

# Legacy Pesticides in Fish and Shellfish



## What are legacy pesticides?

- Legacy pesticides were once widely used in agriculture and home pest control.
- Today, legacy pesticides are banned in the United States due to their harmful effects (though they may still be used in other countries).
- However, legacy pesticides persist in the environment, and can accumulate in fish and shellfish.
- Legacy pesticides include chemicals like DDT (dichlorodiphenyltrichloroethane) and related compounds, dieldrin, chlordane, and toxaphene.
- Only a few California water bodies have fish with significant levels of these chemicals.



## How can I reduce my risk?

- If you catch your own fish, follow the Office of Environmental Health Hazard Assessment's (OEHHA) [fish advisories](#) for California water bodies.
- Keep in mind that legacy pesticides accumulate in the skin, fat, and some internal organs of fish or shellfish.
- Trim the fat, remove the skin, and fillet the fish before cooking. Eat only the skinless fillet (meat).
- For crab and lobster, remove the internal organs ("guts," "butter," or "tomalley") and rinse out the body cavity before cooking.
- Bake or grill fish in a way that lets the juices drain away. Throw away the cooking juices.
- Boil or steam crab and lobster, and discard the cooking liquid.
- Do not use the fat, skin, organs, juices, or the whole fish or shellfish, in soups and stews.

## What is the health concern for humans?

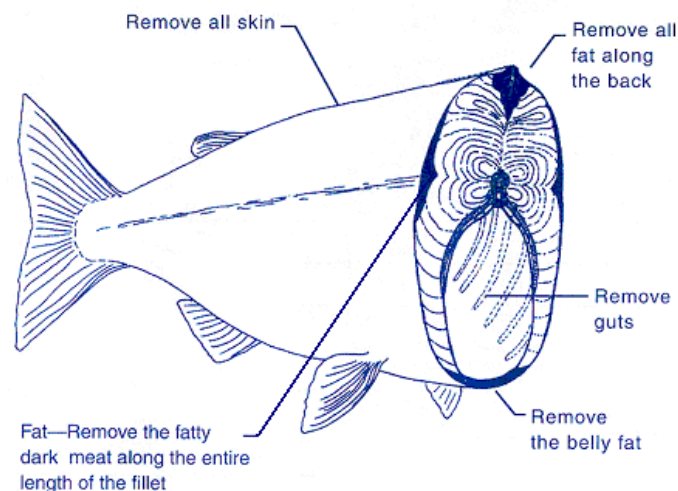
- High levels of legacy pesticides may:
  - affect the developing fetus, possibly leading to later changes in learning and behavior.
  - have effects on reproduction, such as decreased fertility.
  - increase cancer risk.
- Women can pass legacy pesticides on to their babies when pregnant and breastfeeding.

## Should I still eat fish?

- Yes! Low-contaminant fish are an important part of a healthy, well-balanced diet.
- Fish are a good source of protein, vitamins, and heart-healthy omega-3 fatty acids.
- Eating two servings of fish per week is good for you, according to the American Heart Association.
- If you are pregnant, eating low-contaminant fish may help your baby's brain develop.

## If legacy pesticides are present, which fish pose the greatest risk?

- Fatty fish, bottom feeders, and fish that eat other fish.
- Larger and older fish.



## Where can I learn more?

- [OEHHA Fish Advisory Program in California](#)
- [Biomonitoring California \(Organochlorine Pesticides Fact Sheet\)](#)
- [ToxFAQs™ – Aldrin and Dieldrin](#) (ATSDR)
- [ToxFAQs™ – Chlordane](#) (ATSDR)
- [ToxFAQs™ – DDT, DDE, and DDD](#) (ATSDR)
- [ToxFAQs™ – Toxaphene](#) (ATSDR)