growths on skin or fins</td>
<td>Carp pox</td>
<td>Test water</td>
</tr>
<tr>
<td>Eroded mouth and head with cotton wool like growths</td>
<td>Cotton wool disease (bacteria)</td>
<td>TetraPond MediFin</td>
</tr>
</tbody>
</table>

Tip: For some diseases it can be beneficial to treat the pond with pond salt. Ask your aquatics outlet for more advice.
Curing sick fish

To begin with, try to resolve any underlying environmental problems:

• **Test the water to ensure it is healthy.** You can do this with TetraPond test kits, and your aquatics outlet may be able to test a water sample for you. At a minimum, you should check for ammonia, nitrite, and pH. If no problems are identified, you should also check levels of nitrate, oxygen, GH, and KH. Any problems need to be resolved before treatment is likely to work. More information on water quality can be found in our “Caring for your Pond” brochure.

• **Clean the base of the pond & equipment,** as excessive amounts of sediment can harbour disease-causing micro-organisms.

• **Ensure you are feeding a good quality food,** as this will provide everything needed for a healthy immune system.

• **Ensure the pond has plenty of shelter.** If they can’t hide away, many fish will become stressed and sick.

• **Make sure fountains and waterfalls are on all the time in the summer.** At night, oxygen levels are often at their lowest, especially in warmer months. Leaving these running will keep the water healthy.

**Using a treatment**

Once you have identified any possible environmental problems, and taken steps to resolve them, you can then treat the pond. Use the disease identification table on page 11 to find the most appropriate remedy, and ask your aquatics outlet for further help if required.

All TetraPond foods contain patented ActiveFormula, which helps fish maintain a healthy immune system.
Treatment tips:
• Before adding the treatment, perform a 10% water change using tap water and TetraPond AquaSafe. If necessary, tidy up the base of the pond with a pond vacuum.
• Perform a further 10% water change each time you re-treat the pond.
• Ensure there is plenty of aeration during treatment – if the fish seem to gasp at the surface, increase surface water movement with a fountain.
• Read the instructions carefully, and only add the correct amount of treatment. TetraPond MediFin is safe for all fish, but some other brands may carry special warnings for certain species.
• Remove activated carbon, ion-exchange resins, and other “chemical” filtration media during treatment. Ultraviolet clarifiers should also be switched off. These make the treatment less effective.
• Add TetraPond AquaSafe to the water during treatment, to support recovery.
• Watch the fish carefully, and seek help if they appear to react badly to treatment. A partial water change can always be used to dilute out the active ingredients if necessary.
Spring health problems

Early spring, as temperatures start rising, can be an especially sensitive time for pond fish. As they come out of a period of relative inactivity, it can take time for their immune systems to start working properly. During these initial weeks, infections are more likely, and steps should be taken to help your fish through this period:

• Make sure you feed your fish during the autumn and winter, as and when they are active and looking for food. A lack of food results in poorer condition and a weaker immune system in the spring. TetraPond Wheatgerm Sticks are specially formulated for winter feeding.

• Unless the instructions say otherwise, only clean filter media in pond water.

• When adding new fish, follow the advice of your aquatics outlet, and only add a few at a time.

• When adding tap water to the pond, always use TetraPond AquaSafe.

Three very common causes of health problems are washing the filter media in tap water, adding too many fish to the pond at once, and failing to properly condition tap water. All can cause water quality problems or directly harm fish, leading to disease:
• Before the weather warms, try to remove as much debris as possible. Over the winter, fallen leaves and dead plant matter can accumulate, polluting the water.

• Keep the filter running through the winter, unless it is likely to freeze. Switching it off can result in water pollution, which will stress the fish.

• Treat with TetraPond MediFin at the first sign of any disease symptoms.

• Perform a partial water change at the start of spring, to refresh the water and restore its mineral content. Remember to use TetraPond AquaSafe to remove chlorines and other toxins.
Approved by

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