The Optimum Goldfish Aquarium

The original Goldfish lives in fast flowing, cool and well oxygenated waters in north eastern Asia. It spends its day turning over the bottom of the stream. In the spring, the males look for a mate to spawn with along the grassy fringes of the flooded bank. Goldfish in captivity need a pond to spawn in if you are thinking of breeding them.

Of course, today’s goldfish have been developed into a multiple of different colour and body forms, which are often the first fish of choice for many new aquarium hobbyists. They are very hardy and do not require heating. This is what makes them different to tropical fish. Auburn Aquarium carry a complete range of local breed and fancy imported goldfish.

The average Goldfish has about a 20 year life span and is capable of growing up to 25cm or more, if provided enough space. In fact the world’s oldest Goldfish lived to be 43. For these reasons we believe it is best to provide as much space as possible and the highest quality equipment to keep our Goldfish happy.

Choosing an Aquarium for Your Goldfish

Remember the surface area of an aquarium is where the oxygen enters the water. So, if you want your Goldfish to get enough oxygen, try to select a tank or bowl with the largest surface area possible. Make sure they don’t get crowded. In a small tank one or two Happy Goldfish are much nicer than 4 or 5 unhappy ones. The addition of filtration greatly increases the number of fishes you can keep and reduces the amount of waste in your water keeping them healthy. Your goldfish should grow well if you give them plenty of room.

So how big an aquarium do you need to keep more fish? A good rule of thumb to calculate how many fish you can fit into your well filtered aquarium is 1cm of fish length per 1 cm of aquarium length. For example, in a 60 cm aquarium you could have 10 x 6cm long Goldfish, 6 x 10cm long or 4x 15cm long Goldfish.

Use a Blended Gravel

A good blended gravel is a basic fundamental for your tank, it should contain a high proportion of fine grade pebbles. This ensures that food sinking to the bottom can be grazed over by the Happy Goldfish without fear of food falling into the gaps between purely coarse gravel causing ammonia problems which are deadly to fish. The finer the gravel blend you use the cleaner your tank will run.

We have a wide range of natural finer grade gravels, available in many natural colours. We also offer a range of decorative pebbles and coloured stones that should be sprinkled over this natural finer gravel blend. Ornaments and rocks and logs can be added next.

Preparing your Tap Water

Consider: Natural Water with electrolyte salts

Next we must treat our tap water to remove harmful chlorine and ammonia (chloramines) that will kill fish. Most tap water treatments only remove chlorine leaving behind the ammonia that often proves lethal. There are several products like Seachem Prime or API Ammo Lock that will remove both, but the best value is our own START RIGHT A or the more concentrated Supa Chlor Ammonia Remover.

Add START RIGHT A at the rate of 5 ml / 20 litres to instantly make your water safe for your fishes and plants.
To recreate our natural stream system, it is also necessary to replace electrolytes like sodium, magnesium and potassium missing in tap water. The electrolytic (aquarium) salts are essential to your fish’s wellbeing. Aquarium salt provides three important benefits:

- An anti-bacterial effect
- Produce body slime to protect themselves from infection
- Create an essential osmotic barrier so fish do not dehydrate

There are a number of aquarium salts on the market, but none as good as **START RIGHT B**, which not only contains these essential aquarium salts but importantly also uses a deioniser to remove heavy metals like Alum (aluminium sulphate) which is in our water.

Add **START RIGHT B** at the rate of 1 teaspoon (5 g) / 10 litres of water. Dissolve before adding to your aquarium.

You can’t give your fish a better start than with **START RIGHT A** and **START RIGHT B**. They are many products we can use to produce specific water conditions but these should all be used after conditioning you tap water with **A and B**. Ask staff to help you identify these products.

**NOTE**: Only use **START RIGHT A** and **B** in proportion to the volume of water being exchanged. To calculate water volume; Length (cm) x Width (cm) x Height (cm) divided by 1000 = Volume (litres). Eg: Tank 60x30x40 Vol= 60x30x40/1000 = 72 litres

The Happy Goldfish prefers a pH which is neutral to slightly alkaline or 7 - 7.6. In an established tank with higher organic levels the pH will be constantly pulled lower. Therefore it becomes necessary to monitor and adjust your **pH Up** weekly. **Seachem Gold Fish Buffer** can help maintain an ideal pH.

**Biological Supplementation**

The best way to get crystal clear water is to pro-actively provide bacteria cultures as biological filter supplements. In our opinion **Nutrafin Cycle** or **API QuickStart** are the best way to enhance your filtration and stay ahead of the game. People using these products simply do not encounter the same problems as people who take a minimalist approach (don’t use a filter supplement) and end up constantly reacting to problems.

These bacteria cultures help convert all organic wastes (fish poo, plant detritus and uneaten food) to ammonia then further to nitrite and finally to nitrate. To establish your tanks bacteria cultures can take several weeks but is accelerated greatly by adding supplements. You still need to be careful not to overstock your new aquarium during this run in period. As an indication 1 or 2 fish would be ideal to start with, the next addition would need to be at least a week later with still not more than 2 fish to be added.

After 21 days the nitrogen cycle is complete and your tank is mature, at this point you can now safely add more fish.

**Good Water Movement & Filtration is Essential!**

Good water movement allows the oxygen entering at the surface to be distributed around the tank. All good filters provide ample filter media surface area for the colonisation of aerobic (oxygen breathing) denitrifying bacteria which break down fishes waste. The greater the volume of the filter and the greater the flow rate, the larger the population of bacteria which keeps your tank clean by breaking down the waste.
Filter Types

You should select a filter that will turn over your water volume at least 4 times per hour. For example, in a 60 litre aquarium you would want a filter that does 240L/PH minimum.

External Canister Filters
Such as Eheim, Fluval or Aqua One are the best of all filters. They offer the highest flow rates through the largest volume of media and can be concealed from view.

Hang-on Style filters like the Aquaclear or Elite Hush are also very good. They provide the best value if your budget does not permit an external canister. To prime, simply fill the filter box with water and turn on. Water is pumped through the filter and gravity flows back into your tank. Sometimes you may need us to cut your top glass to suit.

Internal Filters
Like the Eheim Pick Up, Elite Jet Flo or Aquatopia ranges are popular for smaller tanks or as a secondary filter for extra circulation in a large tank. Internals usually do not interfere with top glass or hoods.

Air Operated Filtration
In bowls or small tank set-ups, a small air pump connected to an airstone is sufficient to move and oxygenate the water well. But if the water also moves through a filter your management will be a lot easier. Of the air operated filters, the Small World filters are a good choice, being small and easy to maintain by exchanging the cartridge. Other popular choices are sponge and simple box filters. Be sure to use a Check Valve (non return valve) so that water cannot flow back into your pump if your power goes off. When using T-pieces to divide your air flow use an inline valve for each device, as air will always flow to the ending of least resistance.

In a simple bowl set-up without any water movement or filtration, be extra careful not to overcrowd or overfeed.

Water Change Regularly

This cannot be stressed strongly enough. Nitrate is the residual by product of any filtration process. Although nitrate is relatively harmless, the levels will accumulate and become dangerous if regular partial water changes are not performed to dilute nitrates. pH is also pulled dangerously lower by organic waste accumulation. Therefore, no matter how good your filtration is, you still must water change regularly.

We recommend a 1/3 to 1/2 water change fortnightly to monthly to keep pH high (7-7.6) and nitrates low.

Always use a gravel vacuum when you change water so that you are not just removing old water but are also removing solid waste accumulating at the bottom of your bowl or aquarium. Remember a fine blended gravel will minimize this. The dirtiest water is then removed and new water which has been conditioned with Start Right A and B is returned to the aquarium.
Your fish should remain in the bowl or aquarium while you do this. Do not fall into the trap of rinsing the entire tank and gravel with tap water as the chlorine will kill all the good bacteria living in the system.

**Remember:** Even when your tank appears clean, dangerous nitrates which are the end by-product of all organic breakdown continue to build up.

---

**Testing Your Water**

We recommend that you always test **pH** and **Nitrate** weekly to ensure your water change maintenance is sufficient to maintain this balance. **API Test kits** are available at a small cost. pH can be maintained using **PH UP**, and while there are many filter media products that can help reduce nitrate, the best and easiest way to remove nitrate is by water changing.

---

**Choosing Your Happy Goldfish**

Try to have your new aquarium running for a couple of days before first introducing your new Goldfish. Always choose the happiest, healthiest Goldfish. We will always choose the best fish in the tank for you but are also happy to select any fish you like. Look for fish that are active and deporting well, with well balanced body shape and straight fin rays.

There are many varieties to choose from. **Comets** and **Koi** are very active and are popular in ponds but are also happy in aquariums with busy friends. We try not to mix these single tail, more active varieties with fancy double tailed forms.

**Fantails** have an attractive double tail and move more slowly. **Black Moors** are also very popular and should have a fantail and large eyes. There is a large range of colours and sizes bred in Australia and available at good prices. The fancy imported ranges include **Orandas** which have caps on the top of their heads and make a lovely display. **Ryukins** are shorter with an arched back. **Ranchus** have no dorsal fin and **Pearlscales** are very rounded with raised scales. Many other varieties make excellent displays also. For those after the best show quality fish, try to purchase the largest fish you can afford as the best quality fish are not sold off small, but rather raised as premium show fish.

---

**Taking Fish Home**

We pack all our fishes in medical oxygen, which means they are safe in the bag for extended periods of time (24hrs). When you get fish home, float the bag in your Goldfishes new home for 10 minutes, this equalises the temperature to avoid shock. Now roll the top of the bag down a little and introduce a little of your tank water to the bag. Allow them to float in the mixed water for a few minutes and then introduce a bit more tank water to the bag. After doing this a couple of times, gently and slowly tip the bag and allow your Happy Goldfish to swim into the tank. Unfortunately even Happy Goldfish get very lethargic in hot weather and not very hungry, so try to keep them cool and feed less during the hottest months. This is also true in the coldest parts of winter.

---

**Live Plants or Plastic ?**

Plants will only grow in your Happy Goldfish tank if there is sufficient lighting and a little plant fertilizer. Goldfish are inclined to eat plants if they do not get enough vegetable matter in their diet. Remember the Happy Goldfish enjoys the chance to nibble on plants. If plants grow well for you then a natural balance can be maintained. If your plants begin to die off for any reason, quickly remove them as they will pollute your tank the same as uneaten food and excess wastes.

If you get tired of constantly replacing your plants then plastic plants are for you. There is a wide range of very realistic plastic plants available.
Lighting
If you want to enjoy viewing your Happy Goldfish at night time then you will need a suitable aquarium light. If you want to grow plants lighting is essential as plants will not grow without sufficient light. To grow your plants well, fluorescent lighting at about 2 watts per 5 litres of water is a good guide. Ideally 8-10 hours of light per day is sufficient for well planted tanks and less if you do not have live plants.

We find it best to illuminate your tank from afternoon until bed time when people can more easily enjoy their tanks. **Lighting left on all day will undoubtedly cause excessive algae problems.** We have a wide variety of light tubes available. Our favourites for planted tanks are *Aquastars* or *Power Glo*. If you do not intend to grow plants then *Aqua Glo* tubes are a little cheaper. We sell a number of lighting fixtures from singles to double fluorescent, high and low wattage LEDs. All light fixtures are sold without tubes.

Feed Small Amounts Often
Feed your Happy Goldfish at least twice a day with small amounts of food. Be careful not to overfeed though. Unfortunately there is some bad advice out there suggesting this means feeding less often. This is incorrect.

When we say “**Do not to overfeed**”, we mean, do **not feed them too much at any single feed**. Uneaten food is 10 times worse for the aquarium than fish poo, so make sure your fishes eat all of what you feed them quickly. **A minute** of feeding off the surface and a couple more cleaning the food up off the bottom is about the right amount. There should **never** be uneaten food floating around in your tank. If there is, remove it quickly. If you feed small amounts, your Happy Goldfish will eat more, metabolize it better and be more active and produce less waste. Use only good quality prepared foods like flakes or pellets from the *TetraFin* and *Hikari* ranges. Try to alternate between these prepared foods. To add greater variety to your Goldfishes diet, try treating them with some live plants or live blackworm. Our staff can help advise you on a variety of foods.

The Best Advice
Achieving good results in your aquarium can be easy if you follow our advice and principles. The biological balances and feeding are the keys to good water quality which means happy fish. We know that by using the best blend of equipment and products along with the right advice and service from our staff you can have a beautiful and problem free tank.

Written by Wayne Buglar, Owner of
**Auburn Aquarium & Pet Centre**
115 Parramatta Rd
Auburn, NSW, 2144
Phone: (02) 9648 5200
AuburnAquarium.com.au
Facebook.com/AuburnAquarium

Last Edit 15/07/2013