

**Fish Contamination Education Collaborative
Frequently Asked Questions**

1. What is DDT?

DDT is a pesticide that was widely used in the United States until the 1970's to control insects that destroy crops and carry diseases like malaria. In the environment, DDT breaks down into DDD and DDE; thus we use the term "DDTs" to refer to all DDT compounds that may be present. When DDTs were found to be harmful to both human health and wildlife, the use of DDT was banned in the United States. However, because of their stable chemical structures, DDTs stay in the environment for a very long period of time. DDT is still being used in some countries like India and Mexico.

2. What are PCBs?

PCBs, or polychlorinated biphenyls, are a group of man-made chemicals that were widely used in industrial processes, such as in the production of electrical equipment, because of their insulating properties. Their use was also banned in the 1970s because they were found to harm both human health and wildlife. However, because of their stable chemical structures, PCBs don't break down easily in the environment.

3. How did DDTs and PCBs get into the Los Angeles and Orange Counties Coastal environment?

*Montrose Chemical Corporation manufactured the pesticide **DDT** at its former chemical plant near Torrance, California from the 1940s until the 1970s, and released industrial wastewater containing DDT into the sewer system. Other industries released polychlorinated biphenyls, or **PCBs**. The DDT and PCBs got into the sewer system and ultimately flowed out of the outfall pipes located off White Point on the Palos Verdes Shelf.*

4. How widespread or severe is the chemical (DDTs and PCBs) contamination off the coasts of Los Angeles and Orange Counties?

The chemicals were originally released through wastewater outfalls at White Point on the Palos Verdes Shelf. The chemicals spread over a large area, extending into Santa Monica Bay and the Los Angeles/Long Beach Harbors. The highest levels of DDTs and PCBs in ocean sediment were found about one to three miles off shore of the Palos Verdes Shelf. More than a hundred tons of DDTs and about 11 tons of PCBs are in the sediments on the ocean bottom between Pt. Fermin and Pt. Vicente. Both chemicals do not break down quickly and tend to stay in the environment for many years.

5. What are the health effects of eating fish contaminated with DDTs and PCBs?

The possibility of developing health problems related to DDTs or PCBs are increased for people who eat a lot of contaminated fish throughout their lifetime. Eating fish with DDTs and PCBs does not make people sick right away. However, these chemicals can build up and stay in your body for a long time. This might cause health problems later.

Health effects associated with DDTs and PCBs include: cancer, liver damage, and effects on the immune, endocrine, neurological, and reproductive systems. Many effects have only been shown in animal tests, but could occur in humans.

Health risks resulting from exposure to these chemicals may also be higher for infants and young children. During pregnancy and lactation, mothers can pass DDTs and PCBs on to their infants. These chemicals can then affect overall growth and development, and brain development and function.

Some children born to mothers with high amounts of PCBs in their bodies as a result of eating fish with high levels of PCBs showed delayed growth and development. However, the levels of PCBs in the fish eaten by these mothers were 5 to 10 times higher than levels of PCBs found in fish from the coasts of Los Angeles and Orange Counties.

6. Should senior citizens be concerned?

*Yes, senior citizens should be concerned because they might not be able to fight illnesses very well. It is best for senior citizens to follow the fish consumption advisories and recommended preparation and cooking practices, and to help other family members do likewise. You can lower the possibility of developing health problems related to chemicals by reducing your exposures to chemicals in fish. **You can do this by controlling how often you eat fish, how much fish you eat, and which parts of the fish you eat.***

7. How can you tell if a fish has DDTs or PCBs contamination?

Fish contaminated with DDTs and PCBs do not look, taste or smell any different than fish that are not contaminated. That is why it is important to follow the fish consumption advisories and recommendations for Los Angeles and Orange Counties.

8. Where can I get more information about contaminated fish?

*If you live in Los Angeles County you can call
Los Angeles County Department of Health Services: (213) 240-7785*

*If you live in Long Beach, you can call
**City of Long Beach, Department of Health and Human Services,
Bureau of Environmental Health: (562) 570-4134***

*If you live in Orange County you can call
County of Orange, Health Care Agency, Environmental Health: (714) 667-3600*

9. Where can I get information in my own language?

For information in Spanish you can call:

MAHEC at (323) 780-7640

For information in Korean you can call:

Korean Resource Center at (323) 937-3718

For information in Khmer you can call:

Families in Good Health at (562) 491-9100

For information in Mandarin and Cantonese you can call:

Chinatown Service Center at (213) 808-1791

For information in Tagalog you can call:

People's CORE at (213) 241-0906

For information in Tagalog Ilocano and Cebuno you can call:

Filipino American Service Group Inc. at (213) 487-9804 or (626) 813-9696

For information in Chomorro you can call:

Guam Communications Network at (562) 989-5690

For information in Vietnamese you can call:

VNCOC at (714) 839-4441

10. Why have I not heard of this problem before?

Since 1985, fish consumption advisories or warnings have been issued and posted for areas between Pt. Dume and Newport Beach because of elevated levels of DDTs and PCBs, but broader public education has been difficult to implement and maintain. Articles have been published in local newspapers, and some stories have appeared on the television news, but those efforts may not have reached the most affected populations.

From 1999 to 2001, EPA funded the California Department of Health Services to work on a pilot outreach program regarding the health risks associated with consumption of contaminated fish from the Palos Verdes Shelf area. Working in cooperation with several community-based organizations and other agencies, a variety of informational and training materials were developed and distributed.

Based on the results of the pilot project, as a part of its Superfund action, USEPA, jointly with partners in the Fish Contamination Education Collaborative, started the implementation of a full scale public outreach and education program to address the potential health risks posed by the contaminated fish from the Palos Verdes Shelf area in 2003. Additional resources are now available to better inform people who catch and eat fish about the advisories, safe ways to eat fish, and about health risks of eating contaminated fish. The FCEC, as a part of the USEPA's program, is a participatory public outreach and education project aimed to reach affected populations. The FCEC is a consortium of federal, state and local agencies, community based organizations and local health departments.

11. Are fish caught in areas outside of Los Angeles and Orange Counties safer to eat?

It is likely that fish caught further from the Palos Verdes Shelf will have lower levels of PCBs and DDTs. To be sure, federal governmental agencies are currently sampling fish caught along the coast from Ventura to Dana Point. The data will become available in late 2003 and will be used to update current advisories.

If you fish in different areas, find out about any local fish consumption advisories by contacting the local health department. The purpose of fish consumption advisories, also called health advisories, is to recommend that people limit or avoid eating certain types of fish caught from specific coastal waters, lakes, or rivers in order to reduce their exposure to harmful chemicals. Because some chemicals may be more harmful for certain groups of people like pregnant women and children, the advisories may include specific recommendations for these groups.

Women of childbearing age and young children, who are more sensitive to mercury contamination, should follow the recommendations in the [Mercury in Fish brochure](#).

12. What about other seafood? Is it ok to eat crabs, shrimp caught off the coast of Los Angeles and Orange Counties?

Not much is known about DDTs and PCBs contamination in shellfish. However, it would be best to not eat much shellfish caught from the red zones, because DDTs and PCBs can build up in the fatty parts. You should especially avoid eating the hepatopancreas portion of lobster, more commonly known as the butter or tomalley, caught in the red zone because its high fat content can store unsafe levels of DDTs and PCBs. Shellfish may also be unsafe to eat because of paralytic shellfish poisoning and domoic acid, which are chemicals that cannot be removed by cooking. Also uncooked shellfish may be unsafe to eat because they may contain bacteria like vibrio parahaemolyticus and parasites like nematodes or roundworms and tapeworms. Check with your local health department regarding the most current recommendations. You can also call the Paralytic Shellfish Poisoning (PSP) Hotline: (800) 553-4133.

13. What effect does the runoff after it rains have on the fish?

Runoff after it rains can carry many pollutants like motor oil, household and garden pesticides, litter, bacteria and viruses, and other waste materials into the storm drains, and eventually the ocean as a result of our everyday activities. This pollution can certainly have a negative impact on the environment, fish, and other sea life. We can all adopt ways to practice conservation and pollution prevention measures that will serve to actively protect our oceans and rivers.

14. If I shouldn't eat certain fish from the red zone, is it okay to swim there?

There is no known health risk associated with swimming in areas that are contaminated with DDTs and PCBs. These chemicals stay more in the sediment than in the water. However, there are health risks posed by swimming in waters that have high levels of bacteriological and viral contaminants. To find out information on the water quality for swimming in Los Angeles and Orange Counties go to the Heal the Bay website and check out their weekly updated Beach Report Card at <http://www.healthebay.org> or contact the local health department.

15. How can you identify white croaker?

White croaker is called different names, including tomcod or kingfish.

A few identifying features of white croaker include: 12 – 15 spines on dorsal fin, black spot just above fin, horizontal mouth, slightly protruding snout. White croaker may resemble queenfish.

16. Why does white croaker have higher levels of DDTs and PCBs?

White croaker feed directly off the bottom of the ocean floor where the chemicals like DDTs and PCBs are located. White croaker is also a fatty fish and DDTs and PCBs tend to build up in the fatty tissue. White croaker caught from yellow zone areas generally have lower levels of DDTs and PCBs than those caught from the red zone areas.

17. Why can we not eat white croaker from the red zones and can eat them from the yellow zone? Don't the chemicals mix in the water?

DDTs and PCBs do not stay in water, they drop out and mainly stick to the sediment. Fish sampling and testing over the years have shown that white croaker caught from the red zone areas have much higher levels of DDTs and PCBs than white croaker caught from the yellow zone. This is mainly due to the fact that white croaker feed directly off the bottom of the ocean floor where the chemicals are located. White croaker is also a fatty fish and DDTs and PCBs tend to build up in fatty tissues. White croaker usually tend to live and feed in the same general area, so those that are caught in the red zone, where the levels of DDTs and PCBs are higher in the sediment, would be more contaminated. Although it is possible for white croaker to move from a red zone area to a yellow zone area, data from fish sampling and testing so far has found most white croaker in the yellow zone to be less contaminated than those in the red zone. In general, following the consumption recommendations for the different zones can help reduce your exposure to the chemicals in fish.

18. How do I know that the fish I buy in the market doesn't come from the contaminated areas of LA and Orange Counties?

Commercial fishing for white croaker is banned in the area of the Palos Verdes Shelf that has the highest known DDTs and PCBs contamination in the ocean sediment. In general, the fish sold in local stores doesn't come from the affected areas. More fish sampling is occurring to better define if the area where commercial fishing for white croaker is banned should be expanded. Some white croaker with high levels of DDTs and PCBs were found in a few markets. Some people who may be supplying fish to markets may not be aware of these contaminated areas. Efforts to provide education and outreach to market owners to promote buying fish from approved sources are underway. The USEPA will sample and test fish from markets in Los Angeles and Orange Counties in mid 2003 to determine whether highly contaminated white croakers are still reaching the local retail markets.

19. How can you tell that the fish that is caught in the yellow zone didn't come from the red zone?

There really isn't a good way to tell if the fish caught in the yellow zone didn't come from the red zone. Some fish like white croaker are bottom feeders and tend to stay in one area. Reef fish like rockfish, scorpion fish or kelp bass mainly stay in one place but do not feed in sediments. Barracuda, mackerel and bonito swim over large areas of water and do not feed in sediments, so they are less likely to have DDTs and PCBs contamination.

We are currently analyzing fish caught along the coasts Los Angeles and Orange Counties to obtain the latest information on chemical levels in fish including DDTs, PCBs and mercury. . The information will be used to update the current fish advisory and to guide our public outreach efforts.

20. Will cooking the fish remove the chemical contaminants?

*Unlike bacterial and viral contaminants, simply cooking fish contaminated with DDTs and PCBs will not completely remove the chemicals. Cooking and some preparation methods will **reduce** the levels of DDTs and PCBs in fish. These methods include removing the fatty parts of the fish, including the skin, guts, fat, fatty dark meat along the entire length of the fillet and all the belly fat. Eat only the cooked fillet. Bake, broil, steam or grill fish and let the cooking juices drip away. Use only the fillet when making soups, caldos, stews, or chowders.*

21. Will frying the fish remove the contaminants?

In general, cooking fish by most methods, including frying, will help decrease levels of PCBs and DDTs. Removing fatty parts of fish like the skin where these chemicals tend to build up also is recommended. The preparation and cooking methods do not get rid of all the chemicals so it is still best to stay within the recommended consumption amounts listed in the advisories.

Preparation and cooking methods do NOT decrease the amount of mercury in any fish, so it is important to follow the advisories for the consumption amounts recommended

22. What effect does giving the skin and fatty parts to pets have?

Animals can also build up chemicals in their bodies, so feeding pets the skin and fatty parts that are likely to have DDTs and PCBs will increase their body burdens and may increase the risk of them developing health problems. Much of the information on health effects comes from studies performed on animals.

23. Are eggs of fish considered part of the guts?

Eggs or the roe are not technically organs or "guts", but they do tend to have higher fat levels. It is best not to eat them in order to reduce your intake of PCBs and DDTs.