



Why Koi Die Suddenly, and Which Causes You Can Actually Measure

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In short

- Overnight oxygen depletion is the single most common cause of a healthy-looking koi dying between dusk and dawn, and it peaks on the hottest nights of the year.
- A pH crash follows an exhausted KH, and it can take the pond from 8.2 to below 6.0 in one night once the buffer is gone.
- Ammonia and nitrite spikes almost always trace back to something you did to the pond in the previous week: filter cleaned, fish added, medication dosed, feeding increased.
- Not every sudden death is water. Disease, parasites, spawning exhaustion, predators and injury all kill koi, and no water monitor detects any of those.

WHAT YOU SAW	MOST LIKELY CAUSE	TEST FIRST
Dead at dawn, hot night, no marks on the fish	Overnight oxygen depletion	Dissolved oxygen, before 7 a.m.
Biggest koi died, smaller ones fine	Oxygen. Large fish have the highest demand per unit of gill	Dissolved oxygen
Several fish lost over one night, water smells sour	pH crash from exhausted KH	pH and KH together
Losses started 3 to 10 days after you cleaned the filter, added fish or medicated	Ammonia or nitrite spike	Ammonia, then nitrite
Fish gasping at the surface or crowding the waterfall	Oxygen, or gill damage from ammonia or nitrite	Dissolved oxygen, then ammonia
Overnight after a thunderstorm	pH, oxygen and stirred bottom debris together	pH, KH, dissolved oxygen
One fish only, others behaving normally	Often not water: injury, spawning exhaustion, individual disease	Water anyway, then a specialist

The panic response often kills more fish than the original problem. A large change with untreated tap water adds chloramine to an already stressed pond. A cold hose dropping the pond 10 °F in an hour causes its own losses. Dumping pH-up powder into a crashed pond moves pH faster than the fish can adjust and converts harmless ammonium back into toxic free ammonia. Move deliberately, dechlorinate everything, match temperature.

What H2Koi does, and what it does not. H2Koi is continuous early warning on the measurable water parameters — dissolved oxygen, temperature, pH, ammonia, nitrite and related values — with KH reported as a derived, computed value on a 0–20 dKH scale. It is not a titration, and it does not report GH. Readings come from industrial-grade sensors, continuously.

It does not detect disease, parasites, spawning stress, predators, injury or toxins, and it cannot prevent a fish from dying. What it does is tell you that oxygen fell to 2.8 mg/L at 4:40 a.m., or that KH has been sliding for six days, while there is still time to act.