

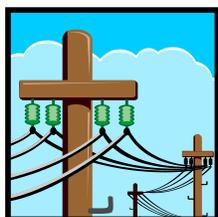
PCBs in Fish Caught in California: Information for People Who Eat Fish

- PCBs are a large group of related industrial chemicals.
 - PCBs are oily liquids or solids and are clear or light yellow in color.
 - They have no smell or taste.
- PCBs are common contaminants in fish in many parts of the world.
- If PCBs levels in fish are high enough, they may pose a health threat to people that eat fish often.



The Office of Environmental Health Hazard Assessment (OEHHA) has issued health advisories for people who fish and their families. The advice tells how much of the contaminated fish can be eaten safely in areas where PCBs are found.

WHERE DO PCBs COME FROM?



- PCBs are man-made. They were made in the United States from about 1930 to 1977. They were used in:
 - Electrical transformers
 - Plastics and lubricating oils
- PCBs were banned for most uses because they do not break down easily and stay in the environment for a long time.

Spills, leaks, and improper disposal are the main ways that PCBs have entered the environment.

When PCBs get into air, they can be carried thousands of miles. PCBs also enter soil and water.

HOW MIGHT I BE EXPOSED TO PCBs?

PCBs are mainly found in:

- soil and sediment
- fatty parts of fish, meat, and dairy products

Fish and shellfish usually contain the highest PCB levels of any food, especially fish that:

- are fatty
- eat many other fish
- are caught near industrial areas



People may also be exposed to small amounts of PCBs from fluorescent light fixtures or electrical appliances more than 30 years old. People who work with PCB transformers, breathe the air near hazardous waste sites, or drink water from a PCB-contaminated well can also be exposed. Mothers can pass PCBs to their babies during pregnancy or in breast milk. But exposure to PCBs has decreased since they were banned in 1977.



WHERE HAVE HIGH LEVELS OF PCBs BEEN FOUND IN FISH IN CALIFORNIA?

High levels of PCBs have been found in some species of fish in or near San Francisco Bay, Santa Monica Bay, the Palos Verdes Peninsula, San Pedro Bay, and Long Beach Harbor.

OEHHA has fish advisories for these locations based on PCB levels in certain kinds of fish.

- The highest PCB levels have been found in white croaker, a fatty fish.
- The advice tells you how much you can safely eat of each fish species at each place.
- The advisories are printed in the California Sport Fishing Regulations booklets.

Although PCB levels in fish have been decreasing since they were banned, scientists may still find PCBs in fish from other areas of the state that have not yet been tested.

HOW CAN PCBs AFFECT HEALTH?



In the past, some people were exposed to very high levels of PCBs at work or from accidental poisoning. These people showed harmful health effects to their skin, eyes, and nerves.

Studies with animals showed that high levels of PCBs could harm the liver, digestive tract, and nerves; and could affect development, reproduction, and the immune system.

PCBs have also been found to cause cancer in some animal studies. The state of California and the United States Environmental Protection Agency say that PCBs probably can cause cancer in humans.

PCB levels in fish are much lower than levels that may have made people sick in the past from work or accidental poisonings. PCB levels in fish also are much lower than levels given to laboratory animals.

Some studies suggest that low levels of PCBs, like those found in some fish, might cause small decreases in children's I.Q. or affect their memory, especially if exposures occur during pregnancy. Other studies have not confirmed these effects.

CAN PCB POISONING HAPPEN FROM EATING FISH CAUGHT IN CALIFORNIA?

- It is very unlikely that you will have any obvious signs of harm from PCBs.
- Fish advisories can help you prevent PCBs from building up in your body to levels that could cause health problems or increase your chance of getting cancer.



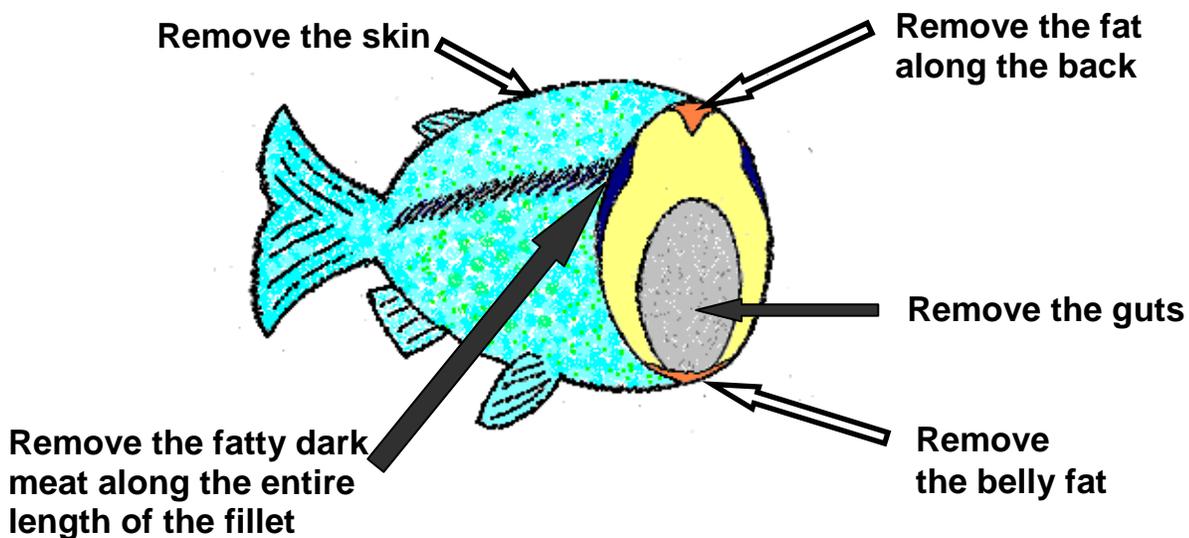
IS THERE A WAY TO MAKE FISH SAFER TO EAT?

A large amount of PCBs can be removed from fish if you cook and clean them in certain ways.



- OEHHA recommends that you clean and gut the fish you catch before cooking it. Some chemicals, including PCBs, build up in the organs, especially in the liver.
- PCBs are stored mainly in the fat. So you can lower the amount of PCBs in fish by getting rid of the fat. You should trim the fat, remove the skin, and fillet the fish before cooking.
- It is better not to use the fat, skin, organs, juices, (or whole fish) in soups or stews.

- Fat is in the back and the belly and in the dark meat along the side of the fish.
- When you remove the skin, you also remove a thin layer of fat under the skin.
 - You should bake or grill fish in a way that lets the juices drain away. Then you should throw away the cooking juices.
 - You can get rid of about half of the PCBs in fish by using these methods.
 - If you do eat the skin, fat, or liver, you will be exposed to more PCBs.
- If you eat crabs or lobsters, you should not eat the soft green parts because PCBs can build up there.



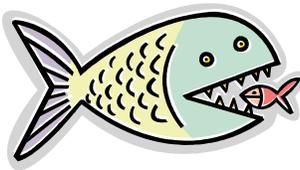
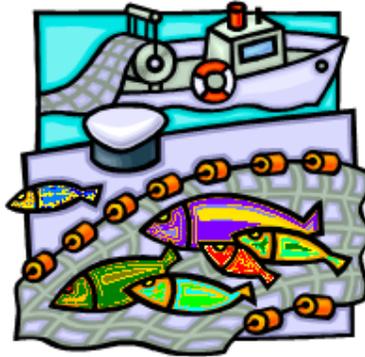
WHAT ELSE CAN I DO?



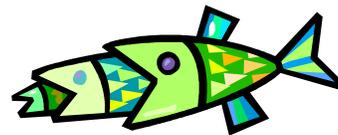
OEHHA recommends that you fish in different places in case the spot where you usually fish is more contaminated.



It is generally a good idea to eat a mix of different kinds of fish.



Fish that eat other fish often have the most PCBs and other chemicals.



BETTER!



Younger fish usually have less PCBs than larger older fish. It is better to eat smaller younger fish.



WHERE CAN I GET MORE INFORMATION?

Health advisories for sport fish in all parts of California are printed in the California Sport Fishing Regulations booklet. This booklet can be found where fishing licenses are sold.

You can also get updates and other information on fish advisories or “safe eating guidelines” from OEHHA at www.oehha.ca.gov/fish.html. Or call (916) 327-7319 or (510) 622-3170.

More information on PCBs is available at <http://www.atsdr.cdc.gov/toxprofiles/tp17.html>.