

What Causes Diseases in Koi? by Harold Biggio

Pull up a chair and let's talk about how fish get sick and what you can do to help them get better. That's the first thing we need to learn – that all we can do is to help them get better.

Actually, their immune system, although a little primitive compared to us “higher life forms”, is pretty neat and most of the time does pretty well at clobbering anything around that may make our fish sick. In short, they're pretty robust, resilient little guys and gals - normally.

Job 1 is to find out what has changed that let one of the “bugs” get around, under or over the great immune defense that Koi normally have. If we fix that, then we'll have removed whatever caused the illness.

Here's a great picture I found on Internet but I've been unable to find it again to give attribution. It's what set theorists call a Venn diagram and it is used to explain the inter-relationships between groups of things.

Look real closely at the little red star in the middle. That represents a disease. Notice **disease only occurs** in that little bitty area **where all three of the circles overlap**.

- The **bug** doesn't make the fish ill. **Not by itself.**
- **Poor water quality** doesn't make the fish ill. **Not by itself.**
- **A husbandry issue** (like overcrowding) doesn't make the fish ill. **Not by itself.**



All three must get together and join forces to have enough power to make the fish ill.

Now look at the three spokes in the form of an inverted Y around the star. That's [stress](#).

Look closely and you'll see that each of the spokes occur when two of the three circles – the contributing factors -- cross. So,



- a bug combined with poor husbandry;
- poor husbandry joining with poor water quality and,
- poor water quality joined by a bug

will act as a stressor. Everything else (which is the majority of the picture) represents the fish's normal Shangri-La.

Let's think about this. It's the key to showing us what to do to help the fish cure itself -- removing the stressors that combine to cause disease.

What did you do that disturbed the Koi to make them sick? Mother Nature had everything balanced -- the bugs were happy, the water was cool and the fish were playing a game of tag. Then you came along and crowded the Koi with a whole bunch of 'must have' Koi. The pond seemed fine, so you got busy with life and let things go amuck. The crowding first abused, then stressed the Koi. The poop built up 'til water quality was a problem; and as a result, the bugs said "thank you very much" and went digging into the Koi for their noon meal.

Two of the three contributors are just as easily fixed, since **we** were the cause of the problem in the first place. Clean out the poop, move a few Koi to other ponds (most club's have auctions and will take donations!) and you've given the Koi a fighting chance to beat those bugs. You need to help **just a little**, to get them back to a point where the pond is back in balance and the Koi can cure themselves.

Two-thirds or more of the problem was poor management... **your** poor management. And it's **for you and only you to fix**.