

# Guidelines for Seafood Consumption

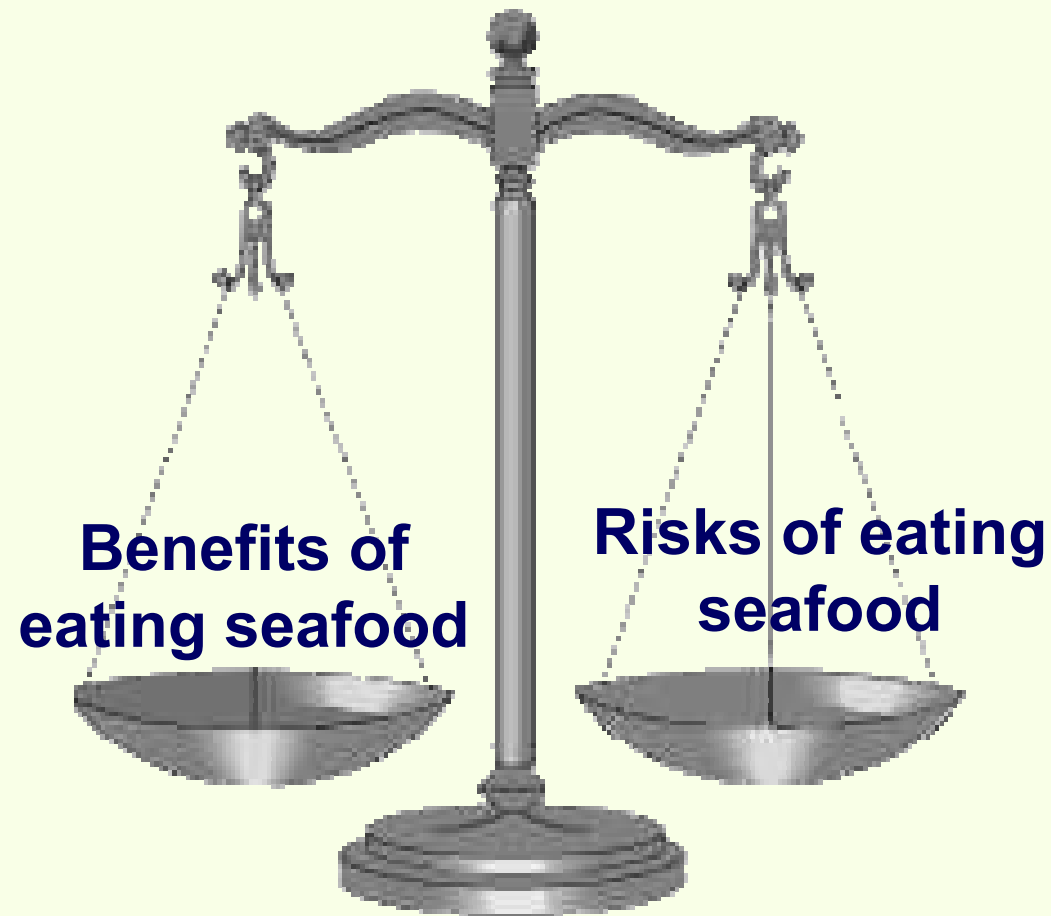
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# Weighing your options



# Benefits of seafood consumption

- Good source of lean protein.
- Many types of fish are low in saturated fat.
- Good source of omega-3 fatty acids.
- **Specifically for pregnant women:** Maternal consumption of omega-3 fatty acids through seafood can contribute to vision and cognitive development in infants and lengthen the duration of gestation.



# Risks associated with seafood consumption

- Some types of fish are high in saturated fats and cholesterol.
- Seafood-borne illnesses from raw or undercooked shellfish, particularly clams, oysters and mussels from contaminated waters. Bacteria such as Salmonella, Staphylococcus aureus, and viral infections (including hepatitis A) have all been found in raw seafood.
- Seafood is the major source of human exposure to methylmercury, a contaminant that accumulates in the muscle of animals over time.
- **Specifically for pregnant women:** Evidence shows that methylmercury can disrupt neurodevelopment in the fetus.

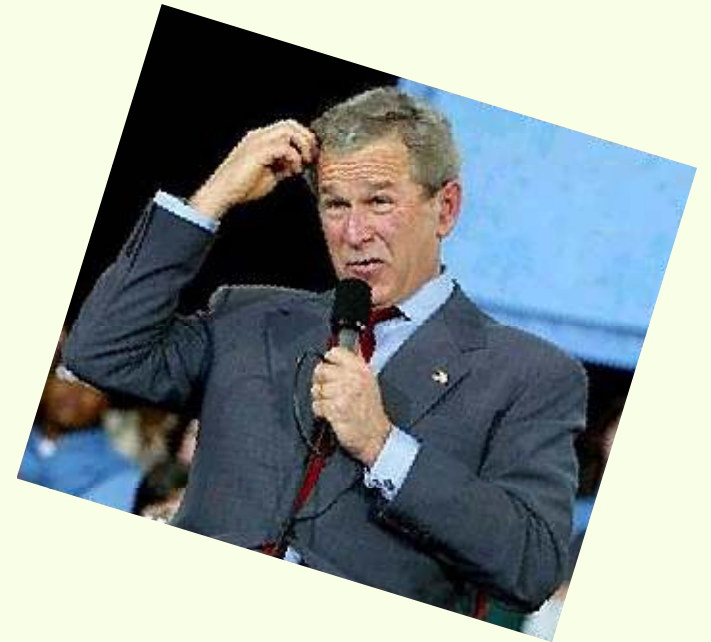


# Example by type of fish

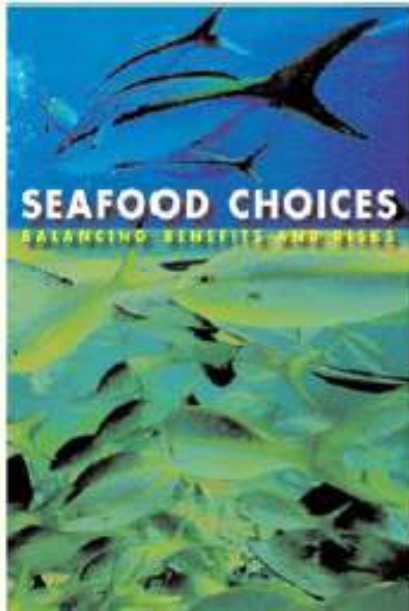
Type of fish	Pros	Cons
Lean fish	Good sources of protein, are low in saturated fat and cholesterol, and provide moderate amounts of omega-3 fatty acids.	Predatory fish with long life spans—such as swordfish, shark, and tilefish—contain levels of methylmercury that are too high for pregnant women.
Fatty fish (such as salmon)	good sources of protein and provide the highest amounts of omega-3 fatty acids. Their methylmercury level is lower than many lean fish.	They also contain higher levels of saturated fat and cholesterol and can accumulate higher amounts of pollutants, depending upon the source.
Shellfish and crustaceans	Good sources of protein and low in saturated fat.	Some contain moderate amounts of cholesterol. They present the greatest risk of microbial infection is eaten raw.



# Confused yet?



# Institute of Medicine report



In response to this confusion, and a request from the National Oceanic and Atmospheric Administration (NOAA) the Institute of Medicine of the National Academies reviewed evidence on the benefits and risks associated with seafood consumption to recommend ways to guide U.S. consumers in making seafood selections to meet their needs.

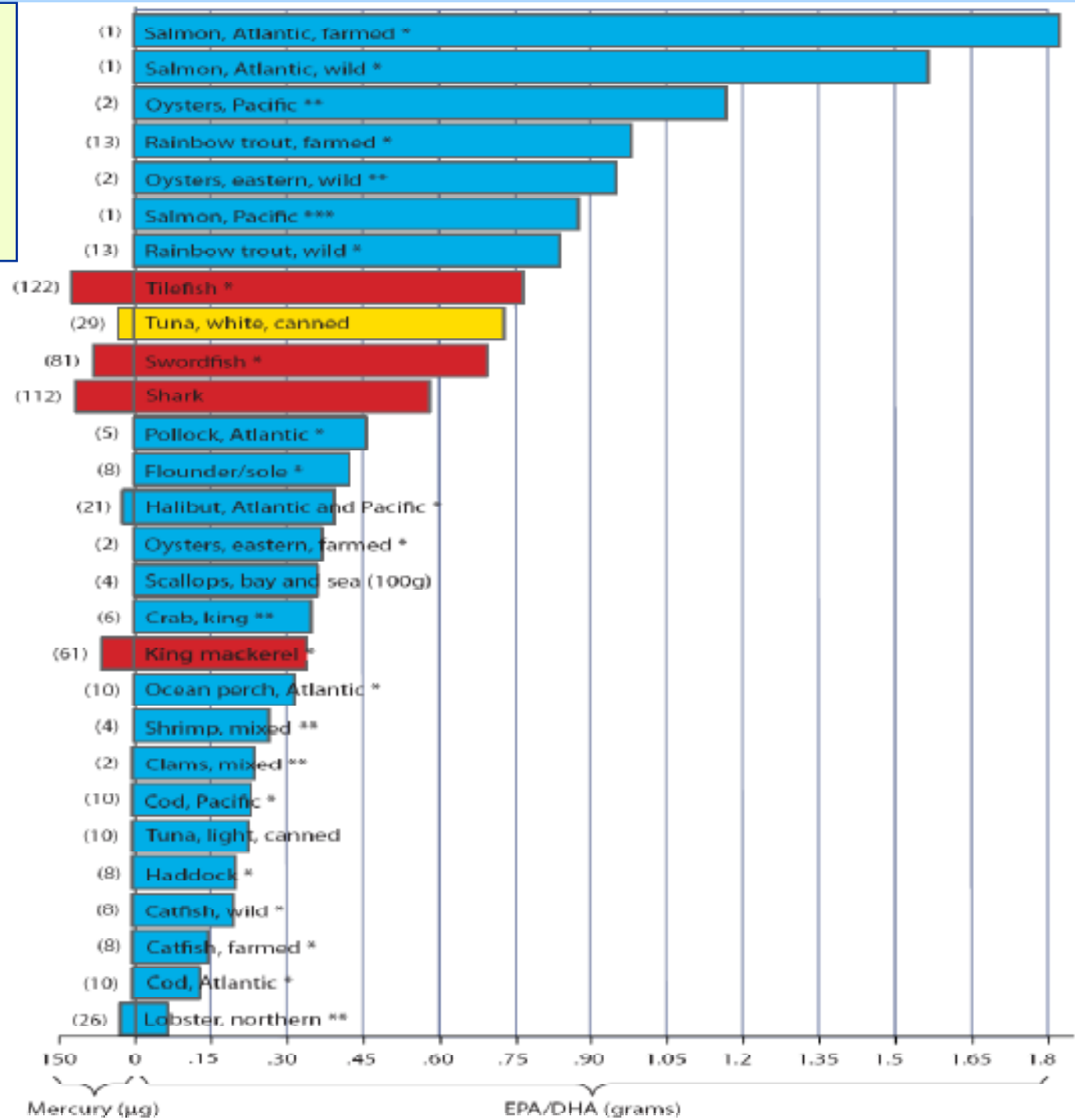


# Consumer confusion

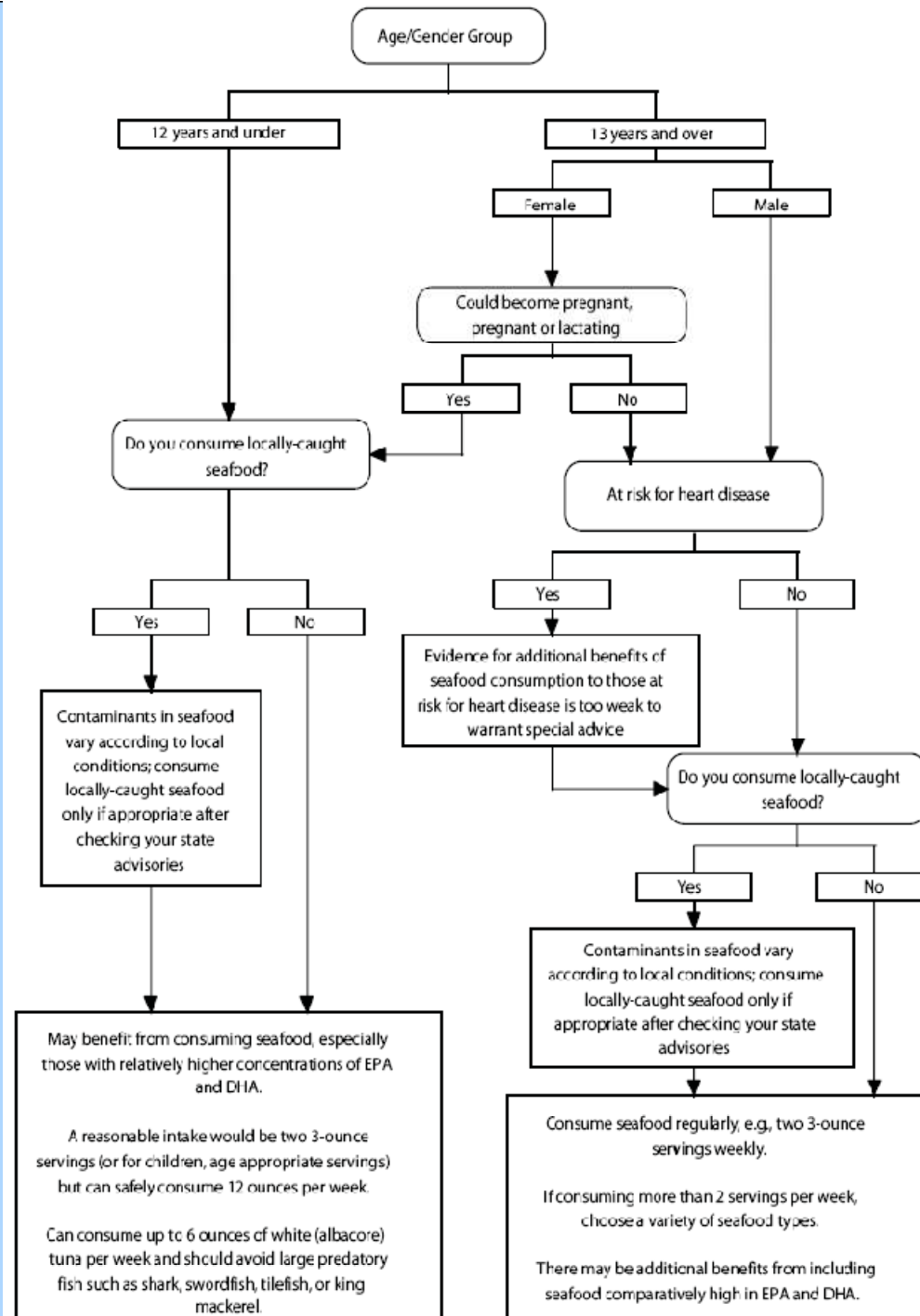
- “The fragmented information that consumers receive about the nutritional value and health risks associated with fish and shellfish can result in confusion or misperception about this food source.”
- “Most of the evidence on seafood’s health benefits and risks is preliminary or insufficient. Reliable data on the distribution of some contaminants is lacking, and there is little evidence on how beneficial effects of seafood might counteract some of the risks of contaminants.”



Example of estimated EPA/DHA (mg) intake and methylmercury ( $\mu\text{g}$ ) intake exposure from one 3-ounce portion of seafood.



## Example of Decision Pathway for Consumer Guidance



# 1. Females who are or may become pregnant or who are breastfeeding

- May benefit from consuming seafood, especially those who are relatively higher concentrations of EPA and DHA.
- A reasonable intake would be two 3-ounce *cooked* (sorry, no sushi\* or uncooked shellfish) servings, but they can safely consume 12 ounces per week.
- Can consume up to 6 ounces of white (albacore) tuna per week.
- Should avoid large predatory fish such as sharks, swordfish, tilefish, or king mackerel.

\*Except for cooked types of sushi like eel and California rolls.



## 2. Children up to 12 years of age

- May benefit from consuming seafood, especially those who are relatively higher concentrations of EPA and DHA.
- A reasonable intake would be two 3-ounce (cooked) servings, but they can safely consume 12 ounces per week.
- Should avoid large predatory fish such as sharks, swordfish, tilefish, or king mackerel.



### 3. Healthy adolescent and adult males and females (who will not become pregnant)

- May reduce their risk for future cardiovascular disease by consuming seafood regularly.
- Who consume more than two servings a week should ensure that they select a variety of seafood to reduce the risk for exposure to contaminants from a single source.



## 4. Adult males and females who are at risk of coronary heart disease

- May reduce their risk for cardiovascular disease by consuming seafood regularly.
- Although supporting evidence is limited, there may be additional benefits from including selecting high levels of EPA and DHA.
- Who consume more than two servings a week should ensure that they select a variety of seafood to reduce the risk for exposure to contaminants from a single source.



# Additional guidelines for pregnant women

- **Smoked Seafood:** Refrigerated, smoked seafood often labeled as lox, nova style, kippered, or jerky should be avoided because it could be contaminated with Listeria. (These are safe to eat when they are in an ingredient in a meal that has been cooked, like a casserole.) This type of fish is often found in the deli section of your grocery store. Canned or shelf-safe smoked seafood is usually OK to eat. (American Pregnancy Association)
- **Shellfish:** The majority of seafood-borne illness is caused by undercooked shellfish, which include oysters, clams, and mussels. Cooking helps prevent some types of infection, but it does not prevent the algae-related infections that are associated with red tides. Raw shellfish pose a concern for everybody, and they should be avoided altogether during pregnancy. (American Pregnancy Association)



# References

- Institutes of Medicine. *Fast sheet: Balancing Choices: Supporting Consumer Seafood Consumption Choices. Fact Sheet drawn from the IOM report, Seafood Choices: Balancing Benefits and Risks.* October 2006.
- Institutes of Medicine committee on Nutrient Relationships in Seafood: Selections to Balance Benefits and Risks, Malden C. Nesheim and Ann L. Yaktine, *Editors.. Report Brief: Seafood Choices. Balancing Benefits and Risks.* October 2006.
- Foods to avoid during pregnancy. American Pregnancy Association. Available at: <http://www.americanpregnancy.org/pregnancyhealth/foodstoavoid.html>. Accessed Nov. 13th at 1pm



# Questions

- Did you find these guidelines helpful?
- What can be done to make seafood consumption less confusing?
- Will these guidelines influence your seafood decision-making?

