

## New Season Goldfish Syndrome



**During late winter or early spring, goldfish can develop white patches or rough skin due to increased mucous production and may also be more susceptible to parasite infections. This is generally more of a problem with fish kept in ponds but can also affect goldfish in tanks. This is a seasonal occurrence and is not a disease as such.**

### So what causes it?

During the winter months outdoor goldfish are subjected to a cooling down of the environment. Fish are 'cold-blooded' and as water temperatures decrease, so does the metabolism of the fish and the immune system is suppressed. Other forms of life within the pond environment including phytoplankton, bacteria etc, die off or also shut down during this period due to the low temperatures.

During spring environmental temperatures increase and the phytoplankton, bacteria and fungi begin to reproduce rapidly causing water to "Bloom". The goldfish on the other hand have a slower response to re-develop their immune system. This results in the healthy fish being subjected to the increased volume of these bacterial blooms.

### Effect on goldfish

The goldfish immune system is challenged by this and responds with an inflammatory reaction of the skin, which produces white patches of mucous and occasionally white lumps on the skin and fins. This over production of protective slime can give the mistaken appearance of fungus or bacterial infection. This condition can last from weeks to months until the

fishes immune system "catches up". During this period the fish act normally and there rarely will be losses associated with this condition.

It should also be noted that a similar problem can sometimes be seen in autumn, also as a result of the seasonal change impacting the fish immune system. Fluctuating temperatures and changes to the day length can result in the goldfish's immune system slowing down making it more prone to parasitic infections such as whitespot or flukes, as well as the excessive slime production.

### What you can do

There are a few ways to minimise the impact of this occurrence, they include: ensuring the pond environment is kept clean, ensuring that the fish are receiving a balanced diet suitable for goldfish which contains high levels of Vitamins B and C to aid the immune system, the addition of a slice of orange will also increase the intake of Vitamin C. Treatment with Melafix may also be beneficial as will the addition of a small amount of salt to the water at the rate of 0.1% or 1 heaped teaspoon in 10 litres of water. Increasing the water temperature to 18 –20 °C will also help to boost the immune system function—this temperature range is optimal for goldfish and higher temperatures should be avoided if possible.

Ensure you keep up regular prophylactic treatments for parasites such as whitespot or flukes.