



## Information about Eating Fish from Mission Bay

Office of Environmental Health Hazard Assessment (OEHHA)  
California Environmental Protection Agency

October 2013

### Why did OEHHA issue guidelines for eating fish from Mission Bay?

Mission Bay was one of the sampling sites for two major monitoring surveys of chemical contamination in fish from California's coastal waters. They showed that some fish tissues contained mercury and polychlorinated biphenyl congeners (PCBs) at levels of concern for fish consumers. The Office of Environmental Health Hazard Assessment is providing these guidelines to help people choose which types of fish are safer to eat.

### How do chemicals such as mercury and PCBs get into fish?

Chemicals enter water bodies, including Mission Bay, from spills, the air, or water runoff from land. Chemicals enter the fish through the food they eat.

- Mercury is a metal that comes from natural sources, mining, and air fallout from burning coal and other fuels.
  - Once mercury gets into water, it settles to the bottom where bacteria in the mud or sand change it to the organic form "methylmercury."
  - Methylmercury, a more toxic form of mercury, is passed up the food chain from small aquatic organisms and builds up in larger and older fish.
- PCBs are a group of man-made chemicals used in electrical transformers, plastics, and lubricating oils.
  - PCBs were banned for most uses in 1979.
  - Because they do not break down easily, they stay in the environment for a long time.
  - Spills, leaks, and improper disposal are the main ways that PCBs enter the water.
  - PCBs are also passed up the food chain.

## What are the health concerns from eating fish with these chemicals?

- Mercury—in the form methylmercury— can harm the brain and nervous system of people, especially unborn babies and children.
- PCBs affect many body functions resulting in a variety of health problems, including effects on the nervous system. PCBs have been found to cause cancer in animal studies.

## How was the consumption advice in the advisory determined?

- OEHHA compared chemical levels in fish from Mission Bay to the acceptable levels of human exposure.
- OEHHA's consumption guidelines balance the risks and benefits of fish consumption.

## Should I continue eating fish from Mission Bay?

Yes! Fish, in general, is:

- An important part of a healthy well-balanced diet. The American Heart Association recommends eating at least two servings of fish each week.
- A good source of protein, vitamins, and heart healthy omega-3 fatty acids. It is important for pregnant women to eat fish because omega-3 fatty acids help the baby's brain develop.

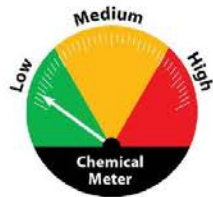
Certain types of fish from Mission Bay can be eaten more frequently than others. Follow OEHHA's advice in the illustrations below.

## What else can I do to protect my health and my family's?

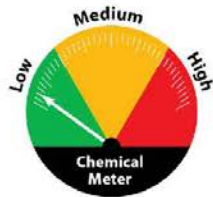
- Eat a variety of fish, especially those low in chemicals and high in omega-3s.
- Eat smaller (younger) fish of legal size.
- Eat only the skinless fillet or meat portion of fish and shellfish you catch.
- Thoroughly cook the fish, allow the juice to drain away.
- Learn about OEHHA's guidelines for eating fish from other water bodies in California:
  - Call OEHHA at (916) 323-7319 or (510) 622-3170, or visit [www.oehha.ca.gov](http://www.oehha.ca.gov) (click on "Fish," then "Fish Advisories")
  - Check the Freshwater or Ocean Sport Fishing Regulations booklets from the California Department of Fish and Wildlife, available at [www.dfg.ca.gov/regulations](http://www.dfg.ca.gov/regulations)

# A Healthy Guide to Eating Fish from Mission Bay

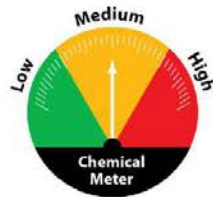
Women 18-45 years and children 1-17 years



- Diamond turbot
- Spotted turbot
- Opaleye
- Topsmelt



- Shiner perch
- Black perch
- White seaperch
- Rainbow seaperch
- Striped mullet



- Spotted sand bass
- Brown smoothhound shark
- Yellowfin croaker

6-7 servings a week **OR** 3 servings a week **OR** 1 serving a week except 2 servings a week of yellowfin croaker

Eat only the skinless fillet.

PCBs are in the fat and skin of the fish.



- Remove and throw away the skin before cooking.
- Cook thoroughly and allow the juices to drain away.

What is a serving?



For Adults For Children

The recommended serving is the size and thickness of your hand. Give children smaller servings.

Why eat fish?





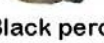
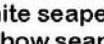






Eating fish is good for your health. Fish have Omega-3s that can reduce your risk for heart disease and improve how the brain develops in unborn babies and children.

What is the concern?

Some fish have high levels of mercury or PCBs. Mercury can harm the brain, especially in unborn babies and children. PCBs can cause cancer.

# A Healthy Guide to Eating Fish from Mission Bay

Women over 45 years and men can safely eat more fish

 <p>Diamond turbot</p>  <p>Spotted turbot</p>  <p>Opaleye</p>  <p>Black perch</p>  <p>White seaperch</p>  <p>Rainbow seaperch</p>  <p>Topsmelt</p>	 <p>Yellowfin croaker</p>	 <p>Shiner perch</p>  <p>Spotted sand bass</p>  <p>Striped mullet</p>  <p>Brown smoothhound shark</p>
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7 servings a week **OR** 5 servings a week **OR** 3 servings a week

Eat only the skinless fillet.  
PCBs are in the fat and skin of the fish.



- Remove and throw away the skin before cooking.
- Cook thoroughly and allow the juices to drain away.

### What is a serving?



For Adults For Children

The recommended serving is the size and thickness of your hand. Give children smaller servings.

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Eating fish is good for your health. Fish have Omega-3s that can reduce your risk for heart disease and improve how the brain develops in unborn babies and children.

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