Common Names

*Acipenser transmontanus* (White Sturgeon)
*Amphistichus argenteus* (Barred Surfperch)
*Atherinopsis californiensis* (Jack Silverside)
*Cymatogaster aggregata* (Shiner Surfperch)
*Embiotoca jacksoni* (Black Surfperch)
*Engraulidae* (Anchovy–other)
*Engraulis mordax* (Californian Anchovy)
*Genyonemus lineatus* (White Croaker)
*Hyperprosopon argenteum* (Walleye Surfperch)
*Morone saxatilis* (Striped Bass)
*Mustelus henlei* (Brown Smooth Hound Shark)
*Oncorhynchus tshawytscha* (Chinook Salmon)
*Paralichthys californicus* (California Halibut)
*Phanerodon furcatus* (White Surfperch)
*Rhacochilus toxotes* (Rubberlip Surfperch)
*Sebastes auriculatus* (Brown Rockfish)
*Triakis semifasciata* (Leopard Shark)
Mercury

Mercury is one of the most abundant toxins found in the bay. This figure shows the average Mercury concentration found in the tissues of fish species collected from the bay.

Other Toxins

This figure shows the average concentrations of Chlordanes, DDTs, PCBEs, and PCBs for each species where samples were caught in the San Francisco Bay and surrounding waters.

Relationships of PCBs and Other Toxins

It can be seen that aside from Mercury, PCBs are the most prevalent toxin found in many of the species commonly caught in the San Francisco Bay. Interestingly, when the concentrations of PCBs in tissues are compared with concentrations of Chlordanes, DDTs, and PBDEs in tissues of the same species, it is evident that species with higher PCB concentrations also have higher contamination of each of these other toxins (as seen in the figure below). This suggests that species high in PCB concentration may be particularly toxic to consume.

Toxins found in the San Francisco Bay

Urban runoff into the San Francisco Bay and surrounding waters is a major source of pollution which introduces many toxins into aquatic bay communities. Once these contaminants are introduced to the bay, they can become concentrated in tissues of fish commonly found in the bay. When ingested, these toxins can cause a variety of symptoms from tremors and seizures to neurological and immunological disorders, as well as many cancers. Of the toxins found in the bay, some of the most toxic and abundant are Mercury, Chlordanes, DDTs, PBDEs, and PCBs.

<table>
<thead>
<tr>
<th>Toxins</th>
<th>Maximum Safe Intake (ng/g/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>0.3</td>
</tr>
<tr>
<td>Chlordanes</td>
<td>0.6</td>
</tr>
<tr>
<td>DDTs</td>
<td>0.1</td>
</tr>
<tr>
<td>PBDEs</td>
<td>0.003</td>
</tr>
<tr>
<td>PCBs</td>
<td>0.02</td>
</tr>
</tbody>
</table>

The chart above provides the maximum safe daily intake of such toxins according to the Agency for Toxic Substances and Disease Registry.

Which Fish are Not Safe to Eat?

Each of the following species have relatively high concentrations of many listed toxins.

- Leopard Shark (*Triakis Semifasciata*)
- Brown Smooth-hound shark (*Mustelus henleii*)
- White Croaker (*Genyonemus lineatus*)
- Striped Bass (*Morone Saxatilis*)
- White Sturgeon (*Acipenser transmontanus*)