



Seafood Nutrition:

UNDERSTANDING THE SCIENCE,
COMMUNICATING TO CLIENTS, RESOURCES
AND RECIPES TO SHARE

RDN Toolkit



Seafood Nutrition Partnership is here to inspire Americans to enjoy seafood at least twice a week by showing how selecting, ordering and preparing seafood is simple and delicious!

As an expert, you know that customers are often overwhelmed by the options, or confused about how best to prepare a tasty seafood dish. The Seafood Nutrition Partnership can help! This guide should assist you in answering their questions and inspiring customers to make healthier choices for themselves and for their families.



seafoodnutrition.org

Today's Fresh Catch

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Fun ways to use this toolkit

- **TAKE IT TO THE SUPERMARKET** — tour a seafood counter at a local market with your client and make selections for tonight's dinner.
- **IN THE KITCHEN** — try recipes together, teach cooking techniques and show them how easy it can be.
- **BE CREATIVE** — take tried and true recipes from your client's own kitchen and make them special with seafood.
- **TALK ABOUT SEAFOOD** — tell your followers and share the seafood news in articles and blogs.

What is seafood?

Seafood includes any form of food from the waters, including fish, shellfish such as mollusks and crustaceans, and even sea vegetables like seaweed and algae. In the United States, that includes freshwater. And, at Seafood Nutrition Partnership, that definition must also take into account the sustainability of the food supply and the waters that provide life.

Short answer: It's any way you can get the good nutrients, vitamins and essential omega-3s that come from the sea.

And what is Seafood Nutrition Partnership?

- SNP is an independent nonprofit grounded in science and guided by respected researchers, healthcare professionals, and academics, with a mission to create a healthier America through consumption of seafood. SNP addresses the biggest barriers to eating seafood — a lack of confidence in knowing how to select, buy, prepare and eat seafood — to encourage more Americans to consume fish, shellfish and omega-3s as part of a balanced diet.
- SNP provides resources to health and nutrition professionals that helps answer consumers' questions about seafood and health and encourages balanced nutrition throughout the lifespan. SNP's outreach materials emphasize seafood at all price points, ease of prep and cooking, and provide culturally relevant recipes — many of which feed a family of four for less than \$10 and can be made in less than 15 minutes.

Why we need your help.

Research shows eating seafood two to three times per week reduces the risk of death from any health-related cause.¹ Seafood provides unique health benefits as a lean protein and is the best source for omega-3 fatty acids, which are healthy fats essential to human health and development.

However, only 1 in 10 Americans follow the recommendation in the Dietary Guidelines to eat seafood at least twice a week. Health professionals recommend 250-1,000 mg/day of omega-3s EPA and DHA. However, the average American intake is only 90 mg/day.² We need your expert help to reach consumers and improve their health.



Take the pledge to eat #Seafood2xWk

Eating seafood regularly can significantly improve overall health. Eating two servings per week — as recommended by the Dietary Guidelines for Americans, American Heart Association, American Diabetes Association and many other leading health organizations — is an easy way to make a positive commitment to your health and the health of those around you. **Take the pledge at seafoodnutrition.org/pledge.**

The pledge is an easy, voluntary way to let friends and family know that you're making a positive commitment to your health. Sign the pledge to eat seafood twice each week. Your heart — and your loved ones — will thank you for it!

I pledge to eat two servings of seafood each week.

*I recognize **seafood is a healthy choice** for me and my family. It is one of the leanest proteins with a variety of nutrients beneficial for heart and brain health.*

*By pledging to **eat at least two servings of seafood each week as recommended by the USDA HHS Dietary Guidelines for Americans and supplement with omega-3s**, I know I will help me and my family improve our health.*

*The Seafood Nutrition Partnership aims to **reduce the risks of heart disease, improve baby brain wellness and increase memory for seniors** by educating Americans about the health benefits of sustainable seafood and building awareness of seafood's essential nutritional value.*



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

² What We Eat in America, NHANES 2013-2014, individuals 2 years and over (excluding breast-fed children), day 1. Available: www.ars.usda.gov/nea/bhnrc/fsrg.



Eat Seafood: All the Reasons You Need

People feel good about seafood — they agree it’s good for their health, it’s a perfect choice when they want something special, or they love how it tastes. In fact, Americans are eating more seafood as they discover its great taste and healthy benefits. In 2017, a third of consumers reported they increased their fish consumption at home in the past year.

Despite this, few people are eating seafood on a regular basis — only one in 10 consumers meet the goal of having seafood two times per week.¹ To help consumers make the leap, give them these reasons:

1

LIVE (HEALTHIER) LONGER

- Fish literally saves lives. Eating seafood two to three times per week reduces the risk of death from any health-related cause by 17 percent.²
- Seven out of 10 deaths in the U.S. are preventable through nutrition and lifestyle changes, like adding omega-3s to your diet. Low seafood intake contributes to 55,000 deaths each year, making seafood deficiency a leading dietary contributor to preventable death in the U.S.³
- Older adults with highest fish consumption lived an average of 2.2 years longer.⁴

¹ U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015 – 2020 Dietary Guidelines for Americans. 8th Edition. December 2015. Available at <http://health.gov/dietaryguidelines/2015/guidelines/>.

² Mozaffarian D, Rimm EB. Fish intake, contaminants, and human health: evaluating the risks and the benefits. *JAMA*. 2006;296:1885-99.

³ Micha R, et al. Association Between Dietary Factors and Mortality From Heart Disease, Stroke, and Type 2 Diabetes in the United States. *JAMA*. 2017 Mar 7;317(9):912-924.

⁴ Mozaffarian D, et al. Plasma Phospholipid Long-Chain Omega-3 Fatty Acids and Total and Cause-Specific Mortality in Older Adults. *Ann Intern Med*. 2013 Apr 2;158(7):515-25.

2

SEAFOOD IS A “PROTEIN WITH BENEFITS”

- Seafood sits among the highest-quality proteins (like eggs, meats, poultry and dairy) and offers additional health benefits. It can reduce your risk of heart disease, improve how you feel during pregnancy and help your child develop a healthy brain and eyes, and improve memory and sharpness.^{2,5,6}
- As a “protein with benefits,” leading health organizations recommend Americans eat seafood at least twice a week.¹

3

FISH IS BRAIN FOOD

- “As calcium is to the bones, DHA is to the brain,” says Dr. Tom Brenna, member of the 2015-2020 Dietary Guidelines Advisory Council. Seafood provides docosahexaenoic acid (DHA), a type of omega-3 essential for brain development and function, helping neurons trigger and cells regenerate. It is such an important building block that people with low levels of it have measurably smaller brains!⁶
- The FDA and EPA agree seafood consumption is especially important for pregnant or nursing women because eating fish regularly helps with the growth and development of children’s brains and even helps boost IQ. Babies from moms who ate seafood twice a week had a higher IQ averaging 5.8 points.⁷
- People who regularly eat fish are 20 percent less likely than their peers to have depression.⁸ In fact, the American Psychiatric Association has endorsed the fatty acids in fish as an effective part of depression treatment.

⁵ Hibbeln JR, et al. Maternal seafood consumption in pregnancy and neurodevelopmental outcomes in childhood (ALSPAC study): an observational cohort study. *Lancet*. 2007;369(9561):578-85.

⁶ Tan MD, MPH, Z.S. Red blood cell omega-3 fatty acid levels and markers of accelerated brain aging. *Neurology*. 2012 Feb 28;78(9):658-664.

⁷ FAO/WHO (2011). Report of the Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption. Rome, Food and Agriculture Organization of the United Nations; Geneva, World Health Organization, 50 pp.

⁸ Li F, et al. Fish consumption and risk of depression: a meta-analysis. *J Epidemiol Community Health*. 2016 Mar;70(3):299-304.

4

SEAFOOD IS DELICIOUS, VERSATILE, BUDGET-FRIENDLY AND FAST

- From delicate, mild flounder to rich, flavorful salmon, or sweet and savory shrimp, seafood can please any palate.
- Seafood fits with all of your favorite flavors — it can be incorporated into a spicy Latin dish, flavorful Creole recipe, light and refreshing salad, or a rich Italian pasta bowl.
- Fresh, local, seasonal catches are easy on the wallet, as are frozen options and canned seafood, like tuna or salmon.
- From start to finish, fresh, frozen, or canned seafood can make a meal in 15 minutes or less.





The Ultimate Guide to Buying Seafood

Buying seafood doesn't need to be complicated. Utilize this guide to find the perfect seafood to satisfy your taste, schedule, budget and diet.

I'M IN THE MOOD FOR:

- For a light, delicate fish, choose a lean fish, such as striped sea bass, cod, flounder, grouper, haddock, halibut, mahi mahi, perch, pollock, red snapper, rockfish, sole or yellowfin tuna.
- For a richer taste, choose a fattier fish usually with darker flesh, such as herring, mackerel, salmon, sardines, swordfish, trout or albacore tuna.

Tip LET FRESHNESS BE YOUR GUIDE. It's easy to substitute one fish for another in a recipe, so if the mahi mahi looks and smells fresher than the pompano, buy it instead. Also, keep in mind the frozen and canned sections offer the same health benefits and often a wider variety to choose from.

TO PREPARE AND COOK MY SEAFOOD, I'D LIKE TO:

- **Use my outdoor grill**
 - Many fish stand up to the heat, and it can bring out a delicious grilled flavor. Try salmon, snapper, tuna, mahi mahi, swordfish, catfish, scallops or shrimp.
- **Steam or poach it**
 - Try lean fish – mild-flavored with tender, white or pale flesh – such as sea bass, cod, flounder, grouper, haddock, halibut or pollock.
- **Broil or bake**
 - Try a medium-fat fish, such as bluefish, catfish, mullet, salmon or swordfish.
- **Eat it without having to cook it**
 - Choose a precooked fish that's frozen (so you just have to warm it up), or opt for canned tuna, salmon or crab.

ACROSS THE STORE

- **FRESH:** A great option if you're planning to eat fish today or tomorrow. Seafood should be consumed within one to two days when it's fresh or thawed. If you're eating it right away, prepared seafood is a quick and easy option, as well. Swing by the sushi station or prepared foods section for a meal on the run.
 - **For the wallet:** Seasonal or local fresh options tend to be more budget-friendly at your fish counter. Both farm-raised and wild fish are good nutritional choices, so talk to your seafood counter expert about best deals, what's freshest and recipe ideas.



- **FROZEN:** If you plan to save your seafood for a later date, this is the way to go. It's also great for fast family-friendly meals such as pre-seasoned fish that can be cooked quickly in the oven or even microwave. Frozen seafood is just as good for you, especially with today's flash-frozen-at-sea technologies and can be saved for up to six months.



- **For the wallet:** Frozen seafood is often a budget-friendly option, especially if you can buy larger packages and store them. Check for sales and coupons for even better values.
- **CANNED, TINNED OR POUCHED:** There are many canned seafood options for a quick and easy meal or snack, and they serve as a great source of protein.
 - **For the wallet:** Canned seafood is often the most budget-friendly option. Keep an eye out for sales and stock up on this shelf-stable pantry protein.



Additional Considerations

SUSTAINABILITY

- Sustainable means that seafood has been caught or farmed with minimal impact to the environment.
- The majority of U.S. retailers have sustainability practices in place. Always buy seafood from a reputable market where the employees are able to answer your questions.
- When at the store, look for a trusted certification such as Certified Sustainable Seafood from the Marine Stewardship Council or Best Aquaculture Practices administered by the Global Aquaculture Alliance.
- You can also download the Seafood Watch app from the Monterey Bay Aquarium or visit FishWatch.gov, both of which list sustainable seafood choices based on where the fish is from, how it was caught and other factors.

FARMED VS. WILD

- Both farmed and wild seafood are safe to eat.
- The two main types of seafood farming are marine, which is net enclosures in the open ocean or in tanks on land, and freshwater, usually man-made ponds. In the U.S., the most common farmed species include oysters, clams, mussels, and shrimp, and fish such as catfish, trout, salmon and black sea bass.
- Farming fish, shellfish and even seaweed helps produce food while restoring habitats, replenishing wild stocks, and rebuilding populations of threatened and endangered species.
- When it comes to the environment, both farmed and wild fish and shellfish can be harvested responsibly, or not, so it is best to find out the sustainability policy of your grocer or look for a trusted certification on the package.



The Ultimate Guide to Cooking Seafood

BEST WAY TO COOK YOUR SHELLFISH

Often, shellfish are boiled, poached, steamed or microwaved. They can also be baked, broiled or grilled, as with scallops or shrimp.

IS IT DONE?

- **Raw shrimp:** will turn pink and become firm.
- **Live oysters, clams and mussels:** shells will open when they are done.
- **Shucked oysters, clams and mussels:** will become plump and opaque. The edges of the oysters will start to curl.
- **Scallops:** will turn white or opaque and become firm to the touch.
- **Crab and lobster:** shells will turn bright red and the meat will become white or opaque.

	 CLAMS	 CRAB	 LOBSTER	 MUSSELS	 OYSTERS	 SCALLOPS	 SHRIMP
Cooking Method	Steam	Steam, boil or buy precooked frozen or canned	Boil, or use precooked frozen	Steam	Steam, roast or poach	Pan-sear, broil or grill	Boil, saute, grill or use precooked frozen
Ways to Enjoy	In risotto or on their own with a squeeze of lemon	In gumbos, as crab cakes, or as a topping on fish, shrimp, or lobster	Over a fresh salad or served with melted butter	Steamed in broth or soup, or on their own with a squeeze of lemon	Grilled or baked, topped with sautéed spinach and garlic	Tossed with pasta	Grilled, in tacos or over pasta

BEST WAY TO COOK YOUR FISH

Fish can be divided into categories based on the amount of fat it contains. Within each category, you can swap types of fish in recipes and cooking techniques.

- **Steamed or poached:** Lean, mild-flavored fish with tender, white or pale flesh, such as sea bass, cod, flounder or grouper are usually delicate, so this cooking method works well. Shrimp, crab and lobster can be cooked in this method.
- **Grilled, baked or broiled:** Medium-to-fatty fish with a firmer texture and richer flavor are perfect for these methods because they can withstand the heat. Try black cod (sablefish), bluefish, catfish, mackerel, salmon, swordfish or trout.

IS IT DONE?

- Many types of fish are delicate and tender, so you want to avoid overcooking them. The best way to tell if a fish is done is by testing it with a fork. Insert the fork at an angle, at the thickest point, and twist gently. The fish will flake easily when it's done, and it will lose its translucent or raw appearance.
- If you are new to preparing seafood, a good rule of thumb is to cook the fish to an internal temperature of 140° to 145°F.
- Try the 10-minute rule, which says you should measure the fish at its thickest point and cook it for 10 minutes per inch, turning halfway through the cooking time.

Fish is versatile and can be paired with a variety of cuisines and flavors. Try a few of our favorite ways to enjoy it!

MILD FISH	COOKING METHODS	WAYS TO ENJOY
Cod	Broil, pan-fry, bake, or poach	Baked with vegetables
Flounder	Broil, pan-fry, or bake	Dress it with toasted almonds and lemons
Grouper	Grill, pan-fry, pan-sear, bake, or poach	Try a zesty lime sauce or marinade
Haddock	Broil, pan-fry, bake, or poach	In a sandwich topped with slaw
Halibut	Grill, broil, pan-sear, or bake	Marinated in soy sauce and miso paste, paired with vegetables
Mahi mahi	Grill, saute, bake, or poach	Topped with a spicy pesto sauce or in a curry sauce
Monkfish	Grill, pan-roast, or pan-fry	Cubed, coated with Jamaican jerk spices, grilled and served as kabobs
Pollock	Broil or saute	Coated with breadcrumbs and parmesan
Red Snapper	Roast, fry, or saute	Served in a spicy tomato sauce with pasta
Sea Bass	Grill, broil, pan-sear, or bake	Baked with a citrus dressing or pan-seared with vegetables
Sole	Broil, saute, or bake	Simple saute or stir-fry
Tilapia	Broil, pan-fry, or saute	Pan-fry with a lemon and kalamata olive sauce

RICHER-FLAVORED FISH	COOKING METHODS	WAYS TO ENJOY
Catfish	Grill, pan-fry, or bake	In gumbo or pan-fried
Salmon	Grill, broil, bake, poach, or use canned	Form into cakes or dust with cumin and pair with black bean stew
Sardines	Grill, broil, bake, or use canned	In meatballs or puttanesca sauce
Swordfish	Grill, broil, or bake	In meatballs or puttanesca sauce
Trout	Grill, broil, or pan-fry	Saute with vegetables, rice, and pecans
Tuna, Yellowfin	Grill, broil, pan-fry, bake, or use canned	In a panini, atop a salad, or grilled as a steak

Tour Talking Tips

SEAFOOD IN THE SUPERMARKET

Shoppers often hesitate when it comes to choosing seafood. A supermarket tour is a perfect opportunity to help shoppers get comfortable with the variety of options, and make choices that taste delicious and are good for their health.



SEAFOOD COUNTER

- When you are in the mood for something fresh, ask our seafood counter about seasonal seafood options, along with any recipes they may have on hand.
- Be flexible and let freshness be your guide. Seafood is seasonal just like produce. It's easy to substitute one fish for another, so if the mahi mahi looks and smells fresher than the pompano, buy it instead.
- Saltwater fish should smell briny, freshwater fish should smell like a clean pond, and shellfish mild and sweet.
- When buying fresh fish, ask the seafood counter when they got it in, and check to see if the flesh is firm and elastic, meaning it will spring back when touched.
- When buying shellfish, make sure that if they have shells, they are tightly closed, not cracked or broken. If you are purchasing them alive, make sure they are actually alive by tapping on the shell to make sure they close.
- If you aren't going home within an hour or it's warm outside, ask for your fish to be packed with a separate bag of crushed ice to keep it cold while shopping.

PREPARED FOOD

- When you're in a hurry, the prepared food section offers quick and convenient seafood choices — and is the perfect opportunity to try something new.
- Check out the store's seafood offerings and pick up an entrée to pair with cooked vegetables or a salad for a balanced meal.
- Stop by the sushi counter for a seafood lunch or dinner on the run.



OMEGA-3S BEYOND THE FISH DEPARTMENT

- If your customers are truly fish-averse, or are vegetarian or vegan, there are still ways to get your EPA and DHA.
- Milk and buttery spreads can be found fortified with omega-3s, as well as a variety of shelf-stable products such as tortillas, pasta sauces and peanut butter. There's an omega-3-enhanced olive oil. Most omega-3-containing foods are fortified with DHA, sourced either from fish or from algae, so vegans should be sure to read the label.
- Another option for boosting marine-based omega-3s is to choose eggs from chicken raised with DHA-heavy diets.
- Most fortified food products provide less than 100 mg per serving, which falls short of the 250 mg recommended per day.



PHARMACY/VITAMIN AISLE

If you can't get enough omega-3s in your diet from food, supplements are a great option. But, with dozens of options available on the shelves, consumers often are overwhelmed with choice and may need help understanding how to narrow their choices.

When it comes to choosing an omega-3 supplement, be sure to read the Supplement Facts panel. There are two important things to look for on the label:

1. **The amount of EPA and DHA:** The number shown on the front of the package doesn't always tell the whole story. For example, some packaging will feature "Fish Oil 1000mg," but this describes the amount of total fish oil in the product and not the specific levels of omega-3s. The Supplement Facts panel on the back of the packaging should clearly identify the amount of EPA and DHA.
2. **What is considered a serving:** While on the Supplement Facts, check the serving size, as well. For some supplements, you might need to take two or more pills, especially when it comes to gummies. Remember — you are looking to consume at least 250 mg to 500 mg of EPA and DHA per day.

Supplement Facts		
Serving Size: 2 Soft Gels		
Amount Per Serving		% Daily Value*
Calories	18	
Calories from fat	18	
Total Fat	2.0g	3%
Saturated Fat	0.1g	1%
Trans Fat	0g	**
Vitamin E (d-alpha tocopherol)	30 I.U.	100%
Omega-3s	Weight**	Volume %
EPA (Eicosapentaenoic Acid)	650mg	35%
DHA (Docosahexaenoic Acid)	450mg	25%
Other Omega-3s	180mg	10%
Total Omega-3s	1280mg	70%
Oleic Acid (Omega-9)	58mg	3%

* Percent Daily Values are based on a 2,000 calorie diet.
 ** Daily Value not established. *** Natural Triglycerides.
 Less than 5mg of Cholesterol per serving.

Ingredients: purified deep sea fish oil (from anchovies and sardines), soft gel capsule (gelatin, water, glycerin, natural lemon oil), natural lemon oil, d-alpha tocopherol, rosemary extract.

FREEZER SECTION

- Frozen seafood is just as good for you as fresh, especially with today's flash-frozen-at-sea technologies.
- It is a cost-effective alternative that allows you to make something special and healthy any day of the week.
- From baked fish sticks to grilled salmon to shrimp scampi, frozen seafood offers healthy varieties that everyone in your family will love for quick weeknight meals.
- If thawed properly — either in the refrigerator overnight or in a sealed plastic bag placed in cold water for 15-30 minutes — fish should retain its fresh texture and taste.



CENTER OF THE STORE

- There are many canned seafood options when you are looking for a quick and easy meal or snack — and they serve as a great source of lean protein. Canned tuna, crab and salmon are precooked options that taste great in salads, on pasta or all by themselves.
- Canned salmon, sardines, anchovies, mackerel, herring, crab and clams are among the highest sources of omega-3s in the grocery store.



For those following a vegetarian or vegan diet, you can still add EPA and DHA to your nutrition regimen by choosing algae-based omega-3 supplements. ALA supplements (think flaxseed and chia) will not provide the EPA and DHA your body needs.



FOR MANY SHOPPERS, SEAFOOD REMAINS A MYSTERY. You can help shoppers overcome their deep-sea fears by showing them just how simple (and tasty) buying and preparing seafood can be. One delicious bite can reel in customers and get them hooked on seafood! (Feel free to use all our puns!)



Step 2 TALK ABOUT SEAFOOD

Let shoppers know that preparing seafood is easy, tastes great, and is good for their health.

- Seafood sits among the highest quality proteins and offers many additional health benefits throughout the lifespan. It improves how women feel during pregnancy, aids in brain and eye development for children, benefits cardiovascular health, and helps with healthy aging from memory loss to arthritis pain.
- Take the Pledge to eat #Seafood2xWk at seafoodnutrition.org and you can get more tips, coupons and recipes to help you eat seafood twice a week.

The Demonstration

THREE STEPS TO THE BEST SEAFOOD DEMO

Seafood sits among the highest quality proteins and offers many additional health benefits throughout the lifespan.

Step 1 SHOW THEM HOW TO PREPARE

Here are some quick, simple, no cook recipes great for demos:

- **Simply Satisfying Kale & Tuna Salad**
seafoodnutrition.org/kale-and-tuna-salad
- **Crab Salad**
seafoodnutrition.org/crab-salad
- **Smoked Salmon Pinwheel**
seafoodnutrition.org/smoked-salmon-pinwheel

(Recipe cards available at seafoodnutrition.org/rd.)



Step 3 GIVE THEM SHOPPING AND MEAL PLANNING TIPS

Tips for making seafood part of your weekly menu:

- **Hit the seafood counter with an open mind**
Fresh seafood is seasonal, so you may not be able to find exactly what your recipe calls for. Talk to the fishmonger — aka the person behind the seafood counter — about what's in stock that would be tasty substitutions.
- **Buying seafood can be affordable for everyone**
Ask the seafood counter what seafood is in season for cost savings. And, remember, frozen and canned seafood is just as healthy as fresh, and is a tasty, cost-effective alternative.
New, flash-frozen technologies preserve the fresh flavor of seafood, at the time it is caught.
- **Cooking seafood is quicker and easier than you think**
Keep frozen and canned seafood on hand for a quick meal. On average, frozen seafood thaws in about 15 minutes.
Start to finish, many fish and shellfish dishes can be prepared in 15 minutes or less.
- **Eat a variety of seafood**
Add variety to your favorite family meals with different species or cooking methods. Be adventurous and try something new.



Guide to Answering Customers' Seafood Questions

As an expert, you know consumers are often overwhelmed by the options, or confused about how best to prepare a delicious seafood dish. Far too frequently, shoppers walk by the seafood counter or stop and stare blankly. The Seafood Nutrition Partnership is here to help! Here are some tips that answer common questions customers have when it comes to buying, preparing or serving seafood.

HOW OFTEN SHOULD I EAT SEAFOOD AND WHY?

- The American Heart, Diabetes, Pediatric, Alzheimer's and Psychiatric associations — and many others — promote seafood as part of the solution to be healthier, recommending fish and shellfish at least twice a week. This recommendation, which translates to about 250 mg of omega-3s EPA and DHA per day, is based on decades of research that shows seafood at least twice a week can lead to fewer instances of chronic and preventable diseases, and even reduce the risk of death from any health-related cause by 17 percent.¹

HOW DO I KNOW IF A FISH IS FRESH?

When it comes to fresh fish, here are some tips:

- If it's the whole fish, gills should be reddish-pink and scales should be bright with a sheen.
- For fillets, the flesh of the fish should be firm and elastic, meaning it will spring back when touched.
- There should be no unpleasant odor.

For frozen fish:

- The package should be tightly wrapped, and frozen solid with little or no air space between the package and the fish. (Unless the package says flash frozen.)
- It should not be discolored. If there are points of discoloration, it may indicate freezer burn.
- There should be no odor.

When buying shellfish:

- Make sure that if they have shells, they are tightly closed, not cracked or broken.
- If you are purchasing them alive, make sure they are actually alive by tapping on the shell to make sure they close.
- The odor should be mild and sweet, not overwhelming or foul.

WHICH FISH HAVE THE MOST HEALTH BENEFITS?

- While all fish are excellent high-quality protein options, those with higher amounts of omega-3 fatty acids are packed with the most heart, brain, eye and overall health benefits. Try mackerel, trout, tuna, salmon, sardines, anchovies or pollock. Some shellfish also are rich in omega-3s such as oysters, crab and mussels.

WHAT'S A FATTY FISH?

- Fattier fish have more than 5 percent fat. They have a firmer texture, a richer flavor and deeper color, and include black cod, mackerel, salmon and trout. They are perfect for broiling, grilling, poaching, baking, or even microwaving.
- Fatty fish are one of the best sources for omega-3 fatty acids. In fact, salmon has one of the highest amounts of omega-3s per serving.

WHAT ARE THE MOST BUDGET-FRIENDLY CATCHES?

- Frozen and canned seafood can be the most budget-friendly. However, there are many seasonal and local options at the fresh counter. Ask your fishmonger and check store circulars for the best deals.

WHAT ARE THE BEST TYPES OF SEAFOOD FOR GRILLING?

- Try salmon, snapper, tuna, mahi mahi, swordfish, catfish, scallops or shrimp — they stand up to the heat and taste delicious when grilled.
- Use foil or a plank to cook delicate fish such as cod, tilapia and flounder.



HOW DO I PREPARE FISH WITHOUT ANY ADDITIONAL FAT OR FRYING?

- For lean, mild-flavored fish with tender flesh, such as sea bass, cod, flounder, grouper, haddock, halibut, pollock or monkfish, you can steam, poach or even microwave without adding fat.
- For medium-fat fish, such as catfish, mullet or swordfish, any cooking method will do.
- For fattier fish with a firmer texture, richer flavor, and deeper color — such as salmon, mackerel or trout — try broiling, grilling, poaching, baking or microwaving.

IF A RECIPE CALLS FOR A WHITE FISH, WHAT DOES THAT MEAN?

- White fish is generally a mild-flavored fish, so if your recipe calls for it, look for cod, bass, flounder, grouper, haddock, snapper or tilapia. These are great for pan-frying, pan-searing, using in soups and chowders, and baking.

SHOULD YOU EAT SEAFOOD WHILE PREGNANT?

- The FDA and EPA agree seafood consumption is especially important for pregnant or nursing women because eating fish regularly helps with the growth and development of children's brains and even helps boost IQ.² Babies from moms who ate seafood twice a week have a higher IQ by an average of 5.8 points.³ Studies have shown women who do not eat seafood during pregnancy are twice as likely to experience depression.⁴

SHOULD I BE CONCERNED ABOUT MERCURY IN FISH?

- For men and women not trying to get pregnant, the recommendation is to eat a variety of seafood each week to reap the range of nutrients in different types of fish, and there are no specific species you need to avoid.
- The FDA and EPA released advice urging pregnant women, breastfeeding moms, and young children to consume more fish and seafood, including all of the most popular seafood in the U.S. from salmon to canned tuna. The guidance listed seven fish to avoid during pregnancy due to higher mercury: shark, swordfish, king mackerel, tilefish, bigeye tuna (does not include canned tuna), marlin and orange roughy.²

WHAT DOES IT MEAN TO BE "SUSTAINABLE"?

- Sustainable means that the seafood has been caught or farmed with minimal impact to the environment.

² FDA/EPA (2017). Eating Fish: What Pregnant Women and Parents Should Know. Available at <https://www.fda.gov/Food/ResourcesForYou/Consumers/ucm393070.htm>. Updated 11/29/2017.

³ FAO/WHO (2011). Report of the Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption. Rome, Food and Agriculture Organization of the United Nations; Geneva, World Health Organization, 50 pp.

⁴ Hibbeln JR, et al. Maternal seafood consumption in pregnancy and neurodevelopmental outcomes in childhood (ALSPAC study): an observational cohort study. *Lancet*. 2007;369(9561):578-85.

⁵ NOAA. What is aquaculture? Available at <https://oceanservice.noaa.gov/facts/aquaculture.html>. Updated 10/10/2017.

How to safely store seafood at home

FRESH FISH

- If your commute home is over an hour, take your fish home in a cooler or use portable insulated bags available at the store.
- All fresh seafood should be kept in your refrigerator or on ice at 32°F. It should feel cold to the touch, so store it in the coldest part of your refrigerator.
- Wrap fish or fillets in moisture-proof paper or plastic wrap.
- If it's not prepacked, you should wash it under cold running water and pat dry with a paper towel.
- Use fresh or defrosted fish within one to two days.
- Do not refreeze previously frozen fish.

FROZEN FISH

- Store frozen fish in your freezer (0°F).
- You can store commercially frozen fish for up to six months.
- Thaw it in the refrigerator (a 1 lb. package takes about 24 hours).
- You can also thaw it under cold, running water or place it in a container with cold water, refreshing water frequently (fillets take 15-30 minutes depending on thickness).

IS FARMED FISH SAFE TO EAT?

- Both farmed and wild seafood are safe to eat. According to NOAA, farming fish, shellfish and even seaweed helps produce food while restoring habitats, replenishing wild stocks, and rebuilding populations of threatened and endangered species.⁵ When it comes to the environment, both farmed and wild fish and shellfish can be harvested responsibly, or not, so it is best to find out the sustainability policy of your grocer or look for a trusted certification on the package.

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



EMBRACE FAT

Fats play an essential role in human health from head (brain) to toe (joints).¹ Replacing just 5 percent of your caloric intake from so-called bad fats (like trans and saturated fat found in red meat) with unsaturated fat from seafood and plant-based foods can reduce your risk of death by 27 percent.²

Embrace the unsaturated fats found in foods such as walnuts, seeds, plant oils, avocados, and fatty fish such as salmon, tuna, trout, sardines, mackerel and herring.

Learn more by following **#TeamGoodFat.**



Join the Conversation

SHOW US HOW YOU EAT **#SEAFOOD2XWK** AND ENCOURAGE OTHERS TO DO SO.

Here are some sample posts to use with followers

The Dietary Guidelines recommends eating two servings of seafood each week. Take the #Seafood2xWk pledge and add some #seafood to your plate this year: <http://www.seafoodnutrition.org/pledge>

The American Heart Association (@american_heart) recommends eating seafood twice per week as part of a heart healthy diet. Looking for ways to incorporate more fish and shellfish in your diet? Check out these simple & delicious seafood recipes from @Seafood4Health: <http://www.seafoodnutrition.org/recipes>

#DYK Eating #Seafood2xWk reduces the risk of death from any health-related cause. Learn more: <http://www.seafoodnutrition.org/science>

Seafood isn't just for dinner! Add it to a delicious frittata for breakfast and get in your two servings per week. #Seafood2xWk <http://www.seafoodnutrition.org/alaska-salmon-pesto-frittata>

Need something quick and easy for #dinner? Most seafood cooks in 15 minutes or less. For inspiration, visit: <http://www.seafoodnutrition.org/recipes> #Seafood2xWk

Calling all #moms and #dads: #Seafood2xWk is a must for your kids. Fish is a great source of DHA, an #omega3 beneficial in brain development.

Eating more fish, shellfish & #omega3s leads to higher IQs and better sleep patterns for children. Just another reason to eat #Seafood2xWk

Seafood can improve how you feel during #pregnancy and help your child develop a healthy brain and eyes #Seafood2xWk <http://www.seafoodnutrition.org/moms-babies>

Seafood can improve memory and sharpness in older adults. #healthyaging #Seafood2xWk #omega3s

ONE type of #leanprotein you should eat TWO times per week that's found in THREE different parts of the grocery store. Get your fresh, frozen and canned #Seafood2xWk

Eating fish saves lives. It is estimated an additional 50,000 deaths from heart disease and stroke are avoided per year by eating fish. #Seafood2xWk

Seafood has essential omega-3s & low intake contributes to 55,000 deaths each year. Learn more: <http://www.seafoodnutrition.org/science>

Not eating enough seafood #Omega3s is a leading dietary contributor to preventable death in the U.S. — eat #Seafood2xWk!

¹ Basilian W. 8 Easy Ways to Replace Saturated Fats with Unsaturated Fats.

² Wang D, et al. Association of Specific Dietary Fats With Total and Cause-Specific Mortality. JAMA Intern Med. 2016;176(8):1134-1145.

Spread the Message: TO YOUR FOLLOWERS...

- Share the #Seafood2xWk pledge with your followers: seafoodnutrition.org/pledge
- Mention @seafood4health and Seafood Nutrition Partnership on Facebook, Twitter and Instagram.
- Use the hashtags: #Seafood2xWk, #omega3s and #seafood4health

FOLLOW US!

- facebook.com/SeafoodNutrition
- twitter.com/Seafood4Health
- pinterest.com/Seafood4Health
- instagram.com/SeafoodNutritionPartnership

Content Calendar and Story Ideas

Health, food and nutrition observances present an opportunity to educate and energize the public, co-workers, community members and others. Check out these news hooks to help you talk about seafood all year long.

January NEW YEAR, NEW YOU

Seafood is the perfect lean protein to add into your healthy lifestyle as you start your year on the right foot.

We're (Also) Celebrating: National Slow Cooking Month and National Soup Month

February AMERICAN HEART MONTH

Heart disease can often be prevented when people make healthy choices and manage their health conditions. This month is the perfect time to try some heart-healthy seafood recipes with your family and friends.

The American Heart Association recommends 1,000mg EPA+DHA per day for patients with coronary heart disease.

We're (Also) Celebrating: Canned Food Month, SNP's birthday (13), Lent, National Clam Chowder Day (25)

March NATIONAL NUTRITION MONTH

Focus on making informed food choices and developing smart eating habits, like eating seafood twice per week.

We're (Also) Celebrating: National Frozen Food Month, Brain Awareness Week (second week)

Winter Tip FIGHTING COLD SEASON

Omega-3s EPA and DHA play an important role in the immune system and help fight infections.¹ You can load up on these essential nutrients through fatty fish such as salmon, tuna, sardines and anchovies. In addition to omega-3s, seafood contains protein, vitamin B-6 and iron — all important nutrients to keep you healthy.

April SEAFOOD SUSTAINABILITY

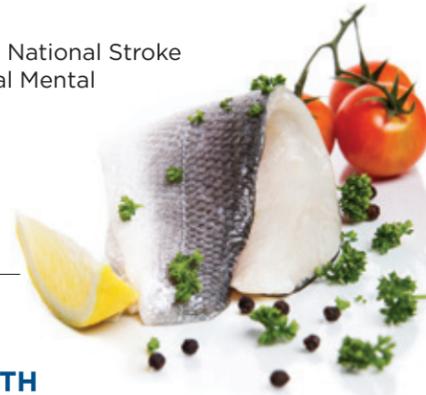
Seafood is a vital part of the diet that supports both human health and environmental health.

We're (Also) Celebrating: National Garlic Month, National Public Health Week (first week), Every Kid Healthy Week (fourth week)

May MEDITERRANEAN DIET MONTH

The Mediterranean diet, which includes eating seafood at least twice per week, reduces the incidence of major cardiovascular events.

We're (Also) Celebrating: National Stroke Awareness Month, National Mental Health Awareness Month, National Salad Month, National Shrimp Day (10), Senior Health & Fitness Day (30)



June MEN'S HEALTH MONTH

Men's Health Month is a time to raise awareness of preventable health problems, such as heart disease. Encourage the men and boys in your life to stock up on seafood and omega-3s.

We're (Also) Celebrating: Aquarium Month, National Fresh Fruits and Vegetables Month, Alzheimer's & Brain Awareness Month, World Oceans Day (8), International Sushi Day (18), National Catfish Day (25), National Ceviche Day (28)

Spring Tip THE MEDITERRANEAN DIET MAY SAVE YOUR LIFE

Research from the landmark PREDIMED study found consuming omega-3s from both plant-based sources, such as walnuts, and fish and shellfish have the greatest protective effects from all causes of mortality. It seems the plant-based and marine-derived omega-3s appear to act synergistically.²



July BACKYARD BBQS & PICNICS GALORE

Summer is in full heat, so head to the grill with your favorite medium-fatty fish, such as catfish, salmon, swordfish or tuna. These types of fish can withstand the heat of the grill.

We're (Also) Celebrating: National Grilling Month and National Picnic Month

August BACK-TO-SCHOOL

When kids eat least two servings of seafood each week, the benefits are big. Fish and shellfish supply nutrients essential for strong bones, brain development, attention span and more.

We're (Also) Celebrating: National Breastfeeding Month, National Catfish Month, National Sandwich Month, National Oyster Day (5), National Fajita Day (18)

September TAILGATING

Easy seafood appetizers and dips make for delicious snacks during the game — whether at the stadium or in your living room.

We're (Also) Celebrating: National Childhood Obesity Awareness Month, National Food Education Month, National Breakfast Month, Aquaculture Week (fourth week), National Lobster Day (25)

Summer Tip FINDING BACK-TO-SCHOOL SUCCESS

Nutritious food and brain health are closely connected. Consuming seafood can help reduce anxiety, stress and headaches, and help you focus. It's also been linked to better sleep and an increase in brain functioning.³

Hungry for more? Download our communications toolkit for more talking points, social media posts, recipe ideas and more at seafoodnutrition.org/rd.

October NATIONAL SEAFOOD MONTH

Celebrate seafood in October, and all year long by taking the #Seafood2xWk pledge.

We're (Also) Celebrating: National Taco Day (4) and National School Lunch Week (third week)

November AMERICAN DIABETES MONTH

Healthy lifestyle changes, such as eating seafood twice per week, can lower your risk for diabetes and better manage symptoms.

We're (Also) Celebrating: National Alzheimer's Disease Awareness Month and National Sardines Day (24)

December HEALTHY HOLIDAY ENTERTAINING

One way to celebrate seafood and the holiday season is with the Feast of the Seven Fishes, an Italian-American celebration of Christmas Eve.



Fall Tip CALMING HOLIDAY STRESS

Fish is rich in omega-3 fatty acids, which have been shown to help prevent surges in stress hormones and protect against heart disease and depression. In fact, the American Psychiatric Association has endorsed seafood's EPA and DHA as an effective part of depression treatment.

¹ Rodacki, et al. Influence of fish oil supplementation and strength training on some functional aspects of immune cells in healthy elderly women. *British Journal of Nutrition*. 2015. doi:10.1017/S0007114515001555.

² Sala-Vila A, et al. Dietary α -Linolenic Acid, Marine ω -3 Fatty Acids, and Mortality in a Population With High Fish Consumption: Findings From the PREvención con Dieta MEDiterránea (PREDIMED) Study. *J Am Heart Assoc*. 2016;5(1):e002543.

³ Liu J, et al. The mediating role of sleep in the fish consumption — cognitive functioning relationship: a cohort study. *Scientific Reports* 7, 17961 (2017). doi:10.1038/s41598-017-17520-w. Published 21 December 2017.



An Ocean of Choice

Seafood is not just filled with omega-3s. Seafood includes other vital nutrients optimal for overall health and wellness, such as selenium, iron, vitamin B-6 and B-12, and protein.

So many great seafood options to choose from, they each offer a unique nutrient profile. Here are just a few highlights:



CLAMS have more vitamin B-12 per serving than any other food — 1,868% of the daily value, to be exact. B-12 keeps nerves and blood cells healthy, balancing mood and fighting fatigue.



COD is the leanest protein available, meaning the protein to calorie ratio beats out any other food. That could be why Dwayne “The Rock” Johnson eats it as his main protein — averaging 253 oz. of cod a week!



LOBSTER is a tasty way to get a boost of thyroid-boosting iodine. A 100-gram serving of the crustacean provides 100 micrograms of the essential mineral, or 67% of the recommended daily intake.



OYSTERS are pumping iron, well, at least they are providing it in abundance. A serving has 60% of your daily needs — or if you’re just enjoying an appetizer, it’s about 4% DV for each oyster.



SALMON is helping fight American’s Vitamin D deficiency with 100% of your daily “sunny D.” Swordfish is also really high in this bone-strengthening vitamin, which is naturally present in very few foods.



SARDINES boast 43% of your daily value of calcium, because of the tiny, edible bones, plus another whopping 169% of your daily vitamin B-12, 85% of selenium and 56% of phosphorus.



SHRIMP is a lean protein and a great source of selenium (80% DV) and iodine (30%), which are both helpful in thyroid support, and a healthy thyroid supports a healthy metabolism.

Statistics based on 4 oz. servings. Data from USDA Nutrient Database.



SMOKED SALMON AVOCADO FLATBREAD

Recipe by Julie Harrington, RDN, of RDelicious Kitchen

PREP TIME: 15 Minutes | **COOK TIME:** 10 Minutes
SERVES: 8

INGREDIENTS

- 2 Tbsp goat cheese
- 2 Tbsp cream cheese
- 1 Tbsp fresh dill, finely chopped
- 1 clove garlic, minced
- 1½ tsp olive oil, divided
- 2 whole grain naan
- ½ small red onion, thinly sliced
- 1 cup arugula
- 6 oz. smoked salmon
- ½ of an avocado, sliced thinly
- salt and pepper, to taste

DIRECTIONS

1. Preheat oven to 350 degrees F. Line a baking cheese with parchment paper or cooking spray.
2. In a small bowl, combine the goat cheese, cream cheese, dill, garlic and 1 teaspoon olive oil. Mix well.
3. Spread evenly over both pieces of naan bread. Top with onion slices.
4. Bake naan in the oven for 8-10 minutes until the edges and bottom of the naan are crisp.
5. Remove naan from the oven. Let slightly cool.
6. In a small bowl, toss arugula with remaining ½ teaspoon of olive oil. Season with salt and pepper.
7. Top naan with arugula, salmon, and avocado. Cut each naan into 4 appetizer size slices. Serve.



SIMPLY SATISFYING KALE AND TUNA SALAD

Recipe by Michael-Ann Rowe, The Fishionista

SERVES: 4
OMEGA-3 PER SERVING: 187mg

INGREDIENTS

- 2 - 5oz. cans tuna
- 1 - Bunch kale or 1 bag of kale
- ¼ cup - Cherry tomatoes
- 1 - Lemon, raw
- ¼ cup - Extra virgin olive oil
- 1/8 cup - Balsamic vinegar
- Kosher salt (To taste)
- Freshly ground pepper (To taste)

DIRECTIONS

1. Wash kale. Set aside to drain water off.
2. Cut tomatoes in half and lightly toss in bowl with balsamic vinegar, oil and pinch of salt and pepper. Set aside.
3. In a salad bowl, mix tuna and juice from the can gently with squeeze of 1/2 lemon and a pinch of pepper.
4. Massage kale for about 3 minutes to soften it.
5. Add the kale and 1/2 the tomatoes to the tuna, and gently toss until all is coated with dressing.
6. Add remaining tomatoes.
7. Squeeze remaining lemon all over and serve.



(MINI) AHI TUNA POKE BOWLS

Recipe by Julie Andrews, RDN, of The Gourmet RD

PREP TIME: 15 Minutes | **COOK TIME:** 15 Minutes
SERVES: 10-12

INGREDIENTS

Tuna & Marinade:

- 2 Tbsp. low sodium soy sauce
- 2 Tbsp. brown sugar
- 1 Tbsp. rice wine vinegar
- ½ Tbsp. sesame oil
- Splash fish sauce
- 1-inch piece fresh ginger, grated
- 3 cloves garlic, grated
- 1 lb. fresh ahi tuna (high quality), cubed

Poke Bowls:

- 2 cups chopped veggies (shredded carrots, shelled edamame, sliced radishes, red or Napa cabbage)
- 1-2 Tbsp. rice wine vinegar
- 2 cups cooked sushi or Jasmine rice
- ½-1 cup diced mango
- 1-2 ripe avocados, sliced
- 3 green onions, sliced
- 2-3 Tbsp. toasted sesame seeds
- Spicy mayo (¼ cup mayo + 1-2 Tbsp. Sriracha), for serving

DIRECTIONS

1. In a medium glass bowl, whisk together soy sauce, brown sugar, rice wine vinegar, sesame oil, fish sauce, ginger and garlic until combined. Add cubes of fresh Ahi tuna and stir to combine. Cover bowl and refrigerate at least one hour.
2. In a medium glass bowl, combine chopped vegetables and rice wine vinegar; toss to combine. Cover bowl and refrigerate at least one hour. (This is an optional step but adds a ton of flavor.)
3. To assemble bowls: Spoon rice into four bowls. Distribute pickled vegetables, mango, avocado, and marinated tuna among bowls. Sprinkle with green onions and sesame seeds. Serve with spicy mayo, if desired.
4. NOTE: To make these appetizer size, use small ramekins to build 10-12 mini poke bowls.



OLD BAY SHRIMP STACKS

Recipe by Cara Harbstreet, RDN, of Street Smart Nutrition

PREP TIME: 10 Minutes | **COOK TIME:** 30 Minutes
SERVES: 8

INGREDIENTS

- 1 large Russet potato
- ½ cup sweet corn kernels
- ½ pound 31-40 ct shrimp, peeled and deveined
- 2 Tbsp olive oil
- 1 ½ tsp Old Bay seasoning
- Fresh parsley for garnish
- Chopped chives for garnish

For the Sauce:

- ½ cup mayonnaise
- 1 tsp garlic powder
- 1 ½ Tbsp chopped chives
- 1 tsp dijon mustard
- Juice of ½ lemon

DIRECTIONS

1. Preheat the oven to 375 degrees F. Line a large sheet pan or two smaller sheet pans with aluminum foil or spray with nonstick spray.
2. Wash and dry the potato. Using a mandolin, slice crosswise into thin slices (¼" thick). Discard the smallest ends and arrange the 16 largest slices on the sheet pan(s). Bake in the oven for 20 minutes, flipping halfway through, until the potato slices begin to brown and crisp slightly.
3. While the potato slices are baking, prepare the other ingredients. If using frozen shrimp and corn, thaw and dry thoroughly. Remove the tails from the shrimp and add to a mixing bowl with the corn, olive oil, and Old Bay seasoning. Stir to combine so the corn and shrimp are evenly coated
4. Remove the sheet pans from the oven. Arrange the shrimp and corn on top of the potato rounds. Try to evenly fill each round to be mostly covered, using 1 or 2 shrimp per piece. Return sheet pans to the oven, switch to the BROIL setting, and broil for 5 minutes or until the tops of the stacks begin to brown. Remove from the oven and allow to cool slightly, then garnish with fresh parsley and chopped chives.
5. Combine all ingredients for the sauce in a small bowl. Mix well, then serve with the shrimp stacks for dipping.



CUMIN SCENTED SALMON WITH BLACK BEAN STEW

From SNP Eating Heart Healthy Nutrition Program
Created by Chef Kelly Armetta, Hyatt Regency Boston

SERVES: 4
COST PER RECIPE: \$12.16
OMEGA-3 PER SERVING: 500-2000 mg

INGREDIENTS

- 2 Tbsp. olive oil, divided
- 1 Tbsp. cumin, ground
- 1 Tbsp. coriander seed, crushed
- 1 lb. salmon filet
- To taste salt & pepper (S&P)
- ¼ cup onions, raw, white or yellow, chopped
- 2 Tbsp. garlic, chopped
- 1 poblano pepper, chopped
- To taste chili flakes
- 1-14.5 oz. canned tomato, chopped
- 1-15.5 oz. black beans, low sodium
- 1 ½ cups water
- 1 Tbsp. cilantro, fresh, chopped
- 2 green onions, chopped
- 1 lime, juiced

DIRECTIONS

1. Cook Salmon: Heat 1 tablespoon olive oil in a heavy skillet on medium heat.
2. Mix together cumin and coriander seed, season fish with spices and S&P. Save some spice mix.
3. Add salmon to skillet and cook on each side for 3-4 minutes.
4. Make Black Bean Stew: Meanwhile, heat remaining oil (1 tablespoon) in another pan and add onions and garlic. Cook for 3 minutes.
5. Add peppers and chili flakes.
6. Add saved spiced mix from Step 2. Cook until aroma starts to smell.
7. Add tomatoes and allow tomatoes to start to sear.
8. Add black beans and water. Simmer for 10 minutes.
9. Add cilantro, scallions and lime juice. Add S&P. Cook for 2 minutes.
10. Place black beans in individual bowls and add salmon portion on top.



RISOTTO WITH CLAM SAUCE

From SNP Eating Heart Healthy Nutrition Program
Created By Chef Kelly Armetta, Hyatt Regency Boston

SERVES: 4
COST PER RECIPE: \$4.87
OMEGA-3 PER SERVING: 300 mg

INGREDIENTS

- 1 cup arborio rice
- ¼ cup olive oil, divided
- 6 garlic, cloves sliced
- ¼ cup onions, white or yellow, chopped
- 3 ½ cups water, divided
- 2 Tbsp. butter, unsalted
- ½ tsp. thyme, dried
- ½ tsp. basil, dried
- 1 lemon, juiced
- 1-14.5 oz. canned tomato, chopped
- 1-10 oz. canned clams, chopped
- To taste - salt & pepper (S&P)

DIRECTIONS

1. Wash arborio rice and heat 2 tablespoons of olive oil on a medium heat.
2. Add ½ the garlic and ½ the onions. Saute until aroma is released.
3. Add rice and mix to coat. Add 1 cup of the water. Stir rice.
4. Add ⅔ cup of the remaining water. Stir and allow water to be absorbed.
5. Repeat Step 4 two more times.
6. When finished, add ½ the butter. Stir rice to incorporate and season.
7. In another pan, heat remaining olive oil, add garlic and onions with thyme and basil. Sauté.
8. Add remaining ½ cup water and lemon juice. Cook for 2 minutes.
9. Add the tomatoes and clams with juice. Cook 4 to 5 minutes.
10. Remove from the heat and let cool for 2 minutes. Add remaining 1 tablespoon butter and swirl to incorporate.
11. Serve over risotto.

Note: pepper flakes can be added during the cooking of the clam sauce if desired.



MUSSELS IN GARLIC BROTH

From SNP Eating Heart Healthy Nutrition Program
Created by Chef Kelly Armetta,
Hyatt Regency Boston

SERVES: 4
COST PER RECIPE: \$6.69
OMEGA-3 PER SERVING: 665 mg (approximately 3 oz. of mussel meat)

INGREDIENTS

- 1 tsp. olive oil
- 4 garlic, cloves sliced
- 2 Tbsp. onions, white or yellow, chopped
- 2 lbs. mussels, cleaned
- 1/2 lemon, juiced
- 1/2 tsp. basil, dried
- 1/2 tsp. thyme, dried
- 1/4 cup clam juice (optional)
- 2-14.5 oz. canned tomatoes, chopped
- 2 Tbsp. butter, unsalted
- To taste - salt & pepper (S&P)

DIRECTIONS

1. Heat large pot with olive oil and sliced garlic and onions.
2. When aroma is released, add mussels.
3. Add lemon juice, herbs and clam juice (optional),
4. and gently toss.
5. Add tomatoes. Cover and simmer over medium heat until mussels are steamed open, generally 3 to 6 minutes.
6. Remove pot from heat. Discard unopened mussels.
7. To finish mussels, add butter and swirl to make broth thicker.
8. Optional: Serve with crusty bread for dipping in broth.



MUSTARD BAKED MACKEREL

From SNP Eating Heart Healthy Nutrition Program
Created By Chef Kelly Armetta,
Hyatt Regency Boston

SERVES: 4
COST PER RECIPE: \$9.87
OMEGA-3 PER SERVING: 1,350-2,100 mg

INGREDIENTS

- 2 Tbsp. mustard, dijon
- 1 Tbsp. mayonnaise
- To taste - salt & pepper (S&P)
- 2 Tbsp. olive oil, divided
- 1 lb. mackerel fillets
- 2 zucchinis, small, cut into rounds
- 1 tsp. rosemary, dried

DIRECTIONS

1. Heat oven to 375°F.
2. Mix mustard, mayonnaise and some S&P, to taste.
3. Lightly coat sheet pan with a little olive oil. Place fish onto pan and lightly spread mustard mixture on fish.
4. Mix zucchini and rosemary with S&P and remaining olive oil.
5. Bake zucchini in oven for 15 minutes.
6. Serving Suggestion: Can be served with brown rice or wild rice.



Additional Resources

SNP offers free materials that emphasize fish and shellfish at all price points, ease of cooking, and culturally relevant recipes — many of which feed a family of four for less than \$10 and can be made in less than 15 minutes.

SEAFOOD TYPE	OMEGA 3 SCALE*	FDA ADVICE FOR PREGNANT WOMEN & CHILDREN**	COST SCALE***	FLAVOR PROFILE	BEST PREP OPTIONS
BASS FRESH, WILD	♥♥	BEST	\$	MILD	GRILL / BAKE / PAN SEAR
CATFISH FRESH / FROZEN, FARMED	♥	BEST	\$	MODERATE	GRILL / BAKE / PAN SEAR
PERCH FRESH, WILD	♥♥	BEST	\$	MILD - SWEET	
SALMON FRESH / FROZEN, FARMED / WILD	♥♥♥♥	BEST	\$	MILD - MODERATE	
SALMON CAN / POUCH, WILD	♥♥♥	BEST	\$	MILD - MODERATE	
SHRIMP FRESH / FROZEN, FARMED / WILD	♥♥	BEST	\$	MILD	
TILAPIA FRESH / FROZEN, FARMED	♥	BEST	\$	MILD - MODERATE	
TROUT FRESH, WILD	♥♥♥♥	BEST	\$	MILD - MODERATE	
TUNA, SKIPJACK (LIGHT) CAN / POUCH, WILD	♥♥	BEST	\$	MODERATE - FULL	
WALLEYE FRESH, WILD	♥♥	BEST	\$	MILD - SWEET	

WHICH FISH IS THE RICHEST IN OMEGA-3s?

(PER 4 OUNCE COOKED PORTION)



Studies show omega-3s can reduce risk of heart disease, depression, dementia and arthritis, and improve overall happiness. Prominent health organizations suggest eating a variety of seafood at least twice a week, aiming to consume an average of 250 to 500 milligrams of omega-3s EPA and DHA per day.

> 1,000 MILLIGRAMS



Anchovies
Herring
Mackerel (Atlantic & Pacific)
Oysters (Pacific)
Sablefish (Black Cod)
Salmon (Atlantic, Chinook, Coho)
Sardines (Atlantic & Pacific)
Swordfish
Trout

500 - 1,000 MILLIGRAMS



Alaskan Pollock
Barramundi
Crab
Mussels
Salmon (Chum, Pink & Sockeye)
Sea Bass
Squid
Tilefish
Tuna (Albacore)
Walleye

250 - 500 MILLIGRAMS



Catfish
Clams
Flounder/Sole
Grouper
Halibut
Mackerel (King)
Oysters (Eastern)
Perch
Rockfish
Snapper
Tuna (Skipjack, canned)

< 250 MILLIGRAMS



Cod
Crayfish
Haddock
Lobsters
Mahi Mahi
Shrimp
Scallops
Tilapia
Tuna (Yellowfin)

If you are not able to meet the omega-3 recommendation from seafood then consider supplementing with omega-3 EPA + DHA capsules.

Source: USDA National Nutrient Database for Standard Reference



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seafoodnutrition.org