Beyond Fish Sticks

Grilled salmon, broiled walleye, fresh caught sunfish or a tasty cold tuna sandwich on toast, sound good? There are plenty of good reasons to eat fish: It’s high in protein, low in fat, an excellent source of B-complex vitamins and trace minerals, and rich in healthful omega-3 fatty acids.

In Beyond Fish Sticks we will go fishing for answers related to current safety issues on fish consumption and review the health contribution of fish to our diet.

FISHING FOR GOOD HEALTH – CATCH OMEGA-3 FATTY ACIDS

When it comes to our health, there is no doubt that fish is good for us. Fish contain omega-3 fatty acids—“good” fats that studies suggest may protect against heart disease, relieve the symptoms of rheumatoid arthritis and decrease the risk of age-related macular degeneration (vision loss).

Sources of omega-3:
Saltwater and fresh cold-water fish with high omega-3 fatty acid content are: albacore (or white tuna), black bass, bluefish, carp, channel catfish, herring, lake herring, lake trout, mackerel, salmon, sardines, tuna (water-packed) and whitefish.

Fish with low level of omega-3’s are: cod, flounder, haddock, halibut, grouper, pike, shark, snapper, sole, walleye and whiting.

Lake Superior is just cold enough so that the lake trout, chub, herring, smelt and white fish found in deep water contain significant omega-3 fatty acids.

Canned tuna packed in water is an easy way to get omega-3’s. However, combining tuna with the fat in mayonnaise may reduce any positive effects.

For maximum benefits, fish with high omega-3 oil content should be prepared without additional oil by baking, broiling, or grilling. Preparing fish with batter, breading, or frying can reduce health benefits.

Alternative sources of omega-3:
Fish oil capsules, canola, soybean and flax oils, flax seed, and English walnuts all contain omega-3’s as well as omega-3 enriched eggs produced by hens that are fed flaxseed. Use of fish oil capsules should be done only with the recommendation of your doctor, who should also specify the brand.

Negative effects of omega-3’s:
• It decreases the ability of your blood to clot. People with bleeding disorders, taking anticoagulants, or with uncontrolled hypertension should not take fish oil capsules.
• Large doses can cause nausea, diarrhea, belching and a bad taste in the mouth.
• Omega-3 fatty acids are highly unsaturated easily becoming rancid.
**LET’S GO FISHING!**
**HANDLING YOUR CATCH OF THE DAY**

**If you catch your own fish:**
- Check fish for signs of disease or parasites.
- A healthy fish should have:
  - Firm flesh with no signs of discoloration or browning
  - A mild fresh smell
  - Bright clear eyes
  - Red or pink gills
  - Scales that are tight
- Chill and store fish in crushed ice. Ice is the key to fresh tasting fish.

**Buying fresh fish:**
- Buy from sources you know and trust
- Market should look and smell clean
- Employees follow good grooming and wear clean aprons
- Employees use gloves or something other than bare hands when touching fish and know how fresh the fish is
- Fish should be refrigerated or on ice
- Other fresh fish characteristics include: Flesh “springs back” when you touch it and it smells fresh, not fishy or ammonia-like
- Keep fresh fish cold—bring a cooler with ice

**Buying frozen fish:**
- Package should be intact, not torn or crushed
- No sign of ice crystals which means fish was thawed and refrozen
- "Fresh Frozen" means the fish was frozen while fresh
- “Previously Frozen” means was frozen fresh and thawed for retail sale

**Storing fish:**
- Refrigerate or freeze fish as soon as you get home
- Place package of fish on a tray or container so it does not drip on other refrigerated food
- Fish held at 40°F or lower will have a shelf life of up to 3 days
- Freeze fish at 0°F or lower

**How Long Does Fish Keep in the Freezer?**

<table>
<thead>
<tr>
<th>Species</th>
<th>How long?</th>
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<tbody>
<tr>
<td>Lean fish: Perch, walleye, crappie, Pollock, cod, flounder, haddock, grouper, halibut, sole, tilapia</td>
<td>6 months</td>
</tr>
<tr>
<td>Fatty fish: Salmon, white bass, tuna, orange roughy, mackerel, trout</td>
<td>2 to 3 months</td>
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<tr>
<td>Smoked fish (vacuum packed)</td>
<td>2 months</td>
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**Thawing Frozen Fish**

**Refrigerator:**
- Allow 1 day for a 1-pound package

**Cold water:**
- Place the container with the fish in cold water until thawed (1-2 hours)

**Microwave:**
- Thaw the fish in a closed package, glass-baking dish or loosely wrapped waxed paper
- Set the oven to defrost
- Allow 6-7 minutes for 1 pound of fillets
- Turn over after 3 minutes

**NEVER refreeze fish**
Fish Consumption: A Sea of Advisories
As part of a low-fat, heart-healthy diet, consumers are hearing the message to incorporate more fish in their diets. Yet, recent reports question the safety of eating fish because of unacceptable levels of PCBs and the most toxic form of mercury, methyl mercury that builds up in fish tissue.

PCBs and mercury are industrial pollutants that find their way into fresh waters and oceans where they are absorbed by fish. Large predator fish at the top of the food chain, such as shark, swordfish and king mackerel, accumulate the most contaminants.

- These chemicals build up in fish and people over the course of a lifetime. Mercury can damage your nervous system and kidneys, if it builds up in your body.
- **Symptoms:** tingling, prickling or numbness in hands and feet or changes in vision. The body can eliminate mercury eventually and many of the adverse affects can be reversed.
- Young children, developing fetuses and breast-fed babies are at most risk, because small amounts of mercury can damage a brain that is just starting to form or grow.
- Too much mercury may affect a child’s behavior and lead to learning problems later in life.
- Babies exposed to PCBs during pregnancy may have lower birth weight, reduced head size and delayed physical development.

**What should you do?**

**Review:**
- *Eat fish often? A Minnesota Guide to Eating Fish*
- *A Family Guide to Eating Fish*

- [www.health.state.mn.us/divs/eh/fish/index.html](http://www.health.state.mn.us/divs/eh/fish/index.html)

**What about Salmon?**
A study made headlines when it reported unacceptable levels of PCBs in fish feed given to farmed salmon. The study said that PCB levels in farmed salmon, especially those from Europe, were about seven times higher than in wild salmon. Yet, there is no official agreement that the amount of PCB’s in farmed fish poses a health hazard. Until more research results are available, it is reasonable to eat farmed salmon less frequently and eat wild salmon more often.

**Farmed vs. wild salmon**
- Over half the salmon sold around the world is farm-raised from Northern Europe, Chile, Canada and the U.S.
- 56% of farm-raised salmon consumed in the US comes from Chile, 31% from Canada and 6% U.S. water.
- Salmon is the 3rd most popular fish in the U.S. behind shrimp and tuna.
- Farmed salmon is affordable and available year round. Wild salmon is only available June-October and is 3 times more expensive that farmed salmon.

**So what’s a consumer to do?**
- Farm fish can continue to be part of a healthy diet – researchers suggest consumers eat only 2 meals of farmed salmon per week.
- Canned salmon is often harvested in the wild.
- Check for the package for country of origin labeling for farmed salmon.
- Choose fish from North or South American water.
- For fresh salmon, ask for the country of origin.
What about Tuna?

The Federal Fish Advisory includes albacore tuna and tuna steaks in the list of fish with high levels of mercury. Research found “white” canned, albacore tuna has three times the mercury levels as the “light” tuna.

As a result of these findings, Minnesota Department of Health advises in A Family Guide to Eating Fish for canned tuna—one meal per week of canned “light” and one meal per month for canned “white” tuna.

Canned light tuna is much lower in mercury, but also lower in omega-3 fats.

Five of the most commonly eaten fish that are low in mercury are shrimp, canned light tuna, salmon, Pollock and catfish.

Stream to table – Fish cooking tips

• General rule of thumb: Cook 10 minutes for every inch of thickness. The 10-minute rule does not apply if cooking fish in the microwave.
• Fish is done when the flesh has just begun to turn from translucent to opaque or white and in firm but still moist or cook to 145°F as measured by a food thermometer.
• Cooking fish at too high a temperature or for too long a time toughens it, dries it out and destroys the flavor.

Leftover Fish

• Fish will keep 1 day before its quality deteriorates.
• Leftover cooked fish doesn’t freeze well.

Safe Fish

• Cooking to 145°F destroys harmful bacteria and parasites.
• Remove skin and trim fat. Broil, bake or grill fish to reduce chemicals like PCB’s.
• Do not eat raw fish unless it has been frozen for 48 hours to destroy parasites.
• Improper smoking methods may result in undercooked, unsafe fish.
• Lightly marinated or salted raw fish recipes may be unsafe unless the fish has been frozen.
• Fish to be pickled needs to be frozen at 0°F for 48 hours before pickling or simmered in the brine for 10 minutes to prevent a broad fish tapeworm infection.

Summary

For most people, two meals of fish per week is generally considered optimal for balancing the health benefits and the health risk from contaminants in fish. “Choosing which fish to eat for those meals is important to minimize exposure to mercury and other chemicals in fish. Following the Minnesota Department of Health (MDH) fish consumption guidelines keeps your exposure to a safe level.” According to Pat McCann of MDH “The right fish choice depends on each person and his or her health status.”

References

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