

Guppy Diseases

Contributed by Gardner McBride

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Guppy Diseases Water Poisoning

The most common killer of guppies is water poisoning. Water with minerals which kills guppies, poisons them. Water running through long lead pipes can kill them insidiously as it has killed human beings. Just as lethal are copper pipes which can be found in most homes in America built since the early 50's. Copper in concentration of 0.2 parts per million will kill some fishes in twenty-four hours. Such small amounts of copper as to seem inconsequential have been found to destroy infusoria and other minute foods on which guppy fry need to thrive. Water too acid, too alkaline or too salty may be lethal. Fresh water from a tap from a city supply may kill due to its high chlorine content. Some spring water, much deep well water and rain water is unfit for guppies to live in, contrary from what you've probably heard in the past. Improper aquarium cement, silicone sealer and ornamentation are also potentially lethal through poisoning. Improper water, caused by any of the above mentioned sources is probably the number one killer of guppies.

Food Poisoning

A very common, yet oftentimes overlooked cause of death to guppies is food poisoning. Overfeeding produces fermentation and decomposition; where insufficient aeration is afforded, the toxins generated by the bacteria growing in the uneaten food can kill your fish. Food poisoning creates secondary problems through bacterial growth that can result in fungal diseases.

Since most people who raise fancy guppy tend to feed from 5 to 10 times a day, it is important to feed only what your fish will consume in 5 minutes, to make sure that you have adequate aeration and filtration and to maintain a strong regimen of partial water changes. Doing these things will virtually eliminate any possibility of food poisoning. TOP

Carbon Dioxide Poisoning

Overcrowding usually accounts for this fate. Too much carbon dioxide given off, insufficient plants and light to turn it into plant growth, low or no aeration to help with the carbon dioxide/oxygen exchange in the water, and the end result is, of course, dead guppies. The effects of this are usually quite visible by the fish hanging near the surface, gasping for air. A simple airstone emitting a stream of fine bubbles is all that is needed to prevent carbon dioxide poisoning.

Dying Plants Poisoning

Under certain conditions, decomposing plants which have died will release chemical compounds into the water which can kill your guppies. The water may take on an acrid odor, which sometimes is so strong you will notice it upon first entering your fish room. Any trace or hint of an abnormal odor emanating from your aquaria should set you immediately searching for the cause. Even algae, being plants, have the potential to kill your guppies if enough die at one time.

I know that it is a common practice among many guppy breeders to keep bare tanks without any plants at all. Personally, I have always kept potted plants in all of my tanks, mainly Water Sprite as an indicator of overall water quality and java moss as an excellent hiding place for newborn guppies. In my opinion, guppies prefer this environment and they are certainly more interesting and aesthetically pleasing to look at. Again, I repeat, the top breeders eschew any plants in their tanks but for me keeping bare tanks is boring and unattractive. I enjoy watching my guppies pick at the plants and the bits of food and algae they contain. It's simply a matter of taste, as to which type of guppy tank you keep.

Household Contaminants

Fly sprays used in the home have killed fishes for as long as they've been in use. One variety of insect killer, rotonone, will kill guppies in a dilution of one part in 13,000,000 parts of water. Others are just, if not more deadly, so never allow anyone in your household to use any of these sprays to control flying insects. Even if used in another room, or another floor of a house, they can still be quite deadly to your fishes. In out-door pools, the killing of fishes by dogs covered with flea powder, jumping into the pools, or by poison dust or sprays used on bushes, flowers or vegetable gardens in the area which blows onto the water's surface, have accounted for many large losses.

Soap and other household disinfectants not rinsed out properly after washing tanks will kill fishes. Cleaning aquarium glass with improperly washed containers which may have held soap or scouring powder is a dangerous practice. Always keep a bucket to be used ONLY for your fish, and never for any other household chore. Even your own hands which always seem to be in a tank for one reason or another can be dangerous. Fish have been killed by reaching into an aquarium without properly rinsing their hands after they have handled the aforementioned insect poisons, or treated their pets with a flea and tick compound, or even given them a dry bath. Oh, by the way. The best way to clean aquarium glass is with newspaper and white vinegar. Nothing beats it. Stay away from Windex, Glass Plus and all the other commercial glass cleaning products. They can cause you trouble.

Fungus Diseases

Fungus grows differently from bacteria and the organisms which constitute this group do strange things. Some turn into resistant forms called spores which wait for suitable conditions before they develop into characteristic and recognizable patterns. Others, like yeast, push out buds which break off and become organisms. The so-called mycelium threads of some fungi are most interesting because they produce the effect which we call mold - a dense thicket of such small threads, that they appear like satin but are easily crushed flat. Some invade an area and grow what appears to be slime. Some fungi are motile, that is they have whip-like appendages with which they propel themselves, much in the same

manner as human spermatozoa.

Note: The reference for this section is a bit dated. Although many of these products and treatments are still helpful and available, there are new classes of drugs and treatment compounds available at your local tropical fish store. Once I get the basic information entered, I will update the material to include the very latest in treatments.

Always remember that it is impossible to effectively treat a sick fish without first making an accurate diagnosis. Since so many questions on the Guppy Forum were disease and treatment related, I felt it necessary to make the completion of this page a priority. I hope it helps you maintain a healthy aquarium.

Saprolegnia

If on the fishes body, a white slimy, flattish patch appears which seems to have replaced a part of the fish's skin, it is probably saprolegnia.

Treatment: Isolate the affected fish and disinfect the net. (1) Add two drops of tincture of metaphen to each gallon of water in the tank to attempt to destroy the organism. Several other treatments of the sick fish are also recommended: (2) Salt treatment, (3) heat treatment, (4) Apply hydrogen peroxide to the spot while holding fish in a damp net. Let it disinfect for 15-30 seconds before returning fish to the aquarium. Be sure to re-disinfect the net. (5) Malachite green, (6) Methylene Blue, (7) Acriflavin.

Mouth Fungus

A very common guppy disease, mouth fungus, kills millions of guppies annually. From a small whitish area which prevents the fish from closing its mouth, the whole mouth becomes filled with a spongy-looking accumulation and the fish dies. If you examine the cottony growth from the mouth through a microscope, you will find it to be composed of an enormous number of moving organisms. The growth not only occludes the mouth but etches away at the tissue. Most people believe that this occlusion prevents the guppy from eating and therefore the guppy starves to death, but this is not the case at all. The necessary stream of water through the mouth and out of the gills can no longer pass and this is what ultimately kills the fish. Affected fish are extremely listless and hang near the surface, even in well aerated tanks.

Treatment: (1) Aureomycin, 250 mg. to a 10-gallon tank. (2) Mercurochrome, 1 drop per gallon, is said to destroy organism. (3) Metaphen, 2 drops per gallon.

Crown Fungus

When you see tiny mycelium threads radiating upward and outward from a smallish spot, making what looks like a crown or miniature drawing of the sun's rays, it is probably crown fungus. The rays may grow an eighth of an inch long before they are brushed off.

Treatment: (1) Mercurochrome. (2) Touch Spot with hydrogen peroxide. (3) Aureomycin, 50-100 mg. per gallon and water changed after 3 days.

Fin and Tail Fungus

Sometimes grayish or whitish areas appear on the fins and the tail, etching out areas and interfering with swimming. This is more prevalent in fishes kept at temperature too cool for their comfort.

Treatment: (1) Raise the temperature. (2) Hold the fish in a damp cloth and apply a 1-3 solution of hydrogen peroxide. If the fungus is in the tail only, let the tail swish in the solution. The dead tissue will slough off. (3) Mercurochrome. (4) Metaphen in tank or applied directly.

Gill Sickness

Possibly gill inflammation is caused by many organisms. The gills appear redder than normal and the gill covers, the operculi stand well out so the gills are visible. The progress of the disease is slow- In older fishes, emaciation occurs, the fish may eat, but not well, and it swims about in an apprehensive fashion. Small fry are lulled quickly. Some experts believe the disease to be a virus, some bacterial, but the type which affects most guppies has consistently been a fungus.

Treatment: Since affected fishes are seldom hardy even if they do recover, it seems best to destroy the diseased fish as soon as they show signs of the sickness. Treatments which have been tried and have not been successful in the gill inflammation among guppies are aureomycin, penicillin, terramycin, hydrogen peroxide. Yet some fanciers have reported miraculous results with antibiotics, an indication that there are several causes, some of which are killed by antibiotics and some not. (1) Metaphen. (2) Mercurochrome. (3) Potassium permanganate. (4) Give fishes some more room. (5) Try using chlorinated city water, leaving fishes in an hour at a time. (6) For large fry and adults, the salt treatment.

BACTERIAL DISEASES

Tuberculosis

This disease kills more fishes than is realized because the effects are generally slow and fishes do not waste as do birds and mammals; they stay plump until they die. The germ, called mycobacterium piscium, has been found in many parts of guppies, even in the eyes. You are not likely to know if your guppies have the disease even when you find them dead. A bacteriologist can make the determination for you. Despite the fact that we keep so many guppies in such small places, tuberculosis does not seem to spread among all the inhabitants. If it does, it is quite rare.

Bloat

When a guppy shows a roughened appearance from the scales standing on end, and it appears to be bloated, it may have an intestinal infection which distends its intestines so greatly that it cannot swim below the surface without great exertion. Some stay in an upright position.

Treatment: Try placing the bloated fish in a solution made of two tablespoonfuls of Epsom salts and two tablespoonfuls of Turk Island salt in a gallon of water. Leave it there for 4-6 hours. Then add another gallon of water and let the fish remain in this weaker solution for twelve hours before returning it to tank.

Air Bladder Disease

Some fishes with air bladder ailments will appear to settle on the bottom of the tank and make violent efforts to rise, only to settle down again. Others, called floaters, rise to the top of the tank and are unable to swim down. Students of fish diseases tell us that inflamed organs can reduce the size of the air bladder. Inflammation of the bladder wall also exerts a disastrous influence.

Treatment: Dissolve a teaspoonful of Epsom salts in a pint of water. Immerse the fish in it until it almost ceases its efforts to escape and lies exhausted. Then change the fish to a shallow container in which the water is not more than three times as deep as the fish is thick. Leave him in this water in which you have dissolved an antibiotic until he appears recovered.

Gas Bubble Disease

Bacteria which invade portions of the fish's body sometimes cause gas which produces lumps. The gas may collect behind the eyes and pop them forward. The exact cause is not known for certain, but successful treatments are.

Treatment: (1) Aurcomycin. (2) An old successful method involving the simple matter of placing the fish in a tank of long-used water. The high nitrogen content is believed to relieve the condition.

DEFICIENCY DISEASES

Except for vitamin D deficiency, very little is known about fish deficiency diseases. The very nature of their natural food almost warrants they receive all the known vitamins, but under artificial conditions they could conceivably have a deficiency. Mineral deficiencies are doubtless common, a fact we can determine knowing the inadequate diets often fed to guppies.

Rickets

A disease caused by a deficiency of calcium or phosphorus or vitamin D; one, two or all three. A crooked spine and the resulting bend in the fish's body is the usual evidence, although the unfortunate humpback can live and even reproduce. It is not a pleasant sight among the fishes of the aquarium.

Proper lighting can prevent D deficiency; the active rays affect ergosterol in the skin of the fish and change it to the irradiated form which is vitamin D. Sometimes whole aquariums will show bent spines but generally only a few of the fishes are affected. There is no treatment; it is all a matter of prevention which is primarily a matter of proper feeding of a complete diet. TOP

PARASITIC DISEASES

In discussing diseases with several of the guppy breeders with longest experience, their greatest difficulties have been shimmies and 'ich', both most often caused in Lebistes by parasites. Another has been troubled by velvet and another who feeds a great deal of live food which he collects from ponds, finds that hydra gives him no end of trouble. There is no uniformity of experience. Ichthyophthirius (Ich)

The microscopic protozoan parasite is named Ichthyophthirius multifiliis. It attaches itself to the guppy and gets inside the layers or under the skin. There it produces a white spot-sometimes a great many white spots can be seen on one fish. After a few days, depending on the temperature, it emerges and falls to the gravel bottom, and becomes a cyst inside of which hundreds or thousands of tiny parasites develop, eventually released to swim about in this infective stage. In this

stage, they are able to live no more than ten days without nourishment and then only in cool water. So you almost never see "ich" on guppies kept at 80 degrees or more in temperature.

Treatment: Raise the temperature to the 80 -85 degree range. Use any chemical treatment: (1) Metaphen. (2) Mercurochrome. (3) Methylene blue will destroy the organism but blues the tank's contents. Owing my own guppies, I have never had "ich" since a uniform temperature of 76 - 80 degrees was maintained. No treatment has been necessary.

Ichthyophonus

Ichthyophonus disease is caused by a small organism, Ichthyophonus hoferi, which attacks principally the ovary but is also found in other parts of the fish; causes the fish to become emaciated with a shrunken belly, lose its appetite and move with shaky unnatural movements (not shimmy). On post mortem the ovary appears to contain a large number of yellowish-white knobs up to the size of a pinhead which are frequently mistaken for tubercles as seen in tuberculosis. The knobs fill the ovary as small ones grow on the larger. In time, the knobs grow through the skin; if the fish lives long enough, these can be seen plainly. Affected fishes have been known to live many months. No cure is known. The best method of control appears to be to remove all victims at the earliest signs of the disease.

Gyrodactylus When guppies shimmy and when with careful observation you can discern a faint whitish abnormality on their scales, the chances are excellent that they have this tiny leech clinging to their scales and in their gills. This parasite has caused me more trouble than all other parasites combined and until I found cures for it, it made guppy keeping far less fun than it now is. An invasion of gyrodactylus causes a fish to shimmy his life away. It makes one shudder to realize what is happening, that is, when one knows the cause.

The parasite reproduces with great rapidity because of a curious fact. A young individual becomes sexually mature while still in its mother's uterus and inside of it may be another sexually mature individual and so on. Four generations may be found, one inside the other. No wonder they multiply so rapidly.

The irritation they cause is by their hooks. Each has large (large considering their microscopic size) pair of hooks with which to anchor themselves, and, around their bases, sixteen marginal hooks. The body moves about standing upright from the base. It can elongate or withdraw in accordion-like movements. It is the presence of huge numbers which drives the guppy frantic and eventually kills him.

Treatment: For a slower, but effective cure, use formaldehyde. (2) For immediate curing use 3% ordinary (drugstore strength) hydrogen peroxide diluted with an equal amount of water. Catch all the fish in the tank in one net and dip them for two seconds in the solution. Return them at once to their home. Only very weak ones will succumb. Those without too many parasites will be only momentarily affected. It is seldom necessary to dip a single fish from that aquarium again. This is a drastic cure and is done at the fancier's risk. Better try it on a few fish first to assure one's self of the efficiency.

Velvet

A few of these parasites on a fish appear as "ich". It is when the infestation is heavy and the numbers of organisms together give a velvety appearance that the seriousness of the condition becomes apparent. Velvet is caused by a small yellowish organism called Oodinium limneticum. It has whip-like flagellum to propel itself and another in a constriction in its middle.

On small fry velvet is particularly serious. The parasites have root-like tentacles which penetrate the fish's skin and through which they draw nourishment from the body. During only the free-swimming, state it is infective. As soon as it anchors itself, it starts to become pear-shaped; the constriction about its middle disappears, and it grows to be about eight times the size of the free-swimming form. After few days feeding from the fish, it drops off and divides, as do its descendants, until it has become almost two-hundred of the free-swimming, infective forms.

Treatment: (1) Acriflavin. (2) Methylene blue diluted as much as one-hundredth of a grain in a gallon of water, killed velvet, provided the temperature has been maintained from 77 to 86 degrees. (3) Mercurochrome. (4) Salt water. Do not remove the fish until all the adult forms have dropped off. These are the hard forms to kill; the infective free-swimming form is easily destroyed. (5) Probably simplest-12 copper pennies in a gallon of water.

Leeches

In introducing pond water to tanks, one is quite likely to bring in a few leeches. These may be of many species. Some are harmless plant leeches. Others live in the gravel, come out and move rapidly about in the water, especially if disturbed. To most persons this species is obnoxious, yet they do not touch the guppies. In rare instances a young leech may be found attached to a guppy's side. They have been reported but I have never seen one.

Treatment: To eliminate all kinds of leeches from a tank, clean it completely. New water, new gravel, new plants. Leeches are both male and female in the same individual and need no partner to populate an aquarium when only one is left. In pouring out the old water, take care to see that no leeches slid down under the rim made by the top angle iron, or it will drop back again into the water later on. Any sucking leech clinging to a guppy must be pulled loose with tweezers.

Fish Lice

This flat creature which lives on fish is a Copepod of which there are eight suborders, one of which is the argulus with twenty-two species found in America. The female louse lays from 30 to 200 eggs. The young must pass through eight transitions or stages before they become adult, a process requiring about eight weeks. Some are salt-water and some fresh-water forms. A. versicolor is prevalent in fresh water. It has two sucking discs, is about a sixteenth of an inch long. In outdoor pools it can destroy all the fish.

Treatment: (1) Salt water cure. (2) Potassium permanganate added to the tank at the rate of one-fourth grain per gallon

once a week for three weeks. (3) Pick lice off with tweezers and disinfect the spot.

ABNORMAL GROWTHS

Quite a wide variety of tumors appear on or in guppies. Some are benign, some malignant. Scientists are much interested in such growths but from a practical point of view, it is best to destroy affected fishes.

ENEMIES

Hydra
This little creature, anywhere from a third to one inch in length, is illustrative of how the guppy hobby carries us into related bypaths. Hydra are often introduced into aquaria with pond water and have become the "number one" enemies of guppies. To call them animals may seem like stretching a point if we judge from their appearance. A whole chapter could be written about them—here only the high spots. The animal attaches itself with a sticky substance to the glass or an object in the water. It cannot swim but it can move by a looping movement. The free end of the body has a conical projection called a hypostome on which its mouth is located. At its base is a circlet of long tentacles, five to ten in number. The hydra pulls the fry to its mouth by means of the tentacles, after interesting devices called menatocysts have caught it. Some of the menatocysts contain long spines in long rows. The prey is pierced and paralyzed by the spines which inject poison. Other cells have thread tubes in them which can lash out and wind around any protuberances on the fry to hold it securely, aided by a glue-like substance which it secretes. In a daphnia culture hydra create havoc. Hydra, when at rest, contract into soft balls. After eating, too, they retract into irregular globular forms. Because they reproduce both by budding and by fertilized eggs, hydra breed very rapidly. They are difficult to eliminate from a tank by washing it or even drying because their eggs have a hard outer shell which resists both drying and washing. The contents of the shell come to life quickly once favorable conditions are established.

A heavy infestation of hydra can destroy or retard the growth of many fry both by killing them and by eating their food which starves them. Hydra are easily seen protruding from their attachments and swaying about.

Treatment: (1) Hydra cannot stand chlorine or heat. If you have city water, remove the fish, drain tank and fill with fresh water. Return guppies two or three days later to the tank. (2) Remove fish, raise water temperature to 105° for 24 hours. When the water has returned to normal, return the fish. (3) Use of ammonium nitrite or ammonium sulphate at the rate of 5 grains per gallon of water will destroy hydra. Dissolve crystals in small amount of water first, then pour this solution into the larger tank. In 3-5 days all hydra will be dead, the guppies remaining unharmed by the solution.

Almost all of the other guppy enemies are introduced unintentionally along with tubificids, daphnia or live plants, and belong to the insect kingdom. Most of them are outdoor enemies, invading pools or large tanks in which fish are kept. There is no treatment for them that will not additionally effect your fish, so all you can do is put mosquito screening over the tanks to prevent entrance by the insects. Here are the principal insect enemies: Dragon fly larvae, Damsel fly larvae, Dobson fly larvae, Water scorpions, Water boatmen, Back swimmers, Water tigers which are larvae of whirligig beetles, Water scavenger's larvae, Predacious diving beetle larvae and the Giant water bug.

If you are not acquainted with these insects, read about them in a good book which you may obtain at your local tropical fish store or the public library.

Information Source - "All About Guppies" by Leon F. Whitney, D.V.M.

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