Fishing during hot weather

Fish can be impacted by angling during hot weather. We all care about the fish we catch, so let's make sure we understand the issues that increased temperatures can cause.

Why is it important?

Hot weather can affect fish both in rivers and stillwaters. As water temperature increases, the amount of dissolved oxygen in the water decreases (Table 1). This is made worse by low water levels or river flows as smaller amounts of water warm faster.

Table 1: approximate dissolved oxygen levels (100% saturation) at different water temperatures

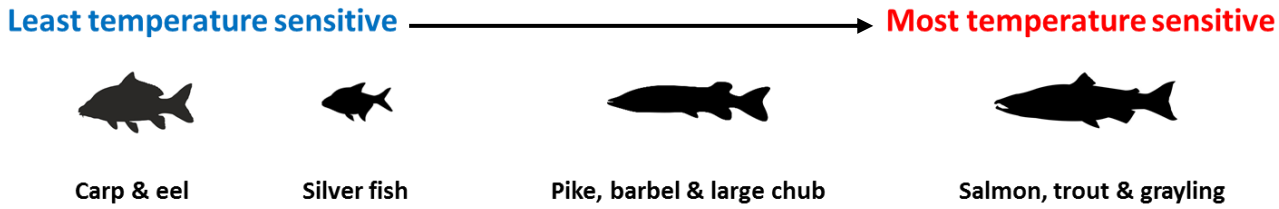
Water temperature	10°C	15°C	20°C	25°C
Dissolved oxygen level	11 mg/L	10 mg/L	9 mg/L	8 mg/L

Low dissolved oxygen means fish take longer to recover from being caught, especially larger, harder fighting fish. When fish eat, they need more oxygen, so fish that have recently fed are also likely to take longer to recover. The combination of high water temperature and low dissolved oxygen levels can also make fish more susceptible to disease and parasite infections, so they need particularly careful handling.

High water temperatures can also cause algal blooms, which can be harmful to fish. Algal blooms can severely deplete dissolved oxygen during the night, meaning that oxygen levels will be lowest first thing in the morning. Algae can also suddenly die off and, as they are broken down by bacteria, dissolved oxygen levels can reduce dramatically. These issues are most likely to occur on stillwaters.

What are the risks to fish?

Different fish species need different amounts oxygen and some are more sensitive to higher water temperatures than others. In general the dissolved oxygen needs to be above 9 mg/L for salmon and trout. For coarse fish it needs to be above 7 mg/L, but for some coarse fish e.g. pike, barbel and large chub it needs to be higher than this.



The key points for fish welfare during hot weather are:

1. As anglers we all love and care for the fish we catch and it's important to remember that fish of the same size caught in warmer water are often more vulnerable than the same fish caught in colder water.
2. Larger fish are more susceptible to the effects of low oxygen levels as they take longer to land and often fight to the point of physical exhaustion.

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3. Keeping the fish in the water while unhooking and taking care in the way a fish is returned will all help to ensure your catch goes back safely.

Fish may change behaviour to cope with elevated water temperatures, such as moving to deeper cooler water. Some fish species can adjust to low dissolved oxygen but this process takes time. So, fish are most at risk when there is a sudden rise in water temperature, for example when there is a mini-heat wave.

What can anglers do to help?

The following points will help you protect the fish you catch during the hot weather:

1. Find out the temperature of the water you are fishing. Ask the fishery owner or use a thermometer.
2. If the river water temperature is higher than 19°C then consider not fishing for salmon, trout and grayling.
3. If the river water temperature is higher than 21°C then consider not fishing for large chub, barbel and pike.
4. For stillwater fisheries, please ask the fishery owner or fishery manager for advice.
5. On rivers, consider fishing earlier in the morning when water temperatures are likely to be lower. But be careful fishing stillwaters early in the morning, in case an algal bloom has reduced dissolved oxygen levels.
6. Minimise your use of ground-bait. As it decomposes, this can further reduce the amount of dissolved oxygen in the water. And fish feeding on ground-bait may have a greater oxygen need, so take longer to recover from being caught.
7. Land fish as quickly as possible and handle them with extra care. Use wet hands when holding and unhooking fish. Wherever possible, keep fish in the water while unhooking. It's a good idea to plan where you can safely land and unhook fish before you start fishing.
8. If you want to take a photo, either keep the fish in the water or keep its time out of the water to a few seconds. This is especially important for larger and more sensitive fish.
9. Avoid using keepnets as they will retain fish in warmer water at the margins during hot weather. However, if you choose to use a keepnet place it in as deep water as possible and at right angles to the bank, so any water flow can pass through the mesh.
10. Release fish as soon as they're fully recovered, making sure they're showing strong signs of movement before doing so. This may take several minutes. Hold them upright and with their head facing into any water flow. This will help oxygenated water to flow across their gills. You can also hold fish in a landing net so that they are away from the bank, making sure their head is facing into any water flow.

And remember, if you see dead fish, fish in distress or gasping at the surface, please contact the Environment Agency on 0800 80 70 60 and alert the fishery owner or angling club.

Thank you for your support

Environment Agency Fisheries Team

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