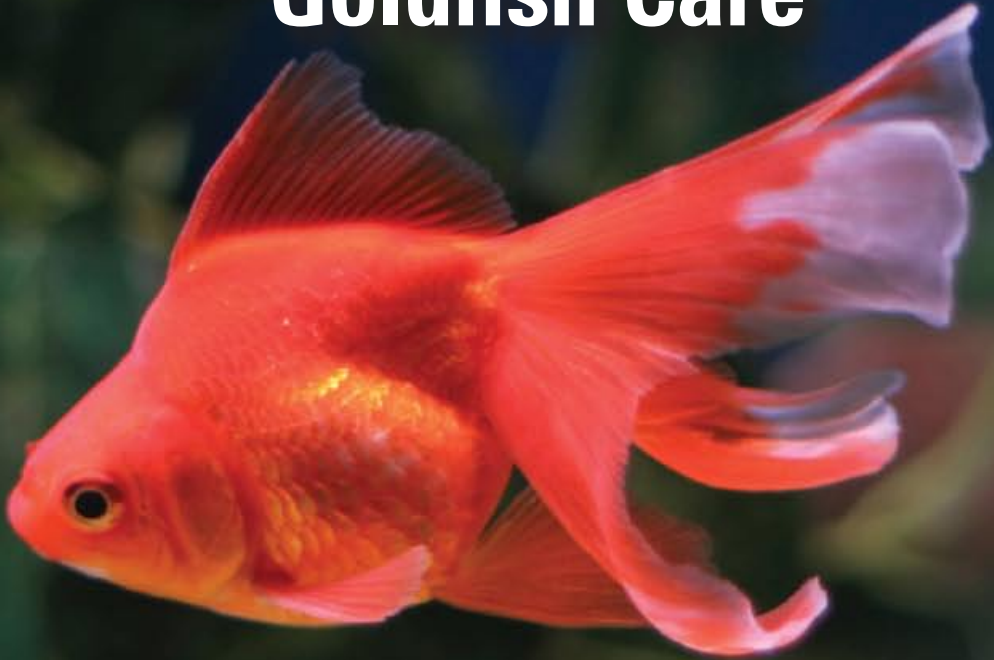




# Goldfish Care



Approved by

**SPARSHOLT**  
COLLEGE HAMPSHIRE

For more information: [www.tetra.net](http://www.tetra.net)



# Goldfish care

Goldfish are ideal pets for children, being fun and interesting, as well as teaching responsibility without the demands of a larger pet. In addition, a well cared for aquarium can provide the perfect focal point to any room, offering a fascinating insight into the underwater world.

With **Tetra's** range of high quality and simple-to-use products, it has never been easier to care for goldfish and keep the aquarium looking good. For more than 55 years **Tetra** has been the global leader for aquarium products, committed to making aquarium ownership easy and enjoyable through continual innovation and unrivalled customer support. Every **Tetra** product has been subject to rigorous testing by our independently accredited Research and Development laboratories to ensure they keep your goldfish in top condition.

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# Planning your aquarium

Before purchasing your aquarium, it is important to think about what you want from it, and where you are going to place it. Taking a few moments to do this will avoid problems later on, and make setting up your new aquarium easier.

## Size

The size of the aquarium will not only determine how many fish you can keep, but also how easy the aquarium is to care for. For example, the traditional goldfish bowl does not offer an ideal home, and is usually much harder to look after compared to modern aquariums.

**As a rough rule of thumb, aim to provide 1-2 litres of water for every 1cm of fish.** This relates to their eventual size, not the size when you buy them. Depending on their variety, goldfish in aquariums will grow to an average of 10-15cm. So, for two goldfish you should provide an aquarium around 30 litres in size.

## Position

A filled aquarium is heavy, so thinking about its position now will avoid you having to move it in the future. An ideal position would be:

- In a reasonably quiet area, away from sudden noises (e.g. not next to a door)
- Away from areas of very high activity
- Away from sources of heat or cold (e.g. radiators)

- Easily accessible, to allow for any maintenance
- Out of direct sunlight, to prevent algae growing
- Well supported, to take the weight of the aquarium (a litre of water weighs approximately 1kg)
- Near to an electric supply to plug in equipment, but far enough away to avoid any danger of splashing



# Aquarium

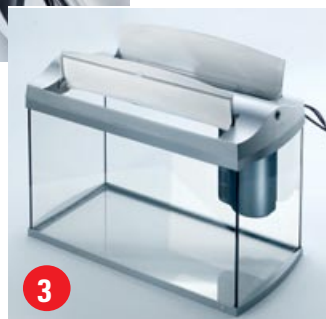
Having planned for your aquarium, you can now discuss your requirements with your aquatics outlet. They will be able to show you some suitable options to choose from. If you prefer, you can buy the aquarium and equipment separately, however an easier option is to get a complete kit.

## Tetra AquaArt Aquariums

**Tetra AquaArt** aquariums have been designed to make starting with an aquarium easy. As well as their award-winning design, every detail has been carefully considered for ease-of-use and healthy, clear water.



- 1** The innovative **EasyCrystal** filter is simple to use, and keeps water healthy and crystal clear.
- 2** The **EasyCrystal** filter is easy to clean and maintain, with a “one-touch” system for easily replacing the filter cartridge without getting wet.
- 3** Large, user-friendly openings in the hood for feeding and easy access to equipment.
- 4** Modern design based on exclusive **Tetra** research:
  - Innovative features
  - High quality material
  - Silver colour to suit any décor
  - Awarded international IF Design award



5 Completely safe to set up and use thanks to excellent manufacturing and high-quality equipment.

6 The filter can be positioned easily in a number of different places, thanks to customised support slots.

7 High quality glass aquarium:

- Distortionless float glass with smoothed edges, for better viewing
- Stable hood with durable fluorescent tube, ideal for encouraging healthy plant growth

8 Complete with all equipment, set-up instructions, and **Tetra** food and care products.



# Equipment

Whether they come separately or as part of the aquarium, there are some important items of equipment that are essential for keeping your goldfish healthy, and the water clear.

## Filter

Like all animals, goldfish produce waste. It is the filter's job to remove this waste from the water, making it safe for the fish.

There are two types of waste to be aware of:

**Solid waste** is mostly undigested or uneaten food. If allowed to accumulate it will cause the water to become murky, and reduce the quality of the environment.

**Dissolved waste** is primarily excreted by fish across their gills, and if not removed will accumulate rapidly to dangerous

levels. The most important dissolved waste is ammonia.

A good quality filter, such as those in the **TetraTec** range, removes both solid and dissolved wastes. It therefore makes the water clearer and safer for your goldfish, and is absolutely essential for their proper care.

Solid waste is removed by physical straining ('mechanical filtration'), whilst the removal of dissolved waste depends on naturally occurring filter bacteria. These colonise the filter and turn ammonia into nitrite, and then into nitrate. This is known as 'biological filtration', or 'nitrification', and is central to good water quality.

Never keep goldfish in an unfiltered aquarium. Although in some cases they may appear healthy, they will be stressed and more likely to suffer from disease.

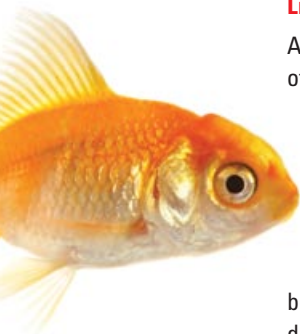




### **TetraTec INplus filters**

- Powerful and easy-to-use internal filters
- Two filter chambers to minimise loss of bacteria during replacement and cleaning
- Filter chamber can be removed for cleaning without taking filter out of aquarium
- Flow adjuster allows regulation of flow rate
- Venturi system increases oxygen content of water
- TUV/GS tested, CE certified – safe and reliable





## Light

A light/dark cycle is a natural part of a goldfish's life, and live aquarium plants rely on good lighting for growth and health. Ambient light levels are not sufficient to support these processes, and so you will need a proper aquarium light unit. This should be on for approximately 10 hours a day. Do not use ordinary household lights, as these don't produce the right quality of light, and produce excessive heat.

Light units can be bought separately and installed into most aquarium lids, or they may come as part of the aquarium kit. **Tetra AquaArt** aquariums come with a built-in light unit, specially designed for encouraging good plant growth.

## Air pump

Air pumps, such as the **TetraTec APS**, are designed to deliver a constant flow of air into the aquarium, to increase oxygen levels. In addition they can be used to power air-driven ornaments.

Although adding an air pump is always beneficial, it is not essential if you have a good filter. This is because the flow produced by the filter can be used to aerate the water. In filters such as the **TetraTec INplus** this is done with a special 'venturi' fitting which draws in air bubbles. If you have such a filter, and the aquarium is not overstocked with fish, an extra air pump may not be necessary.

In aquariums with a lot of fish, where there is less water movement, or where there is an air-powered ornament, you should add an air-pump. **TetraTec APS** air pumps have been engineered to deliver excellent flow rates of air, whilst producing virtually no noise. When using an air pump, it is important to fit a check valve, such as the **TetraTec CV4**, to prevent water back-siphoning into the pump. You will also need some airline and a diffuser stone.



### **TetraTec APS Air pumps**

- Very quiet and highly reliable
- Excellent flow rate of air, even in deeper aquariums
- Adjustable air-flow
- Twin outlets on larger models
- TUV/GS tested, CE certified – safe and reliable

### **Equipment check-list**

Aquarium, e.g. **Tetra AquaArt**

Filter, e.g. **TetraTecINplus**

Light

Air pump, e.g. **TetraTec APS**

For more information on aquarium equipment, see our '**Aquarium Equipment**' brochure.



# Decorating the aquarium

Having chosen your aquarium and equipment, you can now think about decorating it. This isn't just to make the aquarium look nice; it also helps to create an environment in which your goldfish feel comfortable.

## Base of the aquarium

The first decision is which substrate to use on the base of the aquarium. There is a huge selection available, and your aquatics outlet can advise you on its own ranges.

The most popular substrate is pea gravel. This is ideal if you want to have live plants in the aquarium, as it provides a sufficient flow of water around the roots to keep them healthy. You will need a layer of 5-7cm (2-3in) for a planted aquarium, and 1-2cm (0.5-1in) in a non-planted one.



An increasingly popular alternative to pea gravel is sand, of which there are various types. Sand is not as suitable for live plants, however it often remains cleaner than gravel because it does not trap dirt so easily. Make sure the sand you use is meant for aquariums, as some types may be too sharp, or alter the chemistry of the water.

Before use, the substrate will need to be well-washed to remove any dust. If this is not done, the aquarium will become murky when filled.

## Live Plants

Live plants give the aquarium a more natural feel, and help to keep it healthy. You will need to ask your aquatics outlet which plants are most suitable for a goldfish aquarium, as many require warmer water. Use live plants to landscape the aquarium, placing taller ones at the back and larger ones at the front.



## Décor

The aquarium should contain one or two hiding places for your goldfish, as this will help them settle in more quickly and become more confident. When choosing décor, make sure it is from a safe source, such as your aquatics outlet. This will avoid the risk of it polluting the aquarium. There is a wide range of décor to choose from, including:

**Rocks** - These provide structure and focal points, and are great for building hiding places. Ensure the rocks you choose will not alter the chemistry of the water (inert rocks, such as slate, are best), and that they do not contain any metallic veins. If building complex structures, consider gluing the rocks together with aquarium silicone for greater stability. Your aquatics outlet can advise you further.



**Bogwood** - Bogwood provides a very natural look and feel to the aquarium, and is especially effective when combined with live plants. You will need to soak it for a few days before use, to draw out humic substances that can cause the water to turn yellow. These are not harmful, however they can reduce the clarity of the water. Once in the aquarium, if you do experience a slight yellowing of the water, you can easily remove this with activated carbon filter media. Your aquatics outlet can advise you on the correct media for your filter. All

**TetraTec filters** either come with, or can be fitted with, carbon media.

**Ornaments** - Artificial ornaments come in all shapes, colours, and sizes; from imitation rocks and wood, through to brightly coloured, moving air-driven features. When choosing ornaments, consider how they will blend in with the overall design of the aquarium. Also, remember that moving ornaments will require an air-pump, such as the **TetraTec APS**.

**Artificial plants** - Although it is better to have live plants in your aquarium, in some cases artificial ones can be more practical. Use taller ones to provide a back-drop to the aquarium, with smaller ones in the foreground.

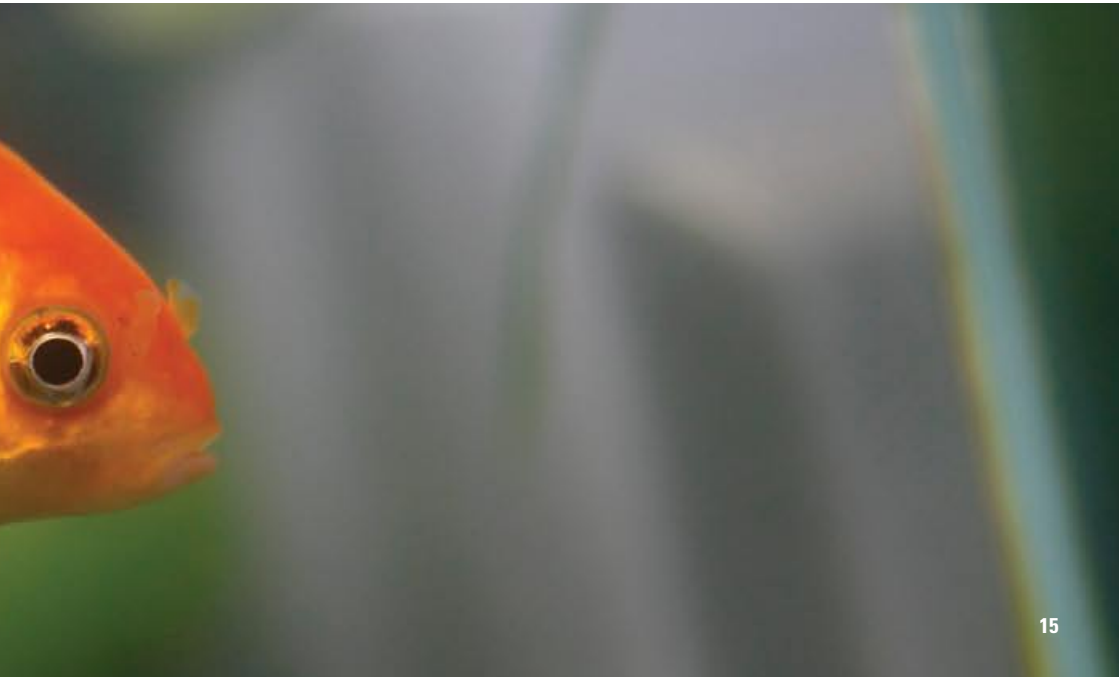


Purchase all décor and aquarium substrate from an aquatics outlet to ensure it is safe. Avoid materials that affect water chemistry (e.g. calciferous rocks), unless it's on the advice of your aquatics outlet.

### What else you will need

Before you can get started, you will also need to ensure you have the following:

- Bottle of **AquaSafe for Goldfish** (included with **AquaArt** aquariums), to make the tap water safe.
- Depending on the aquarium, it may need to rest on some polystyrene tiles or a cork base (not necessary for **Tetra AquaArt** aquariums).
- Bottle of **Tetra SafeStart**, to add bacteria to the filter.
- **TetraFin Flake** for feeding the fish (included with **AquaArt** aquariums).



# Getting started



Having chosen your equipment, substrate and décor, and found a suitable location, you can now get started on setting up your aquarium:

## 1. Substrate

Wash the substrate thoroughly under running water, to remove any dust, and add it to the aquarium. If you are going to have live plants, this needs to be 5-7cm (2-3in) deep. If not, 1-2cm (0.5-1in) is sufficient.

## 2. Equipment and décor

Position the filter, light, and (if present) air pump according to the instruction manuals. Give your chosen décor a good wash, and then arrange this according to your own design. Try to use them to conceal the equipment, and don't forget to provide hiding places for the fish.

## 3. Water

Prepare your aquarium water by filling a large plastic bucket from the tap, and then leaving it to warm to room temperature (18-20°C). Do not use water from the hot tap. Then, add **AquaSafe for Goldfish** to the water to neutralise harmful chlorines and heavy metals.

Lay a plate or saucer on the substrate, and then pour the prepared water onto it. This will avoid disturbing the substrate as the aquarium is filled. Only fill the aquarium half-way at this stage.





#### 4. Live Plants

Before positioning any live plants, trim back their roots and remove any damaged leaves. If they came in a pot, remove this and any rockwool it contains. Then carefully push the base of the plants into the substrate, using your finger to move the gravel aside. Back-fill the gravel, and gently pull the plant up until its growing tip is just above the substrate. Push some **TetraPlant Crypto tablets** into the substrate to provide them with the nutrients they need for healthy growth.

You can now finish filling the aquarium.

#### 5. Settling-in phase

Once the aquarium is full, you should switch on all of the equipment to check it is working properly. It is important to leave the aquarium running empty for a day or two, to check everything is working and to let the water settle down. During this time, switch the light on for 10 hours each day, to ensure the plants can photosynthesise.

It is a good idea to fill the aquarium and leave it standing for 24 hours, to check there are no leaks prior to putting it in its final position. Although the quality of modern aquariums is excellent, there is always a very small chance of damage occurring during transport.



# Adding fish to the aquarium

A common mistake is to add fish to the aquarium too quickly. When first set up, the filter does not contain any of the beneficial bacteria that convert toxic ammonia into nitrate. If too many fish are added at once, ammonia levels therefore rise causing the fish to become unwell. This is often called 'New Tank Syndrome', and is characterised by high ammonia and nitrite levels in the aquarium water.

There are two ways to avoid New Tank Syndrome, and ensure your aquarium gets off to a healthy start:

## METHOD 1

### Traditional stocking process

This approach depends on stocking the aquarium slowly, to avoid dangerous peaks in ammonia or nitrite.

- 1 Having allowed the aquarium to settle for a day or two, begin by adding the first goldfish.
- 2 Using **TetraTest liquid kits**, check the ammonia and nitrite level every 2-3 days.
- 3 If ammonia or nitrite levels are too high according to the kits, perform a partial water change (using tap water treated with **AquaSafe for Goldfish**) to help dilute them.
- 4 Ammonia will rise initially, followed by nitrite, and finally both will return to zero. At this point, you can add another fish and repeat the process of testing the water regularly.

When adding new fish, use **Tetra SafeStart** to increase the number of bacteria in the filter. This will dramatically reduce the time taken for ammonia and nitrite to be brought under control.

## METHOD 2

### Using TetraAqua SafeStart

**Tetra SafeStart** contains the bacteria responsible for nitrification in aquariums (*Nitrosomonas*, *Nitrosospira*, *Nitrospira*). Its use allows the safe introduction of fish into new aquariums without the need to stock slowly over weeks or months.



- 1 Having allowed the aquarium to settle for a day or two, add 5ml of **SafeStart** per 6 litres of aquarium water. On the same day, introduce all the fish to the aquarium. Do not exceed the rule of 1-2 litres of water per 1cm of fully-grown fish.
- 2 Monitor ammonia and nitrite levels carefully using **TetraTest liquid kits**. Perform a partial water change if levels become dangerous (using water conditioned with **AquaSafe for Goldfish**). Levels of ammonia or nitrite should fall to zero within a week or two, confirming that the aquarium is fully operational.



It is not uncommon for new aquariums to experience cloudy water, caused by a bloom of micro-organisms. Once the aquarium and filter settle down, this will clear. Provided you are monitoring ammonia and nitrite, this cloudiness is not harmful to the fish.



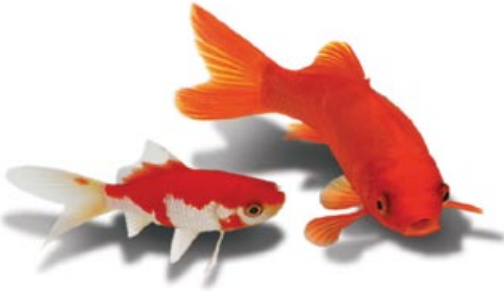
# Choosing and introducing fish

When buying fish, make sure they generally look healthy and active, with no obvious signs of injury or disease. However, avoid the temptation to pick individual fish from a large shoal. The process of catching the fish is stressful for them if prolonged, and may mean you end up with a fish that is not in top condition. The staff in your aquatics outlet will be able to select good quality fish for you.

## Transporting fish home

The aquatics outlet will place your new goldfish in a sealed bag, sometimes with added oxygen. Don't be alarmed by the apparent lack of water in the bag – it is far better to have less water and more air / oxygen, as this creates a healthier environment.

During the journey home, keep the bag in the dark, and away from direct sunlight or excessive heat. Take your goldfish home as quickly as possible, as the process of being transported is quite stressful if prolonged unnecessarily.



## Introducing fish to the aquarium

When you get your goldfish home, keep the bag sealed and float it in the aquarium for 10 minutes to allow the temperature to equalise with the rest of the water. Turn the aquarium lights off during this process. Then, open the bag and roll the sides down. Over a period of thirty minutes, slowly top the bag up with water from the aquarium. This helps your new goldfish get used to the chemistry of the water. Once this is done, carefully net the goldfish out of the bag and release it. If possible, avoid pouring the water from the bag into the aquarium, as by this stage it will be quite polluted. Leave the lights off until the next day.

Your new goldfish may hide for a day or two until it feels secure. Having plenty of cover will help it to settle quickly. Offer a small amount of food at the same place each day, to encourage it to feed. Remove any that is uneaten, and avoid feeding on the first day they are introduced. It is beneficial to add **AquaSafe for Goldfish** to the aquarium when you add fish, as it helps them cope properly with any stress.



# Varieties of goldfish

There are lots of different goldfish varieties, all of which broadly fall into two categories – fancy goldfish and common goldfish. Either are suitable for aquariums, however it is not a good idea to mix them. This is because common goldfish often out-compete fancies when it comes to feeding.

## Common Goldfish

Common goldfish display a typical 'fish' body-shape, and come in three varieties. The classic orange/red goldfish is the most popular variety kept, and the one most people start with. Shubunkins are a multi-coloured variety, displaying all sorts of patterns and colours. Comets are often red and white, with longer, flowing tails. They all have the same basic care requirements, and can be kept together.



## Fancy goldfish

Over hundreds of years, goldfish have been selectively bred to produce a wide variety of body shapes and colours. These more ornate ones are called 'fancy' goldfish, and there are many to choose from. They can be mixed with each other quite happily, and require the same basic care as common goldfish. However, because of their different body shape, they do benefit from a specially formulated diet, such as **TetraFin Gold Japan**.



# Feeding

Like any animal, goldfish need a balanced diet for good health and condition. **Tetra** offers a variety of goldfish diets, formulated and tested for their specific needs. You should feed your fish 2-3 times a day with one of **Tetra's** complete foods, and offer a treat food 2-3 times a week. All **Tetra** foods are designed to minimise waste production, helping to keep the water clean and clear. They also contain patented **ActiveFormula** to maintain a healthy immune system.

## Daily foods

**TetraFin Flake** is a complete flake food for goldfish, and is an ideal daily diet. Alternatively, **TetraFin Sticks** are easier for children to feed, as the sticks can be counted out to avoid over-feeding.

For fancy goldfish, **TetraFin Gold Japan** should be used as the daily diet. It is a sinking stick that is easier for fancy goldfish to eat, and contains ingredients to bring out their strong natural colours.

## Treat foods

To add variety to your goldfish's diet, feed **Tetra FreshDelica Daphnia** 2-3 times a week. This is a natural treat food that goldfish love. **FreshDelica** is also available in bloodworm and brine shrimp varieties.

## Special foods

If you want to give your goldfish a little bit of luxury, or optimise their condition, use one of **Tetra's** special goldfish foods.

**TetraFin Granules** are a mix of specially formulated granules that are used more effectively by the fish. This improves their condition and reduces waste production even further.

**TetraFin Gold Exotic** contains high quality vegetable ingredients that more closely match the natural diet of goldfish. It is also rich in highly digestible wheatgerm.

**TetraFin Gold Colour** contains more of the ingredients that strengthen the natural colours of goldfish. If you want them to look their best, this is the diet to use.

**TetraFin Gold Growth** is especially good for smaller fish, as it contains high quality proteins and oils for rapid, healthy growth.





## Holiday foods

To ensure your fish get enough to eat while you are away, Tetra has developed two unique holiday foods. Unlike plaster-based holiday foods, they are 100% edible and do not alter the chemistry of the water.

**TetraFin Weekend Sticks** provide nutrition for short breaks and weekends away, whilst **TetraFin Holiday** offers a gel-based natural food source for up to two weeks feeding.

Did you know that goldfish aren't as forgetful as many people think? Rather than having a memory of just a few seconds, they will come to learn when it's feeding time, and be ready and waiting for you to arrive with their dinner!



# Keeping your goldfish healthy

To keep your goldfish healthy and the aquarium clean, there are a few things you need to do:

## 1. Refreshing the water

Over time, aquarium water 'ages' and becomes unhealthy. This needs to be prevented by refreshing it from time to time. There are two ways of doing this:

A partial water change can be carried out every 2-3 weeks, which involves replacing 25-30% of the water with tap water that has been warmed to room temperature, and conditioned with **AquaSafe for Goldfish**.

Alternatively, add **Tetra EasyBalance** to the aquarium once a week. This recreates the refreshing action of a water change, and in addition adds important trace elements to the water that keep fish and plants even healthier. With **EasyBalance** a water change can be done once every 3-6 months.

## 2. Keeping equipment clean

The filter in your aquarium will need cleaning from time to time, to keep it running properly. Read the instructions for details on the model you have, but generally this involves replacing or cleaning some of the media it contains. Never clean biological filter media (where the bacteria live) in tap water, as this will kill them and the aquarium will become polluted.

Other equipment needs little maintenance, and should be cared for according to the instructions.

## 3. Keeping the substrate clean

Dirt will settle in the gravel or sand over time, and needs to be removed. A **Tetra GC Gravel Cleaner** is ideal for this, and allows cleaning to be done at the same time as removing water during a water change. Although every aquarium is different, start by cleaning the gravel once every 4 to 6 weeks.







Approved by



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For more information: [www.tetra.net](http://www.tetra.net)