Resources

For a guide to ocean fish species, their abundance, and their eating safety, consult the Blue Ocean Institute website (www.blueocean.org) or the Environmental Defense Fund website (www.edf.org).

For guidelines on fresh water fishing, visit the EPA's Fish Advisory website (www.epa.gov/ost/fish) or contact your State or Local Health Department – listed on the same website.

Stay hydrated, wear sunscreen, and have fun fishing!

Endnotes

[1]Mozaffarian D, Rimm EB. Fish intake, contaminants, and human health: evaluating the risks and the benefits. *JAMA* 2006;296:1885-99.

[2]http://www.tpwd.state.tx.us/landwater/water/environconcerns/hab/redtide/faq.phtml. Accessed July 1, 2009.

[3]A Guide to Healthy Eating of the Fish You Catch. www.atsdr.cdc.gov/HAC/PHA/oakridge013107-TN/appc3.pdf. Accessed June 29, 2009.

[4]http://www.health.state.mn.us/divs/eh/fish/forms/eatfishoften.pdf. Accessed June 29, 2009.

[4]Guidelines For Eating Fish From Georgia Waters. http://georgiawildlife.dnr.state.ga.us/documentdetail.aspx?docid=32&pageid=3&category=fishing. Accessed June 29, 2009.

[6]2004 FDA/EPA Advisory "What You Need to Know About Mercury in Fish and Shellfish" at www.cfsan.fda.gov/~dms/admehg3.html. Accessed July 15, 2009.

[7]http://www.fsis.usda.gov/PDF/Handling_Food_Safely_on_the_Road.pdf. Accessed on June 30, 2009.

Center for Hygiene & Health in the Home and Community

The Center for Health and Hygiene in the Home and Community serves as a national and international resource for information and education, applied research, professional training, and conferences. The Center focuses on issues relating to hygiene and infection control in areas such as:

- Consumer food safety
- Home hygiene
- Daycare
- Preschool
- Homecare
- Sports and leisure activity
- Travel and hospitality

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Fishing:

Should You Eat

What You Catch?

July 2009

Introduction

Fishing is a favorite American recreational activity, especially during the lazy summer months. Whether fishing in fresh or salt water, the catch can make a healthy and nutritious meal for the whole family. Fish are a lean low-calorie source of protein and heart-healthy (omega-3) fats. Eating fish can reduce the chances of dying from heart disease.[1] This brochure will address how to have a fun and safe day fishing, and bring home a delicious meal.

Is Shellfish Safe to Eat?

If you are saltwater fishing, you may see warnings about red tide. Red tide is a naturally-occurring, higher-than-normal concentration of the algae *Karenia brevis*. Red tide occurs when water temperature, salinity, and nutrients reach levels that allow the alga to reproduce, causing dense reddish concentrations called "blooms" on the ocean surface. The alga produces a toxin that accumulates in **oysters** and **shellfish** (clams, mussels, scallops, crabs, lobsters, shrimp) and can cause neurotoxic shellfish poisoning in humans (NSP). Oysters and shellfish can retain the toxin for months after red tide has receded.

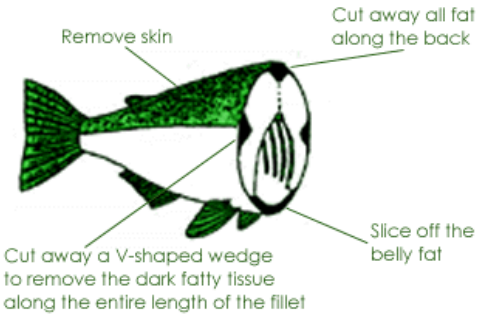
Follow your state or local authority's monitoring of red tide for safe harvesting of oysters and shellfish. Also, never eat fish found sick or dead, regardless of red tide.[2]

Is Fish Safe to Eat?

Many North American water systems – fresh and salt water – contain pollutants that may contaminate fish and pose health risks if the fish are eaten in large amounts. The two chemicals of greatest concern are mercury and PCBs (polychlorinated biphenyls). **Mercury** will accumulate in the muscle tissues of fish; it can damage the developing brains of infants and children and the kidneys and nervous system of adults. **PCBs**, which were banned in 1976, deposit in the fatty tissues of fish; they may increase the risk of cancer and are linked to lower birth weight and delayed development in infants exposed during pregnancy.[1,3,4]

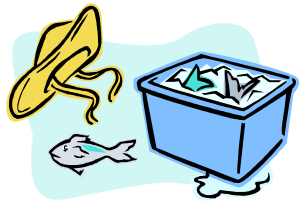
From the results of numerous studies, the EPA, FDA, and the Institutes of Medicine made the following conclusions about fish contaminants:

- More than 90% of PCBs in our diet comes from non-seafood sources. Levels of PCBs and mercury in fish are so low that they do NOT warrant limiting fish consumption by adults.[5] The American Heart Association recommends at least 2 servings of fish/week for healthy adults.
- Women who are or may become pregnant, nursing mothers, and young children should eat no more than 2 servings/week of fish or seafood. One serving is about 6 ounces; therefore they may eat up to 12 ounces of fish per week. They should **avoid** the 4 fish higher in mercury: shark, swordfish, tilefish, and king mackerel.[5,6]
- Eat a **variety** of fish and shellfish.
- Consult your local or state health or environmental department regarding: (1) fishing advisories posted; and (2) amounts of local freshwater fish that is safe to eat.
- If no advice is available, eat up to 6 ounces/week of locally-caught fish, and don't consume any other fish that week.[5,6]
- Eat smaller, younger fish – they contain less pollutants than older, larger fish.
- Trim all fat (where PCBs accumulate), skin, and internal organs. See diagram below.
- Grill, bake, or broil the fish: letting the fat drain away can remove pollutants stored in the fatty parts. Frying can seal pollutants into the fish's fat.
- Remove the skin before smoking fish.



Fresh Fish Handling

- Prepare a separate cooler to store freshly caught fish; the inside temperature will remain colder if the cooler is packed full of ice and is opened less frequently.
- Keep the cooler in a shady spot and covered by a light-colored blanket.
- Handle fish with clean hands and knives.
- Scale, gut, and clean fish as soon as they are caught; wrap fish in water-tight plastic and store in a cooler. Alternate layers of fish and ice.
- Cook fish in 1-2 days or freeze; eat the fish within 3-4 days.
- Keep crabs, lobster, and other shellfish alive until cooked. Store in an open container under wet cloth or newspapers and refrigerate once home; do not store in ice or tap water as the fresh water will kill them.[7]



Fishing Safety Tips:

- Look behind you before you cast
- Take your time; rushing causes accidents
- Wash all wounds with clean fresh water, apply an antibiotic ointment, and keep covered and dry
- Seek medical attention for any retained hook, spine, or scale; a wound involving a bone or joint; or worsening signs of infection