

General Health Advice for People Catching and Eating Sport Fish in California

Follow this advice for water bodies that have fish advisories and especially at other water bodies without advisories.

Fish are nutritious and good for you to eat

Fish are an excellent source of protein and beneficial fats, and are recommended as part of a healthy, balanced diet. The American Heart Association recommends healthy adults eat at least two servings of fish a week.

But some fish you catch may take in toxic chemicals from the food they eat. Some of these chemicals build up in the fish—and in you—over time. Although the levels found are usually low, large amounts may be harmful. It is a good idea to follow a few precautions when eating fish, particularly if you eat fish often. This general advisory gives some tips on catching, preparing, and eating fish. It is not intended to discourage you from eating fish, but should be used as a guide to make your sport fish eating safer.

Fish that contain high levels of toxic chemicals are found in different parts of California. The Office of Environmental Health Hazard Assessment (OEHHA) is responsible for issuing fish consumption advisories in the State. When fish with high levels of contaminants are found, OEHHA evaluates the information and provides advice when appropriate. OEHHA's advisories, or "safe eating guidelines," help people make healthy choices when eating fish. The safe eating guidelines appear in the California Sport Fishing Regulations booklets and are also available from OEHHA.

The amounts of chemicals found in sport fish in California are not known to cause immediate sickness. But chemicals can collect in the body over time, and may eventually affect your health or that of your children. Some of the adverse health effects that might occur from continued exposure to high levels of toxic chemicals in fish are:

- Damage to the developing nervous system in the fetus and young children
- Increased risk of cancer

You can also reduce your exposure to chemical contaminants in sport fish by following the recommendations below. Follow as many of them as you can to increase your health protection.

- This general advice is not meant to take the place of advisories for specific areas, but should be followed in addition to them.
- There may be locations where testing has not been done or has not been complete. Until we know the levels of chemicals in fish from these places, we recommend you follow the general advice given below.

Tips to Protect Your Health

Fish in a variety of locations rather than in one location

Chemical levels can vary from place to place. Your overall exposure to chemicals is likely to be

lower if you fish from a variety of places rather than at one location that might have high contamination levels.

Avoid fishing where there is a visible oil sheen on the water

Eat different types of fish

Some species of fish have more chemicals than others due to different feeding behavior. If possible, eat smaller amounts of several different types of fish rather than a large amount of one type that may have high levels of chemicals.

Fish species that generally have higher levels of contaminants

Fish that eat other fish (predatory fish) generally accumulate more mercury. In freshwater, bass species (striped bass, largemouth bass, smallmouth bass, and spotted bass) are often the top predators. In the ocean, sharks are the top predators.

Species that generally have lower levels of contaminants

Rainbow trout and various sunfish (such as bluegill and redear sunfish) are often the least contaminated fish in water bodies. They are safer to eat. But always check for advisories at individual water bodies.

Eat smaller fish

Some chemicals can build up in fish with age. The larger the fish, the higher the levels of chemicals they may contain, within the same species. For example, large striped bass usually contain more mercury than small striped bass. It is always fun to catch large fish, but it is safer to eat smaller ones. If you keep large fish, freeze some of the fish and eat smaller meals spaced out over time.

Cooking and Preparing Fish

Eat only fillet portions

The fillet portions of fish are the safest parts to eat. Chemicals tend to be much higher in the guts, liver, and skin of fish. Do not eat these parts and do not use them to make sauces, stock or chowder. Also, avoid frequent consumption of any reproductive parts such as eggs or roe.

Eat only the meat of crabs—not their internal organs—because, in general, chemicals such as pesticides and PCBs are more likely to accumulate in the organs. Do not eat the soft “green stuff” (called “crab butter,” mustard, tomalley, liver, or hepatopancreas) that is found in the body section of crabs.

Cook fish or shellfish that you catch and observe quarantines

Certain fish may carry parasites (worms), and shellfish that you gather may have viruses or bacteria that can make you sick. Cook fish thoroughly to destroy harmful parasites and germs. Some shellfish, particularly mussels, may contain natural toxins that cause paralytic shellfish poisoning (PSP) or other serious illness, and even death. Cooking will not destroy these toxins, so it is important to observe shellfish quarantines.

Mussels are quarantined from May 1 through October 30 in California, and local quarantines may be posted for other bivalves. Call the 24-hour PSP information line for recorded information about quarantines at (800) 553-4133 in California or at (510) 540-2605 (for callers in the 510 area, or out of state). For more information on natural contaminants in fish and shellfish, contact the regional marine advisor for your area by calling the Cooperative Extension Office under the county government listings in your phone book.

The annual mussel quarantine does not apply to companies licensed by the State as certified shellfish harvesters. The California Department of Public Health tests and certifies the shellfish from these companies to be safe.

Lowering your risk

Each of the recommendations above helps lower your chances of taking in harmful chemicals when you eat fish. Follow as many of them as you can. If you follow this advice and any OEHHA advisories that apply to places where you fish, you will protect your health and you will benefit from this nutritious source of food. Refer to the California Sport Fishing Regulations booklet or call OEHHA for information on specific advisories.

Get the benefits from eating fish

Eating fish that are low in mercury and other chemical contaminants can benefit your health and that of your family. Fish contain heart-health fats called “omega-3s” that benefit the heart, brain, and eyes. Fish species such as trout, salmon, bass, sardines, and anchovies generally contain higher levels of omega-3s than other species. It is important for women to eat fish while they are pregnant because omega-3s help the baby’s brain develop.

Special advice for women ages 18 – 45, including pregnant and breastfeeding women, and children 1 – 17 years

When OEHHA's specific advisories are to protect against mercury, OEHHA recommends lower eating amounts for women ages 18 – 45 and children 1 – 17 years. Some chemicals may be passed on to the unborn child through the placenta or to the newborn through the mother's milk. Babies and children are more affected by mercury because their brains are still developing. Following the advisories is therefore especially important for this special risk group.

For more information

Please contact:

Office of Environmental Health Hazard Assessment (OEHHA)
Pesticide and Environmental Toxicology Branch (PETB)

Sacramento headquarters:

1001 I Street
Sacramento, CA 95814
(916) 327-7319

Sacramento mailing address:

OEHHA/PETB

Post Office Box 4010
Sacramento, CA 95812-4010.

Oakland office:

OEHHA/PETB
1515 Clay Street, 16th floor
Oakland, CA 94612
(510) 622-3170

Check OEHHA's "safe eating guidelines" at http://oehha.ca.gov/fish/so_cal/index.html for consumption advice for tested water bodies in California.