Fish Facts for Good Health

By Dayle Hayes, MS, RD

This story is filled with fish facts—we can assure you that there is nothing fishy about it! And thus we begin with a fundamental truth: Eating fish—and plenty of it—is good for you. Nutrition experts have long recognized the health benefits of eating fish and seafood recipes. Current dietary guidance has made it official. In January 2016, the U.S. Departments of Agriculture (USDA) and Health and Human Services (HHS) jointly released the 2015-20 Dietary Guidelines for Americans (DGAs), recommendations that are designed to encourage us to adopt healthier eating habits in order to prevent chronic problems like heart disease, high blood pressure and Type 2 diabetes. The current DGAs recommend consuming a variety of protein foods, including more seafood.

Healthy adults should eat at least 8 ounces of seafood per week, receiving an intake of an average 250 milligrams per day of two kinds of omega-3 fatty acids (EPA and DHA). Women who are pregnant or breastfeeding should eat at least 8 ounces weekly because the omega-3 fatty acid DHA has been shown to improve infant health outcomes.

CASTING FOR CLARITY It’s already clear that some definitions will be helpful before we go fishing for more facts. Let’s start with determining if there’s a difference between fish and seafood. Unfortunately, an Internet search won’t provide any definitive answers. Some experts suggest that “seafood” is merely a synonym for “shellfish.” Others, however, consider it a subset category of “fish,” incorporating all types that are found in salt water, as opposed to fresh water. Some assert the opposite: Fish is the subset of seafood, and fish share mutual characteristics (such as scales, eyes and so on), while seafood incorporates all living organisms in ocean and fresh water that can be consumed by humans.

For the purposes of this article, we will consider seafood and fish to be synonymous, and references to either term encompass all types of both ocean and fresh water foods for humans. The list includes finfish (such as pollock, halibut, tilapia, trout, bass, catfish, etc.), as well as shellfish (like clams, oysters, crabs, and lobsters).

YOUR HEALTH IS ON THE LINE Next, we need to understand the nutrition properties that make seafood a desirable protein for human consumption. Omega-3 fatty acids are essential human nutrients. Your body needs omega-3s for good health, but it cannot make them from other components in food. You need to eat omega-3 fats regularly. Improved heart health is the most important benefit of consuming more omega-3 fatty acids, especially those found in seafood. According to the National Institutes of Health, omega-3s can be good for your heart and blood vessels in several ways. They can help in

» reducing triglycerides, an unhelpful type of fat in your blood;
» reducing the risk of an irregular heartbeat (arrhythmias);
When it comes to improving or maintaining good health, consuming omega-3 fatty acids may be the most important reason to eat more seafood, but there are many others. Seafood is a good source of high-quality, relatively low-calorie protein and other important nutrients.

- slowing the buildup of plaque in your arteries; and
- helping to slightly lower your blood pressure.

Scientists are still researching all the possible benefits of omega-3 fatty acids. Some studies suggest they may also help with cancer, depression, inflammation, asthma and ADHD.

There are two kinds that come mainly from seafood: EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid); these are sometimes called marine omega-3s. (Research has confirmed that DHA is especially critical for healthy brain and eye development in infants.) The most common omega-3 fatty acid in most Western diets is ALA (alpha-linolenic acid), and its sources include vegetable oils, nuts (especially walnuts), flax seeds, flaxseed oil and leafy vegetables.

Omega-3s are also frequently marketed as supplements, like fish oil capsules. If you remember your grandmother pushing cod liver oil, she was using the original omega-3 supplement! While omega-3 supplements can be useful for some people, they do not always live up to the marketing hype. Some of their advice is like many a fisherman’s story—claiming bigger benefits than the research actually supports.

The DGAs and a variety of health organizations suggest an EPA + DHA intake of at least 250 to 500 milligrams per day, while the American Heart Association recommends 1,000 milligrams of EPA + DHA per day for patients with coronary heart disease. Most experts agree that two or more meals of seafood per week are the best way to get your omega-3s. The box on page 98 features a list of frequently consumed seafood products with their omega-3 content.

**NEED ANOTHER LURE?** When it comes to improving or maintaining good health, consuming omega-3 fatty acids may be the most important reason to eat more seafood, but there are many other good reasons to put more fish on your plate. Seafood is a good source of high-quality, relatively low-calorie protein. Lean or lower-fat fish (such as cod, flounder and sole) contain 100 calories or less per 3-oz. cooked portion. Even fattier fish (like mackerel, herring, and salmon) feature only ~200 calories or less per 3-oz. cooked serving. Seafood may be an especially appropriate protein source for the elderly or anyone who has difficulty chewing. Compared to red meats and poultry, the protein in seafood has less connective tissue. This means that fish muscle is fragile, flakes when cooked and can be eaten without further cutting or slicing.

Seafood also contains vitamins and minerals in variable amounts depending on the type of fish and processing methods. For example, while most fish do not have much calcium, canned salmon and sardines can be a good source of that nutrient because their calcium-rich bones are softened in the can during processing. Fish generally have lower levels of B vitamins that are similar to meats and other protein-rich foods. Fish varieties with more fat can be a good source of the fat-soluble vitamins A and D.

Following are the general recommendations summarized from the DGAs, as well as guidance from the Food and Drug Administration and the Environmental Protection Agency. Always check with your personal health care provider if you have any questions about consuming seafood.

### Healthy Adults and Teenagers

- **Consume 8 ounces or more of seafood per week.**
- **Enjoy a variety of seafood to maximize nutrients and minimize any possible contaminants.**
- **Eat raw or partially cooked seafood at your own risk.**
- **Try grilling, broiling, roasting or baking seafood rather than breading or frying, which add calories and fat.**
- **Use herbs and spices; dill, chili powder, paprika, and cumin pair well with seafood. Lemon and lime juice add flavor without adding sodium.**

### WEIGHING THE SCALES

Clearly fish and shellfish contain many of the healthy nutrients that we need more of in our diets. But what about seafood safety? What about the things we want to ingest less of, like mercury or pesticides? Should we be concerned? In fact, much of the alarm about seafood safety is unwarranted.

For most healthy adults, the benefits of eating seafood twice a week far outweigh any minimal risks, which can be controlled by making careful consumer choices and by handling fish properly. As is the case with food safety in general, certain groups need to take more care when choosing, handling and preparing seafood. These include pregnant women and nursing mothers, children under age 12, older adults and anyone with a compromised immune system (individuals who have a serious auto-immune disease, are undergoing cancer treatment or are taking certain anti-viral medications).

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Women Who Are Pregnant, May Become Pregnant or Are Breastfeeding
- Consume at least 8 to 12 ounces of a variety of seafood per week, which may include up to 6 ounces of albacore (white) tuna per week.
- Avoid shark, swordfish, tilefish and king mackerel due to the potential of elevated mercury levels.
- Do not eat raw or partially cooked seafood, including smoked fish.

Children 12 Years and Under
- Consume 8 ounces of a variety of seafood per week, which may include up to 6 ounces of albacore (white) tuna per week.
- Avoid shark, swordfish, tilefish and king mackerel due to the potential of elevated mercury levels.
- Do not eat raw or partially cooked seafood, including smoked fish.

Immunocompromised Individuals and Older Adults
- Consume a variety of seafood twice per week.
- Should not eat raw or partially cooked seafood.

**ATTENTION RECREATIONAL FISHERMEN AND ANGLERS:** Concerns about environmental pollutants, like pesticides, in seafood are primarily for fresh waters, estuaries and near-shore coastal waters, rather than species found in the open ocean. Recreational fishermen who eat large amounts of sport fish and shellfish caught from contaminated waters are at greatest risk. Pregnant women, breastfeeding mothers, young children and older adults should avoid consuming recreationally caught seafood. Exposure from fish can be lowered, however, by up to 40% by removing the skin and trimming the fat. State and tribal environmental programs and departments of health frequently test local waters; they issue fish and shellfish advisories.

Go to: www.schoolnutrition.org/OnlinePDAs

"Fish Facts for Good Health"
Completion of this test, with a passing score, will count as 1 Continuing Education Unit (CEU) in Key Area 1, Nutrition, General Nutrition, Code 1320.

Please Print
Name: _____________________________________________________________
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1. Healthy adults should eat at least ___ of seafood per week.
   - 2 pounds
   - 1 fillet
   - 8 ounces
   - 250 milligrams

2. Experts agree that fish and seafood are distinct categories that should not be confused.
   - True
   - False

3. The ___ found in seafood can help to address heart disease in humans.
   - omega-7 fatty acids
   - mercury
   - triglycerides
   - none of the above

4. EPA stands for ___.
   - eicosapentaenoic acid
   - Energy Protection Agency
   - Eat Pollock Always
   - none of the above

5. ___ is an example of a lower-fat fish.
   - Mackerel
   - Flounder
   - Salmon
   - All of the above

6. Most salt-water seafood species contain more than 100 milligrams of sodium per 3-oz. cooked portion.
   - True
   - False

7. Some groups need to take care and avoid the levels of ___ found in some seafood.
   - lead
   - lithium
   - chlorine
   - mercury

8. ___ is an herb/spice that pairs particularly well with seafood.
   - Dill
   - Cumin
   - Paprika
   - all of the above

9. Children 12 years and under should avoid smoked fish.
   - True
   - False

10. Surveys estimate that 1 in ___ Americans eats the recommended minimum amount of seafood each week.
    - 5
    - 100
    - 10
    - none of the above

**TEST COMPLETION & SUBMISSIONDETAILS**
To earn 1 Continuing Education Unit (CEU) toward SNA’s Certificate/Credentialing programs for this professional development article (PDA) test, you must achieve a passing score and the issue date (September 2016) must not be older than five (5) years from your Certificate/Credentialing period. A maximum of three (3) PDAs per year is allowable for SNA’s Certificate in School Nutrition program. There is no maximum of passing PDAs for those with the SNS Credential, submitted within the three-year period.

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when necessary. Before eating recreationally caught seafood on a regular basis, check with your state health department for any health advisories.

GET HOOKED! Current surveys suggest that only 1 in 10 Americans follows the DGAs and eats the recommended weekly seafood minimum. There is plenty of room for improvement—and plenty of delicious ways to menu more seafood on your dinner table or your cafeteria serving line. MyPlate.gov (www.choosemyplate.gov) offers suggestions in its 10 Tips Nutrition Education Series. Here are three to get you started; you can find more at Eat Seafood Twice a Week (www.choosemyplate.gov/twiceaweek).

» Keep seafood on hand. Canned seafood (such as canned salmon, tuna or sardines) is quick and easy to use. Canned white tuna is higher in omega-3s, but canned “light” tuna is lower in mercury.

» Get creative with seafood preparation. Think beyond the fish fillet. Open up your comfort zone to check out salmon patties, a shrimp stir-fry, grilled fish tacos or clams topping whole-wheat pasta. Add variety by trying a new fish, such as grilled Atlantic or Pacific mackerel, at least once a month.

» Put seafood on a salad or in a sandwich. Top a salad with grilled scallops, shrimp or crab in place of steak or chicken. Use canned tuna or salmon for sandwiches in place of deli meats, which are often higher in sodium.

If you are…um…angling for better health, take the…well…bait and reel in more fish and seafood dishes this fall. It’s a great goal to tackle! SN

Dayle Hayes is a school nutrition and social media consultant based in Billings, Mont., and was inspired for this article by a recent trip to Maine. She maintains several social media channels under the School Meals That Rock brand. You can reach her at EatWellatSchool@gmail.com.

WHAT A CATCH!
What are your best marine sources for omega-3 fatty acids? Review this chart before your next supermarket trip or restaurant visit.

<table>
<thead>
<tr>
<th>SEAFOOD PRODUCT</th>
<th>OMEGA-3s (per 3-oz. cooked portion)</th>
</tr>
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<tbody>
<tr>
<td>More than 1,500 milligrams per serving</td>
<td></td>
</tr>
<tr>
<td>Herring, Wild (Atlantic &amp; Pacific)</td>
<td>♥♥♥♥♥</td>
</tr>
<tr>
<td>Salmon, Farmed (Atlantic)</td>
<td>♥♥♥♥♥</td>
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<tr>
<td>Salmon, Wild (King)</td>
<td>♥♥♥♥♥</td>
</tr>
<tr>
<td>Mackerel, Wild (Pacific &amp; Jack)</td>
<td>♥♥♥♥♥</td>
</tr>
<tr>
<td>1,000 to 1,500 milligrams per serving</td>
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<tr>
<td>Salmon, Canned (Pink, Sockeye &amp; Chum)</td>
<td>♥♥♥♥♥</td>
</tr>
<tr>
<td>Mackerel, Canned (Jack)</td>
<td>♥♥♥♥</td>
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<tr>
<td>Mackerel, Wild (Atlantic &amp; Spanish)</td>
<td>♥♥♥♥</td>
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<tr>
<td>Tuna, Wild (Bluefin)</td>
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<td>500 to 1,000 milligrams per serving</td>
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<tr>
<td>Salmon, Wild (Sockeye, Coho, Chum &amp; Pink)</td>
<td>♥♥♥♥</td>
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<tr>
<td>Sardines, Canned</td>
<td>♥♥♥♥</td>
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<tr>
<td>Tuna, Canned (White Albacore)</td>
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<td>Swordfish, Wild</td>
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<td>Trout, Farmed (Rainbow)</td>
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<tr>
<td>Oysters, Wild &amp; Farmed</td>
<td>♥♥♥♥</td>
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<tr>
<td>Mussels, Wild &amp; Farmed</td>
<td>♥♥♥♥</td>
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For the complete Omega-3 (EPA+DHA) Levels in Common Fish and Shellfish list, visit http://tinyurl.com/SNMag-Fish-Omega-3, part of the Seafood Health Facts: Making Smart Choices website, www.seafoodhealthfacts.org, a joint project of several U.S. universities.

Source: Partnership for Food Safety Education