



Dissolved Oxygen in Tanks

The Fresh Org team knows that fish, like all living things, need oxygen. They breathe oxygen that is dissolved in the water through their gills. They wondered whether the problem in the ponds had to do with the amount of oxygen in the water, and so asked some scientists to do an experiment to see how much dissolved oxygen fish need to be healthy.

The scientists set up an experiment to test how the amount of dissolved oxygen affects fish health. They set up 3 large tanks, each with a different amount of dissolved oxygen. They then placed the same number of fish (of the same type and size) in each tank and measured how fast they swam.

When fish are healthy, they swim around actively. When fish are not healthy, they experience physical stress and slow down or stop swimming.

Amount of dissolved oxygen in the tank water	Swimming speed after 5 hours
Tank 1: Low Oxygen (5 mg/l)	Very slow swimming (indicating medium stress)
Tank 2: Medium Oxygen (7 mg/l)	Slow swimming (indicating low stress)
Tank 3: High Oxygen (10 mg/l)	Normal, active swimming (indicating no stress)

Scientists did not study tanks under 5 mg/l of oxygen because they were worried that the fish would die.

Taking the results from this experiment together with data from other scientists' studies, the scientists developed this bar chart to show how oxygen levels affect fish health.

