

2020 Dietary Guidelines Advisory Committee: DRAFT - Part D. Chapter 9: Dietary Fats & Seafood

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This chapter includes questions examined by the Dietary Fats & Seafood Subcommittee

[DietaryGuidelines.gov](https://www.dietaryguidelines.gov)

LIST OF QUESTIONS

1. What is the relationship between types of **dietary fat** consumed and risk of **cardiovascular disease**?
2. What is the relationship between **seafood consumption** during childhood and adolescence (up to 18 years of age) and risk of **cardiovascular disease**?
3. What is the relationship between **seafood consumption** during childhood and adolescence (up to 18 years of age) and **neurocognitive development**?

METHODOLOGY

- The question on dietary fats and cardiovascular disease was answered using a new NESR systematic review conducted to build on evidence reviewed by the 2015 Committee.
- The questions on seafood were answered using new NESR systematic reviews

**Final protocols and draft conclusion statements available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov)
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REVIEW OF THE SCIENCE

- 23 draft conclusion statements across the 3 questions
- Dietary Fats and CVD:
 - 228 articles from 164 studies (~60% RCTs), were included
 - Built upon the 2015 Advisory Committee's review of saturated fats
 - Conclusion statements were graded from Strong to Insufficient but there was consistency in the findings across age groups and outcomes.
- Seafood consumption during childhood and adolescence:
 - Risk of CVD: 4 articles from 4 studies (50% RCTs), were included
 - Neurocognitive outcomes: 13 articles, representing 9 studies (~33% RCTs), were included
 - “Insufficient evidence” or “No evidence” determined for all outcomes

DISCUSSION: Dietary Fats & CVD Studies in Children & Adolescents

Children & Adolescents

- Diets lower in saturated fat and dietary cholesterol and higher in PUFA had beneficial effects on total and/or LDL cholesterol
- Need for more longitudinal RCTs involving dietary intervention among growing children

DISCUSSION: Dietary Fats & CVD Studies in Adults

Adults

- Built off of 2015 Committee's review of saturated fat
- Current evidence consistent with 2015 findings
- Blood lipids:
 - Diets higher in unsaturated fats, especially PUFA reduces total and LDL cholesterol
 - New evidence remains inadequate to differentiate between sources/types of CHOs as replacement for SFA and their impact on blood lipids
 - Diets lower in dietary cholesterol may reduce total and LDL cholesterol
- CVD endpoint outcomes:
 - Diets replacing saturated fats with PUFA are associated with reductions in risk for coronary heart disease and CVD mortality
 - Diets replacing saturated fat with MUFA may confer CVD health benefits
 - "Insufficient evidence" to differentiate types/sources of CHO as replacement for SFA and risk of CVD
 - Small body of evidence on dietary cholesterol; need for additional research to isolate independent effect of dietary cholesterol

DISCUSSION: Seafood during childhood

- Insufficient evidence was available to make conclusions about the relationship between seafood intake during childhood and adolescence and outcomes examined
- Risk of CVD
 - An inadequate number of studies available and several had serious methodological limitations
- Neurocognitive development
 - Most studies showed a null or favorable association
 - The vast majority of analyses showed no detrimental relationship
 - Inadequate number of studies, inconsistency in results, risk of bias in classification of exposures, and heterogeneity in some outcome assessment measures

SUMMARY: Draft Evidence-Based Advice to USDA and HHS – Saturated Fat

- Saturated Fat:
 - Continue current Dietary Guidelines recommendation: Intake of saturated fats should be limited to **less than 10% of energy** per day by replacing them with unsaturated fats
 - Applies to adults and children 2 years and older
 - Majority of Americans (77%) consume saturated fat in amounts higher than 10% of total energy
 - Because of the high incidence of CVD in the United States, the health effects of reducing saturated fat in the diet is of particular public health importance.
 - Replace saturated fat intake with unsaturated fat by substituting some animal protein sources, especially processed meats and certain dairy products, with sources of polyunsaturated fats, such as seafood, seeds, nuts, legumes, and appropriate vegetable oils

SUMMARY: Draft Evidence-Based Advice to USDA and HHS – Dietary Cholesterol

- Dietary Cholesterol:
 - Continue current Dietary Guidelines recommendation: Individuals should eat **as little dietary cholesterol as possible** while consuming a healthy dietary pattern
 - Dietary cholesterol intakes have decreased from levels in the 1980s when the DGAs first recommended lowering cholesterol intake
 - Mean dietary cholesterol intakes have increased in recent years

Dietary Cholesterol (mean daily intake)	Males 2+	Females 2+	All 2+
NHANES 2011-12	315 mg/d	221 mg/d	267 mg/d
NHANES 2015-16	321 mg/d	245 mg/d	282 mg/d

SUMMARY: Draft Evidence-Based Advice to USDA and HHS - Seafood

- Seafood intake for children
 - **Two or more servings of cooked seafood* per week** are recommended for ages 2 years and older to ensure intake of key nutrients and as part of an overall healthy dietary pattern.
 - Serving size varies depending upon child's age
 - ~5% of US youth report consuming seafood two times/week
 - Increased seafood intake with emphasis on species higher in omega-3 polyunsaturated fatty acids and with low methylmercury content is advised
 - Non-seafood options: flaxseeds, walnuts, soy oil, algae and eggs that contain n-3 fatty acids

*Seafood includes marine animals that live in the sea and in freshwater lakes and rivers. Seafood includes fish (e.g., salmon, tuna, trout, tilapia) and shellfish (e.g., shrimp, crabs, oysters)

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