

Seafood for Life

A DIVE INTO HEALTHY AGING



Regular fish consumption is associated with significantly greater longevity and improved quality of life as we age, according to an NIH-AARP study.³

Seafood consumption is associated with lower risk for:

Women

- 38% lower Alzheimer's disease mortality
- 10% lower heart disease mortality
- 8% lower total mortality

Men

- 37% lower chronic liver disease mortality
- 20% lower respiratory disease mortality
- 10% lower heart disease mortality
- 6% lower cancer mortality
- 9% lower total mortality

This study, which followed 421,309 American seniors for 16 years, found even modest consumption of fish, around 1-2 servings per week, was associated with significant reductions in risk for death by cardiovascular, respiratory, liver and cancer diseases. While eating all fish is healthful, the greatest impact on long-term health was found with eating non-fried fish.



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As we age, it's important to keep our bodies and our brains nourished and strong. Seafood can play a central role in aging with good health. Lean protein, healthy fats, and the vitamins and minerals naturally occurring in fish all provide valuable nutrients our bodies need. **Research shows people who regularly consume fish live an average of 2.2 years longer than those who don't eat fish.¹**

- **Eating fish is associated with better brain health and better cognitive function as we age.** A 2019 analysis showed 60-80 year olds who consumed, on average, at least 250 mg of omega-3s per week from seafood (about 2-3 servings) scored significantly better on three indicators of cognitive health.²
- A recent meta-analysis, which assessed 27,000 people, found that eating fish regularly was associated with a 20% lower risk for Alzheimer's type dementia. Specifically, adding a 3.5 ounce serving of fish per week was associated with an additional 12% reduction in risk for Alzheimer's type dementia.^{3,4} **People who eat fish are also less likely to experience depression.^{5,6}**
- **Eating fish may help you stay biologically younger.** A genetic marker of biological age (telomeres), which combines both genetic factors and environmental stressors, indicates that mature adults who consume more omega-3 fats are younger and have healthier hearts than those who do not consume much omega-3 in their diets.^{7,8}
- Once we reach middle-age, muscle mass declines and is associated with a higher risk of falling, disability, longer hospital stays and the inability to carry out routine activities in older age. **Healthy intake of lean protein, omega-3s, calcium and vitamin D as found in fish can help maintain muscle strength, prevent muscle loss and reduce our risk of falling as we age.^{9,10,11}** One study of seniors using approximately 3 grams of EPA and DHA omega-3s from fish oil per day showed significant increase in muscle mass and muscle strength.¹²
- The documented life-long health benefits from regularly eating fish are expanding. For example, eating seafood is associated with less risk for Metabolic Syndrome, dry eyes and non-alcoholic fatty liver.^{13,14,15}

MEDITERRANEAN TUNA SANDWICH

Recipe by Chicken of the Sea®

For over 100 years, Chicken of the Sea® has brought you the freshest, best-tasting seafood the oceans have to offer.

Servings: 1
Total Time: 7 minutes

INGREDIENTS:

- 1 (2.5 ounce) pouch Chicken of the Sea® Albacore or Light Tuna
- 2 dried apricots, diced
- 5 Kalamata olives, diced
- 3 Tbsp. cucumber, finely diced
- 3 Tbsp. parsley, finely chopped
- 3 Tbsp. red onion, chopped
- 2 Tbsp. plain Greek yogurt
- Juice of 1 lemon
- ⅛ tsp. salt
- ¼ tsp. fresh ground pepper
- 2 slices whole grain bread, toasted

INSTRUCTIONS:

1. In a large bowl, mix together tuna, apricots, olives, cucumber, parsley, onion, yogurt, lemon juice, salt and pepper.
2. Stir to mix well. Serve between two slices of toasted bread.

TIP Make a big batch of this recipe and have on hand for family meals, or to make quick lunches throughout the week.



BUDGET-FRIENDLY SEAFOOD

Delicious seafood comes at all price points. Eating more seafood doesn't have to be expensive. Some quick tips to find a great deal:

- **Check seasonality** – for example, fresh Alaskan salmon is cheaper in early summer when the fish are running. (Farmed seafood is available yearround.)
- Many **sustainable species** can be found at great deals – look for flounder, perch, tuna and Pacific or Alaskan cod, pollock and rockfish, for example.
- **Buy in bulk and freeze.** Fresh and frozen seafood often come in “family pack” size – just freeze fresh fish within a couple days.
- **Check the weekly sales and clip coupons** – or seek out digital coupons on apps such as Ibotta – to save.

¹ Mozaffarian D, et al. Plasma phospholipid long-chain omega-3 fatty acids and total and cause-specific mortality in older adults: A cohort study. *Ann Intern Med* 2013;158(7):515-525.

² Nielsen SJ. Omega 3 Fatty Acid Consumption from Seafood and Cognitive Functioning, 2011-2014. *Curr Dev Nutr* 2019;3(S1).

³ Zeng L-F, et al. An exploration of the role of a fish-oriented diet in cognitive decline: a systematic review of the literature. *Oncotarget* 2017;8(24):39877-39895

⁴ Muldoon MF, et al. Serum phospholipid docosahexaenoic acid is associated with cognitive functioning during middle adulthood. *J of Nutrition* 2010; 140: 848-853

⁵ Sanchez-Villegas A, et al. Seafood Consumption, Omega-3 Fatty Acids Intake, and Life-Time Prevalence of Depression in the PREDIMED-Plus Trial. *Nutrients* 2018;10(12). pii: E2000.

⁶ Grosso G, et al. Dietary n-3 PUFA, fish consumption and depression: A systematic review and meta-analysis of observational studies. *J Affect Disord*, 2016;205:269-281.

⁷ Farzaneh-Far R, et al. Association of marine omega-3 fatty acid levels with telomeric aging in patients with coronary heart disease. *JAMA*, 2010;303(3):250-257.

⁸ Leung CW, et al. Diet quality indices and leukocyte telomere length among healthy us adults: Data from the National Health and Nutrition Examination Surveys (NHANES) 1999-2002. *Am J Epidemiol*, 2018.

⁹ Zoltick ES, et al. Dietary protein intake and subsequent falls in older men and women: The Framingham Study. *J Nutr Health Aging* 2011;15(2):147-152.

¹⁰ Murad MH, et al. The effect of vitamin D on falls: A systematic review and meta-analysis. *J Clin Endocrinol & Metab*, 2011; 96(10):2997-3006.

¹¹ Ilich JZ, Brownbill RA, Tamborini L. Bone and nutrition in elderly women: Protein, energy, and calcium as main determinants of bone mineral density. *Eur J Clin Nutrition*, 2003;57:554-565.

¹² Smith GI, et al. Fish oil-derived n-3 PUFA therapy increases muscle mass and function in healthy older adults. *Am J Clin Nutr* 2015;102(1):115-122.

¹³ Karlsson T, et al. Associations between fish intake and the metabolic syndrome and its components among middle-aged men and women: the Hordaland Health Study. *Food Nutr Res* 2017;61(1):1347479.

¹⁴ Miljanovic B, et al. *Am J Clin Nutr*. 2005;82(4):887-893.

¹⁵ George ES, et al. Practical dietary recommendations for the prevention and management of nonalcoholic fatty liver disease in adults. *Advances in Nutr*, 2018;9(1):30-40.