

US EPA ARCHIVE DOCUMENT

**Summary Table of Responses to Public Comments
on EPA's and FDA's
Draft Updated Advice About Eating Fish
(Docket No. FDA-2014-N-0595)**

INTRODUCTION

FDA and EPA have updated their advice about eating fish for women who are pregnant, might become pregnant, and are breastfeeding and for caregivers who feed young children. The agencies published the draft updated advice on June 11, 2014, and accepted written comments from the public until March 26, 2015. FDA and EPA considered those comments when finalizing the advice and prepared the following responses to the comments.

The agencies received 222 comments from states, industry, academia, various organizations, and concerned individuals. The agencies also reviewed recommendations made by FDA's Risk Communication Advisory Committee and by EPA's Children's Health Protection Advisory Committee. Many of the comments pertained to the manner of communication of the advice (look, feel, and content), while others suggested a more restrictive set of consumption recommendations or disagreed with setting consumption thresholds for specific species of fish or for any but the species highest in mercury.

The updated version of the joint FDA and EPA fish advice reflects synthesized input and suggestions from the comments on the draft version of the advice. After reviewing the comments, which included examples of states' fish consumption advice, FDA and EPA adopted an approach in which fish species are separated into three categories based primarily on average measured mercury content of the species as contained in FDA's [fish tissue database](#), with support from other sources referenced in the Technical Information. The categories are "Best Choices: eat 2-3 servings a week," "Good Choices: eat one serving a week," and "Choices to Avoid," which are fish species that the target audience should not eat.

The format and content of the updated advice depicts the fish species on a colored chart based on the mercury categories described above. In selecting this format, FDA and EPA incorporated aspects of many constructive comments, which offered ways to more effectively communicate the protective message of the advice. Other comments incorporated into the updated advice include creating the "Best Choices" category, creating the "Good Choices" category, including fish species with mercury levels similar to albacore tuna in the category that recommends consumption once per week, and augmenting the "Choices to Avoid" category with additional species that should not be consumed by the target audience because of their higher mercury content.

We received a number of comments on tuna. Some comments suggested that the advice should recommend against eating all tuna, while other commenters indicated that advice limiting the consumption of tuna was not justified. An evaluation of available information led FDA and EPA to continue to recommend the consumption of canned chunk light tuna in the 2-3 servings per week category and albacore tuna in the one serving per week category. Implicit in the advice is that the target audience should eat a

variety of seafood at the recommended frequencies. FDA and EPA added species of tuna, and all of the species of tuna are categorized according to their average mercury content, so that species of tuna occur in all three consumption frequency recommendation categories.

The agencies also received comments on FDA's [net effects assessment](#). This document was one of a range of documents considered in the formulation of the advice. Because the request for comments was on the draft updated advice, comments on the net effects assessment itself were considered to be outside of the scope of the response to comments on the advice. Accordingly, responses in this document do not directly address that subset of comments. Many thoughtful and insightful comments were sent on this topic, underscoring the nature of the ongoing discussion in the scientific community concerning quantifying the integrated effects of the benefits of fish consumption to the target audience relative to the potential adverse health effects of mercury exposure from fish consumption.

The comments summarized in this document are condensed versions of the original comments provided in the public docket (FDA-2014-N-0595). Comments with similar content were combined in the following response-to-comments table. Substantial changes were made to the draft version of the updated advice that reflect comments that were received. Accordingly, interested parties should read and review the updated version of the advice, including the revised Qs and As, before reading the responses to comments. The contribution of comments by the stakeholders in this community has resulted in improved advice that will be useful and more protective of our future generations.

LIST OF COMMENTERS

Alaska Division of Public Health
Alaska Seafood Marketing Institute
Alliance of Nurses for Healthy Environments
American Academy of Pediatrics
American College of Nurse-Midwives
American Optometric Association
American Seafoods Group
American Tunaboat Association
Anfomed India
Bumble Bee Foods, LLC
Bumble Bee Seafoods
Cargill
Center for Science in the Public Interest
Clean Water Action
Consumer Reports
Consumers Union
Council for Responsible Nutrition
Environmental Defense Fund
Environmental Working Group
Food Marketing Institute
FoodMinds
Genuine Alaska Pollock Producers
Global Organization for EPA and DHA Omega-3s
Great Lakes Consortium for Fish Consumption Advisories
Grocery Manufacturers Association
Groth Consulting Services
Gulf Seafood Institute
Harvard School of Public Health
Healthy Weight Commitment Foundation
High Liner Foods
Imperial College
International Conservation Caucus Foundation
International Food Information Council Foundation
inVentiv Health Clinical
inVentiv Medical Communications
LPNY
Maine Center for Disease Control and Prevention
Maine Department of Marine Resources
Massachusetts Department of Public Health
Mercury Free Baby
Mercury Policy Project
Michigan Department of Community Health
National Fisheries Institute
National Healthy Mothers, Healthy Babies Coalition
National Medical Association
National Restaurant Association
Nestle Products/Gerber Products Company
NYC Department of Health & Mental Hygiene
Oldways
Pacific Seafood
Rutgers University School of Public Health
Safe Minds
Seafood Nutrition Partnership
Sea Port Products Corp.
Starkist Co.
Surf Side Products LLC
Suter Company, Inc.
Tennessee Riverkeeper
Tri Marine International
The Coca-Cola Company
The Kitchen Doesn't Bite
University of Florida Food Science & Human Nutrition Department
Western Fishboat Owners Association
Women's Voices for the Earth
140 individuals

Summary Table of Responses to Public Comments on FDA-EPA Fish Advice

Main Issue	Sub-Issue	Comment	Response
<p>Scientific Basis of Advice</p>	<p><i>Advice based on outdated evidence</i></p>	<p>The document downplays the implications of food contamination that can lessen the health benefits derived from eating seafood. The scientific justification for balancing benefits and risks in regard to seafood intake is dubious because FDA apparently assumes that target organs and mechanisms are similar for the nutrients and mercury. The net effects assessment and methylmercury dose-response relationship developed by Axelrad and colleagues are seriously outdated. Several studies have been completed and showed adverse effects at methylmercury exposure levels prevalent in the U.S. However, these more recent data were ignored by the FDA. FDA's net effects analysis fails to address the implications of new knowledge on variations in susceptibility between population groups. (0038)</p>	<p>The FDA net effects assessment was one of many documents considered in the course of developing the draft fish consumption advice. Comments on the net effects assessment submitted through the consumption advice process, however, are beyond the scope of comments on the advice.</p>
<p>Scientific Basis of Advice</p>	<p><i>Advice based on outdated evidence</i></p>	<p>FDA has over-estimated the area where benefits exist given the chronic low-level exposure to mercury vapor in the atmosphere, the likelihood of additional exposures to other sources of mercury in food (such as rice) and the potential for other contaminant exposures that would exacerbate the effects of mercury from fish. It is well-understood the toxic effects of mercury on the developing brain is the most sensitive endpoint, but other health issues bear consideration and inclusion in information provided to the public about mercury's health threats from fish consumption. A major problem with the most recent FDA guidelines are they fail to consider the health status, nutritional status, or weight and height of an individual, which are indicators of adult or offspring susceptibility to potential mercury poisoning. (D0174)</p>	<p>We took a cautious and highly protective approach in determining which fish belonged in each category in the updated advice. The purpose of the advice is limited to offering recommendations on the amounts of fish that should be consumed by pregnant women, women who might become pregnant and breastfeeding mothers. The advice is based on an assumed weight (75 kg) of the mother. An uncertainty factor in the methodology for the effects of mercury exposure allows for variations in susceptibility between individuals.</p>

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Scientific Basis of Advice	<i>Advice based on outdated evidence</i>	The net effects assessment contradicts the draft advice (particularly for swordfish and albacore tuna - model shows one could eat more than the recommended). (D0196)	We took a cautious and highly protective approach in determining which fish belonged in each category in the updated advice. The FDA net effects assessment was one of many documents considered in the course of developing the draft fish consumption advice. For the fish consumption recommendations included in the revised advice, FDA and EPA relied on a method reflecting mercury exposure only. In the revised advice, swordfish is listed in the category of fish for the target group of the advice to avoid, and albacore tuna is in the category of fish recommended for consumption of one serving a week. The consumption categories in the revised advice do not contradict the net effects assessment, which, unlike the revised advice, did not provide specific consumption recommendations.
Scientific Basis of Advice	<i>Update mercury concentration data for some species</i>	Remove the 0.78 PPM value from the calculation of mean Hg concentration for pollock. (0072)	Pollock is in the "best choices" category. The source data used to calculate mercury concentration levels for pollock were reexamined. Removing the 0.78 ppm value does not change this category.
Scientific Basis of Advice	<i>Update mercury concentration data for some species</i>	Review Hg concentration data for lobster. (D0192)	We reviewed the mercury concentration data and considered this in listing lobster in the "best choices" category.
Scientific Basis of Advice	<i>Overreliance on modeling</i>	Areas of uncertainty, such as regarding the impact of the timing of exposure, and especially of short term spikes of exposure during developmental "windows of vulnerability," should be explicitly identified, and assumptions that err on the side of caution incorporated. (0064)	We took a cautious and highly protective approach in determining which fish belonged in each category in the updated advice in consideration of many uncertainties. The FDA net effects assessment was one of many documents considered in the course of developing the draft fish consumption advice. Comments on the net effects assessment submitted through the consumption advice process, however, are beyond the scope of comments on the advice.

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Scientific Basis of Advice	<i>Overreliance on modeling</i>	Our analysis of these models found that the model structure was fine and that the fish benefit on neurodevelopment was reasonably parameterized (Ginsberg et al. 2015). However, the slope for the mercury risk in terms of IQ loss per unit of mercury intake is quite shallow and does not lead to much risk, even for high mercury fish species. One explanation is that this slope was generated from studies in which the competing beneficial effect of fish ingestion was not accounted for when estimating the mercury risk slope; this will tend to obscure and lessen that slope. (D0196)	We took a cautious and highly protective approach in determining which fish belonged in each category in the updated advice. The FDA net effects assessment was one of many documents considered in the course of developing the draft fish consumption advice. Comments on the net effects assessment submitted through the consumption advice process, however, are beyond the scope of comments on the advice.
Scientific Basis of Advice	<i>Overreliance on modeling</i>	The draft advice appears to be based exclusively on the results of FDA's net effects assessment (i.e., the model). The result is that FDA and EPA have based the new advice on a narrow, tenuous scientific foundation, and failed to consider a very large amount of additional published, peer-reviewed relevant literature. (D0179, D0208, D0203)	EPA and FDA conducted a thorough review of the recent literature in preparing the draft advice and considered the many studies and analyses included in various comments submitted on the draft advice. For the fish consumption categories included in the final version of the updated advice, FDA and EPA relied on a method reflecting mercury exposure only.
Scientific Basis of Advice	<i>Inconsistency with mercury reference dose</i>	Clarifying statements on how the EPA's reference dose (RfD) is to be regarded, specifically with respect to fish consumption, should be constructed and communicated. The concept that the benefits of fish nutrients offset the harm of mercury, which simply was not incorporated in derivation of the RfD, could aid in "relaxing" the treatment of the RfD as a hard and fast number and a threshold. (0034)	We took a cautious and highly protective approach in determining which fish belonged in each category. For that reason, the chart in the updated fish advice is based on exposure to mercury in comparison to the RfD. The technical appendix that we are publishing in conjunction with the consumption advice helps clarify how the agencies regarded the RfD in developing the advice. As explained in the appendix, the reference dose is determined to be an exposure to mercury that can be consumed every day for a lifetime without appreciable risk of harm. The RfD for methylmercury is protective of neurodevelopmental effects from a critical window of development for a fetus during pregnancy.

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Scientific Basis of Advice	<i>Inconsistency with mercury reference dose</i>	Exceeding the RfD is very unlikely to carry any risk. (0040)	We used the RfD to categorize the fish to craft advice that is cautious and highly protective. There is potential risk associated with high levels of consumption of higher mercury fish. An RfD is determined to be a rate of exposure that a person can experience over a lifetime without appreciable risk of harm. The RfD includes a 10-fold uncertainty factor to allow for variability among individuals and groups.
Scientific Basis of Advice	<i>Other evidence to consider</i>	The FDA/EPA has yet to take into account more recent publications, which clearly show a broader variety of adverse outcomes at a much lower exposure level. (0094, D0208, D0207)	We continue to monitor the peer reviewed literature and do not believe it is sufficiently robust to call into question the consumption advice we are publishing.
Scientific Basis of Advice	<i>Other evidence to consider</i>	Selenium in fish (such as albacore tuna) mitigates any harmful effects of mercury. (0028, D0216, D0223, D0218, D0232)	Currently, the literature does not make a clear case whether selenium in fish protects humans against adverse effects of mercury.
Scientific Basis of Advice	<i>Other evidence to consider</i>	23 epidemiological studies on fish consumption, methylmercury exposure and their beneficial and adverse effects, all published since 2004, show the model in FDA's net effects assessment appears wrong by a wide margin, and advice based on the model (if followed) will lead to exposures to mercury that entail considerable net risk to health. (D0179)	We took a cautious and highly protective approach in determining which fish belonged in each category in the updated advice. The FDA net effects assessment was one of many documents considered in the course of developing the draft fish consumption advice. Comments on the risk benefit assessment submitted through the consumption advice process, however, are beyond the scope of comments on the advice. For the fish consumption recommendations included in the updated advice, FDA and EPA relied on a method reflecting mercury exposure only.
Scientific Basis of Advice	<i>Other evidence to consider</i>	Commenters provided other studies that were not considered in developing the Draft Advisory. (0065, D0192, D0194, D0207, D0208, D0220, D0203, D0231, D0233, D0202, D0218)	EPA and FDA conducted a thorough review of the recent literature in preparing the draft advice and considered the many studies and analyses included in various comments submitted on the draft advice.
Scientific Basis of Advice	<i>Recommendations to improve evidence</i>	Publish a summary of models in peer-reviewed journal; organize a seminar to review recent literature; withdraw the reference dose; address risk communication deficiencies. (D0179)	Much care has gone into updating the advice to address any communication deficiencies noted in the draft advice. In addition, substantive changes have been made to the updated advice in response to the comments received. Other elements of this comment are beyond the scope of this response to comments on the draft advice.

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Scientific Basis of Advice	<i>Recommendations to improve evidence</i>	Publicly disclose sources and provide the public with free access to the scientific research upon which they have based their decision. Consumers ought to be able weigh the evidence for themselves if they so choose. (D0007)	Data on mercury content in a range of fish species upon which the advice is based are available on the FDA/Food website (see FDA Monitoring Program) and other supplemental sites such as the NOAA National Marine Fisheries , EPA websites, and other supplemental sources cited in the Technical Information.
Reactions to Consumption Limits/Ranges in Advice	<i>Increase restrictions on tuna</i>	Many commenters said that the recommendations for tuna consumption for pregnant women and women of childbearing age were not strict enough, and they are concerned that the current advisory could actually increase the amount of mercury exposure due to increased consumption of relatively high mercury containing tuna. (D0179, D0209, D0220, D0231, D0233, D0234, D0128, D0072, D0073, D0098, D0067, D-0066, D0064, D0077, D0060, D0061, D0106, D0103, D0101, D0096, D0095, D0097, D0092, D0089, D0086, D0100, D0088, D0226, D0235, D0208, D0207, D0212, D0231, D0215, D0233, D0070, D0189)	The chart in the updated advice indicates protective levels of consumption for a number of varieties of tuna and also assumes that consumers will eat a variety of fish to meet their recommended fish intake.
Reactions to Consumption Limits/Ranges in Advice	<i>Decrease/Eliminate restrictions on tuna</i>	The recommendation to limit albacore tuna to 6 ounces/week is not scientifically justified or will lead to reduced fish consumption. (0049, 0097, D0206, D0214, D0217, D0218, D0221, D0227, D0232, D0138, D0043, D0201, D0230, D0173, D0144, D0149, D0217, 0045, 0051, D0211, 0060, 0056, D0134)	The chart in the updated advice indicates protective levels of consumption for a number of varieties of tuna and also assumes that consumers will eat a variety of fish to meet their recommended fish intake. It is scientifically justified, and the recommendations about albacore tuna are based on average mercury concentrations for the tuna in comparison to the RfD discussed in response to other comments. Albacore tuna is now only one variety in the category of fish to be consumed once a week, along with other fish of comparable mercury levels.
Reactions to Consumption Limits/Ranges in Advice	<i>Decrease/Eliminate restrictions on tuna</i>	Advise consumers to eat West Coast (troll/pole caught) albacore (younger fish thus lower mercury). (0026, D0047, 0028)	We do not have data for mercury levels in troll/pole caught albacore tuna from the West Coast sufficient to make a different recommendation for those fish.

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Reactions to Consumption Limits/Ranges in Advice	<i>Decrease/Eliminate restrictions on tuna</i>	Canned tuna is safe, healthy, affordable, and accessible thus the restriction should be removed from the Draft Advisory. Providing budget friendly, practical advice allows women of all socioeconomic backgrounds to safely and confidently enjoy seafood while obtaining essential DHA and EPA omega-3's. (D0136, D0135, 0045, 0051, D0149, 0073, 0047, D0138, D0213, D0214)	We added a question providing useful and budget friendly advice for consumers. See Q and A VI.1. In addition, the advice regarding tuna consumption is based on applicable evidence.
Reactions to Consumption Limits/Ranges in Advice	<i>Make consumption limits stricter</i>	No evidence that shows the benefits outweigh the risks. There should be stringent requirements on high/moderate mercury fish. Tell consumers to eat lots of low mercury fish. (D0189, D0044, D0208, D0065, D0070, D0174, D0056, D0195)	We recommend that the target audience eat a variety of fish from the "best choices" and "good choices" categories on the chart. The recommendations on how often to eat fish are based solely on mercury concentrations. The chart clearly shows how frequently the target audience can eat fish with higher mercury concentrations.
Reactions to Consumption Limits/Ranges in Advice	<i>Make consumption limits stricter</i>	Plant sources of omega-3s are safer for pregnant/nursing women and young children. Do not recommend they consume fish. (D0111)	We do not agree that plant sources of omega 3's are necessarily safer for pregnant and nursing women and young children than fish sources. Fish sources of omega 3's are safe when exposure to mercury is not excessive. We also note that plant sources are good sources of alpha linoleic acid (ALA), a precursor to eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), but humans have only limited capacity to convert ALA to EPA and DHA.
Reactions to Consumption Limits/Ranges in Advice	<i>Make consumption limits stricter</i>	Mercury poisoning is pervasive in our society and this fact along with the long list of side effects from mercury should be included in the advisory for all Americans. (D0009, D0039, D0186)	Acute mercury poisoning is extreme and rare. This advice is focused on protecting mothers and children from subtle neurodevelopmental effects of mercury exposure resulting from the consumption of fish only, while also providing advice that helps mothers and children achieve the benefits that can result from fish consumption.
Reactions to Consumption Limits/Ranges in Advice	<i>Make consumption limits stricter</i>	Do not recommend an increase in fish consumption. (D0034)	The advice clearly shows how often the target audience can eat various species of fish. Many can be eaten 2-3 times a week while some should be eaten no more than once a week. The recommendations in the advice are designed to help the target audience achieve the benefits that can result from fish consumption while limiting mercury exposure.

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Reactions to Consumption Limits/Ranges in Advice	<i>Focus on health benefits of fish instead of mercury risk</i>	Increase the consumption recommendation. (D0206, 0039, D0134, D0173, 0073)	The advice clearly shows how often the target audience can eat various species of fish. Many can be eaten 2-3 times a week while some should be eaten no more than once a week. In addition, some should be avoided.
Reactions to Consumption Limits/Ranges in Advice	<i>Focus on health benefits of fish instead of mercury risk</i>	Provide more information on the benefits of eating fish while pregnant, such as the development it supports in the fetus, and more specifically what the dangers are in not getting enough of the fatty acids. (D202, D0214, D0221, D0213, D0219, D0138, D0227, 0097, 0095)	We agree that the advice should provide helpful information on the benefits of eating fish, and this is reflected in the updated advice and Q's and A's.
Reactions to Consumption Limits/Ranges in Advice	<i>Focus on health benefits of fish instead of mercury risk</i>	Provide the minimum seafood consumption advice opposed to a weekly maximum. (0058, 0060, D0227)	We agree that the advice should suggest a minimum for seafood consumption, and this is reflected in the updated advice and Q's and A's.
Reactions to Consumption Limits/Ranges in Advice	<i>Focus on health benefits of fish instead of mercury risk</i>	There is no basis in science for the FDA to suggest to the public that methylmercury in the concentrations present in commercial seafood poses any harm whatsoever to human health (including pregnant women). (0035)	We took a cautious and highly protective approach in determining which fish belonged in each category. We calculated how many servings the average pregnant woman could eat in a week based on the mercury content of each fish type and the RfD. If she could eat that fish at least twice a week, then we listed it in the "best choices" category. If she could eat that fish only once a week, then we listed it in the "good choices" category. If she could not eat a serving of that fish once a week, then we listed the fish in the "choices to avoid" category. There is potential risk associated with high levels of consumption of higher mercury fish, and the consumption advice is designed to provide the target audience with information to help keep exposure to mercury below the reference dose in order to avoid risk of harm.
Reactions to Consumption Limits/Ranges in Advice	<i>Focus on health benefits of fish instead of mercury risk</i>	Highlight risks of not consuming fish rather than the risks of consuming too much. (0040, D0213, D0229, 0047, 0048, D0232, D0144, 0046, 0050, D0139, D0209, D0178, 0065, 0063, 0061, 0059, 0070, D0154, 0053, D0150, D0175, 0055, 0054, D0194, D0188)	We agree that the advice should highlight the benefits that can result from fish consumption, and this is reflected in the updated advice and Q's and A's where we placed a greater emphasis on the benefits of consuming fish.

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Reactions to Consumption Limits/Ranges in Advice	<i>Species to avoid/not to avoid</i>	Remove the list of species to avoid. (0071, 0047/0049/0050 / 0052 / 0066/ 0067/ 0068/ 0069, D0179, 0061, 0062, 0094, 0097, D0222, D0227, D0229, D0232, D0219, D0230)	Based on a review of the mercury concentrations in fish, we have determined that the list of choices to avoid should be retained. There is potential risk associated with high levels of consumption of higher mercury fish, and avoiding consumption of the highest mercury fish helps minimize that risk.
Reactions to Consumption Limits/Ranges in Advice	<i>Species to avoid/not to avoid</i>	Add orange roughy and marlin to the list of species to avoid. (0027, 0025, 0018, 0057, D0183, 0064, D0196, D0220, D0224, D0226, D0228, D0235)	Orange roughy, marlin, and other species with comparable mercury concentrations have been added to the list of choices to avoid.
Reactions to Consumption Limits/Ranges in Advice	<i>Species to avoid/not to avoid</i>	Add varieties of tuna to list of species to avoid. (0018, 0057, 0019, D0226, D0235)	Bigeye tuna was added to the list of choices to avoid. Other varieties of tuna are in the good choices and best choices categories.
Reactions to Consumption Limits/Ranges in Advice	<i>Species to avoid/not to avoid</i>	Add do not eat more than 4 ounces a week of marlin, orange roughy, walleye, bluefish, lingcod, Chilean seabass, big eye and Bluefin tuna and do not eat more than 8 ounces a week of halibut, albacore tuna steaks, yellowfin tuna, Spanish mackerel, lingcod and grouper. (D0220)	Bluefish, Chilean sea bass, halibut, albacore tuna, yellowfin tuna, Spanish mackerel, and grouper were added to the "eat once a week" (4 ounces a week) category based on their average mercury concentrations. Marlin, orange roughy, and bigeye tuna had average mercury concentrations high enough to qualify them for the species to avoid category. Walleye, lingcod and bluefin tuna were not added to the list because adequate federal data to determine which category they belonged in were not available.
Reactions to Consumption Limits/Ranges in Advice	<i>Species to avoid/not to avoid</i>	What Hg cut-off is being used for the list of species to avoid? Some species have overlapping values to those on list but they are not on list. (0025, D0226)	Species of fish with an average concentration higher than 0.46 µg/g were included in the choices to avoid category. Available data on mercury levels were reviewed in preparing the updated advice, and we only provided consumption advice about species for which we have sufficient data.
Reactions to Consumption Limits/Ranges in Advice	<i>Species to avoid/not to avoid</i>	Add golden snapper to list of species to avoid (same as tilefish). (0025)	We have included other common names of fish in the chart. Golden snapper is listed as snapper.

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Reactions to Consumption Limits/Ranges in Advice	<i>Species to avoid/not to avoid</i>	If the cut-off is 0.35 ppm, these species should also be added to list of species to avoid – marlin, cobia, Bluefin tuna, opah/moonfish, bigeye tuna, escolar, wahoo, orange roughy, Spanish mackerel, Chilean seabass, spotted seatrout. (0057)	Species of fish with an average concentration higher than 0.46 µg/g were included in the choices to avoid category.
Reactions to Consumption Limits/Ranges in Advice	<i>Species to avoid/not to avoid</i>	With the exception of canned tuna, the draft advice does not cover species in the range of 0.12 to 1.0 ppm mercury. (D0204)	The advice now includes all species for which we had federal data, including those in the range of 0.12 to 1.0 ppm of mercury.
More defined guidance for children		<p>Some commenters said that the advice for children provided in the draft advice needs improvement.</p> <ul style="list-style-type: none"> • Define “young children.” (D0048, 0064, 0097) • Provide specific guidelines for children, they are not “little adults.” (0065, 0067, 0024) • Provide guidance for older children and adolescents. (0064) • Provide advice for purchasing formula with DHA/EPA. (0020) • Day care centers/schools should never serve fish. (0036) • No evidence exists to indicate that children are more susceptible than fetuses to the adverse neurodevelopmental effects of mercury, so there is no reason to develop stricter consumption advice for children than for pregnant women. (D0218) • A small percentage of children under 4 years of age consume fish or shellfish on any given day, and there is a decline in the percentage of children consuming fish in some age groups between 2002 and 2008, from 2008 FITS. (D0225) 	We have considered these comments in updating our advice and Q’s and A’s.

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Guidance remains confusing for consumers	<i>Communication approach/method</i>	<ul style="list-style-type: none"> • Develop some educational materials that show what to avoid, limit, and choose more often. (0018) • Advice needs to be made available to people of low literacy. (0073) • Consult state advisory programs for examples of good communication materials. (0057) • Develop mobile friendly materials. (0057) • “Trumpet” the advice in many media. (D0128) • Elaborate on benefits beyond “important for growth and development.” Provide concrete reasons. (0051) • Provide an online calculator for people to estimate how much Hg and omega-3 they consume. (0029) • Translate advice into languages spoken by frequent consumers. (0029) • Develop a wallet card and a smart phone application. (0194) 	We appreciate the suggestions and are developing a variety of materials for consumers.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	OVERALL	
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Change title to “Fish and Seafood: What Pregnant Women and Parents of Young Children Should Know About the Benefits of Fish and Seafood.” (D0219)	We changed the title to “Advice About Eating Fish: What Pregnant Women & Parents Should Know.”
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Use only encouraging messaging by creating language that is plain and simple, concise and clear. (D0205, D0214, D0217)	We simplified the language in the advice and the chart clearly shows how often the targeted audience can eat various species of fish.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Women who might become pregnant should be included in the title. (D0204, D0228)	Women who might become pregnant are included in the advice.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Help the public understand the specific neurodevelopment benefit of omega-3s. (0097, D0232)	We have considered these comments in updating our advice and Q’s and A’s.

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Main Issue	Sub-Issue	Comment	Response
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Add the dangers of increased mercury levels in a woman's body and how that can affect fertility and a fetus. Where and how to get testing for assessing the level of mercury in one's body, and it does not address the issue of accumulation. (D0032)	This comment is beyond the scope of the fish advice to the extent that it addresses testing for mercury. The health effects of mercury were considered by EPA and FDA in developing the consumption advice.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Change the advice language from "ounces" to "servings" or "meals." (0049, D0214, D0221, D0232, D0230)	We updated the advice language from "ounces" to "servings." We discuss how many ounces constitute a typical serving in the Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	"Shellfish" may be interpreted as referring only to mollusks (clams, mussels, oysters, scallops); it should be clarified that it also includes squid and octopus (cephalopod molluscs) and crustaceans (shrimp, crab, lobster). (0064)	Fish as defined by the advice includes both fish and shellfish. The chart clearly shows which species are included based on available mercury data.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Add language that acknowledges and respects state fish consumption guidelines. (D0218)	The updated advice and Q's and A's acknowledge state fish advisories for locally caught fish. FDA and EPA considered other types of state fish consumption guidelines in developing the consumption advice.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Clearly specify that the updated guidelines do not apply to people who are not children or women who are pregnant, plan to become pregnant, or are breastfeeding. (D0218)	The title makes it clear that this advice is specifically for women who are pregnant, might become pregnant or are breastfeeding, and for young children, and not the general population.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Remind the general population that there are no types of commercial seafood to avoid. (D0219)	This advice is specifically for women who are pregnant, might become pregnant or are breastfeeding, and for young children, and not the general population.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	KEY MESSAGE	
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Change to, "Increase the amount of fish and seafood you eat to at least 2 or 3 servings (8-12ounces) of a variety of fish and seafood each week. Eating fish and seafood during pregnancy and breastfeeding can help improve your baby's brain development. That is because fish and seafood are full of nutrients including healthy oils called omega-3s. Omega-3s are needed for the brain to grow and work properly. Omega-3s are also good for your heart. (D0219)	We have considered these comments in updating our advice and Q's and A's.

Summary Table of Responses to Public Comments on FDA-EPA Fish Advice

Main Issue	Sub-Issue	Comment	Response
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Move to the beginning of the document: "There is longstanding evidence of the nutritional value of fish in the diet. Fish contain high quality protein, many vitamins and minerals, omega-3 fatty acids, are mostly low in saturated fat, and some fish even contain vitamin D. The nutritional value of fish is especially important during growth and development before birth, in early infancy for breastfed infants, and in childhood." Disseminating this statement should be the goal of the advisory. (D0178)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Stress that there is evidence showing moderate levels of fish consumption has a significant and positive effect on a fetus/child's IQ. (D0206, D0214, D0219)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Add, "For people who eat fish almost every day of the week avoid consuming fish that will give you more than 20 micrograms of mercury per week on a regular basis." (D0078)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Amend the "key message" in the advice to explicitly state that 8 to 12 ounces per week is FDA's recommendation and note that most consumers are not meeting this goal. (0058)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Rewrite, "Eat fish, Choose Wisely. Fish are part of a healthy diet and are good for you and your child's heart and brain. To gain the health benefits associated with eating during pregnancy - eat 8 to 12 ounces of a variety of fish each week that are low in mercury." (D0193, D0219)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Proposed Alternate Message: "Eat 8 to 12 ounces of a variety of fish each week." The nutritional value of fish is important for baby brain and eye development before birth, in early infancy for breastfed infants, and into childhood. The most commonly consumed fish species in the U.S. are low in mercury. (0056)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Identify whether the advice refers to 8-12 ounces of cooked or uncooked fish. (0023)	The mercury levels on which the advice is based applies to uncooked fish except for fish that are cooked during the canning process, such as tuna, salmon and sardines.

Summary Table of Responses to Public Comments on FDA-EPA Fish Advice

Main Issue	Sub-Issue	Comment	Response
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Just state which four types of fish are highest in mercury and what the target range of weekly fish consumption is. (D0031)	The updated advice allows the target audience to make informed choices about which fish they should eat and how often.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Explain that mercury is harmful. (0027)	In Q and A V.1 we explain that methylmercury can be harmful to the brain and nervous system if a person is exposed to too much of it.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	WHO SHOULD KNOW	
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Change to, "Follow these simple tips during pregnancy and breastfeeding as well as when feeding fish and seafood to young children to make sure you and your family are getting plenty of fish and seafood. (D0219)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Remove the parentheses from the "or might become pregnant" phrase. (D0204, D0228)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Rewrite, "The developing fetus and child are most at-risk to mercury in fish. Women who are pregnant (or might become pregnant) or breastfeeding, and if you feed fish to children you should follow this updated advice." (D0193)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	WHAT TO DO #1	
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Change to, "Increase the amount of fish and seafood you eat to at least 2 or 3 servings (8-12 ounces) of a variety of fish and seafood each week. (D0219)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	The average pregnant woman in the U.S. eats about half a serving (2 ounces) of seafood per week. So you should likely eat four times the amount of seafood you currently eat each week. (D0219)	The updated advice encourages pregnant women to eat more of a variety of fish lower in mercury. See Q and A V.3.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	"For young children, give them 2 or 3 servings of fish and seafood a week in child-sized portions." (D0219)	We have considered these comments in updating our advice and Q's and A's.

Summary Table of Responses to Public Comments on FDA-EPA Fish Advice

Main Issue	Sub-Issue	Comment	Response
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Provide additional information or a graphic that defines a serving size for both an adult and child, and delete information concerning calorie needs as this confuses the message. (The target audience may interpret this to mean that they can eat two cans of albacore tuna and an additional fish serving - this would put them over the MeHg RfD.) (D0193)	We have considered these comments in updating our advice and Q's and A's. We added a portion size graphic and moved the calorie needs information to the Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	WHAT TO DO #2	
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Change to "Choose a variety of cooked seafood to help you meet your omega-3 needs." (D0219)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	"Eat at least 2-3 servings (8-12 ounces) of a variety of seafood each week, including some higher omega-3 types like salmon, canned tuna, mackerel, sardines, trout, and anchovies." (D0219)	We have considered these comments in updating our advice and Q's and A's. .
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Eliminate repeated references to choosing "fish lower in mercury." (0058, 0050, 0052, 0097, 0066, D0221, D0227, 0047)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Rewrite, "Choose fish lower in mercury. The most commonly eaten fish in the U.S. are low in mercury." (0056)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Emphasize importance of eating a variety of fish and add a color coded (green, yellow, red) table here. (D0193)	We have considered these comments in updating our advice and Q's and A's. We added a color-coded chart.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Rewrite, "While the mercury content varies from one individual fish to another, certain types of fish tend to contain less mercury than others. Based on averages calculated from mercury testing on a variety of types of fish, some of the most commonly eaten fish are usually lower in mercury. These include salmon, shrimp, pollock, tilapia, catfish, cod, and light canned tuna (light canned because other forms of tuna have much higher mercury levels)." (0027)	We have considered these comments in updating our advice and Q's and A's. Our chart clearly shows which fish are typically lower in mercury.

Summary Table of Responses to Public Comments on FDA-EPA Fish Advice

Main Issue	Sub-Issue	Comment	Response
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	WHAT TO DO #3	
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Change to, "During pregnancy and breastfeeding avoid only four types of fish that are higher in mercury: tilefish from the Gulf of Mexico, shark, swordfish, and king mackerel." (D0219)	We have considered this suggestion in updating our advice and Q's and A's. We also note that there are now more than 4 species in the "choices to avoid" category.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	"If you are not pregnant or breastfeeding, there are no types of commercial seafood to avoid." (D0219)	This advice is targeted to women who are pregnant, might become pregnant or are breastfeeding, and for young children, and not the general population. While we state that the general population can follow this advice, advice on the consumption of fish for the general population is beyond of the scope of this advice. Refer to the Dietary Guidelines for Americans for general advice on the benefits of fish consumption and appropriate quantities for other population groups than those covered in this advice.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Include a statement about not eating other fish and the recommended children's ounces per week to the white (albacore) tuna information. (D0228)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Include the word "eating" after the word "avoid." (D0228)	We have considered this comment in updating our advice and Q's and A's. We revised it to "choices to avoid."
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Rewrite as "Avoid 4 types of fish: tilefish from the Gulf of Mexico, shark, swordfish, and king mackerel. These 4 types of fish are highest in mercury and are not commonly consumed in the U.S." (0056)	We have considered this suggestion in updating our advice. We also note that there are now more than 4 species in the "choices to avoid" category and some are commonly consumed in the United States.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Add to the second bullet: "Limit white (albacore) tuna to 6 ounces a week (if you eat 6 ounces of white (albacore) tuna, no other fish should be eaten that week)." (D0193)	The chart is based on a serving size of 4 ounces. A pregnant woman should limit her fish consumption to one serving of albacore per week as recommended.

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Main Issue	Sub-Issue	Comment	Response
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	WHAT TO DO #4	
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Additional information might include specific locations with highest possible danger of mercury contamination, specific rivers, canneries, lakes or other bodies of water that have recorded highest amounts of mercury (maps), any species of fish to absolutely avoid worldwide. (D0032)	State and local fish advisories include location-specific information.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Mention a resource that the public can access if there are no local resources available to provide information on their community streams, rivers and lakes. (0032)	In cases where there is not information available, we recommend the public follow this advice. See Q and A VII.1.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Add, "Contact your local health department or state agency who issue fish advisories for up-to-date information" and provide a hyperlink to state agency or health department list." (D0193)	We have addressed this comment in the updated advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Remove references to fish caught from streams, rivers and lakes, and albacore tuna. (D0219)	We considered this comment but decided to retain these references because they contain important information for fish consumers.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	WHAT TO DO #5	
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Add a table of calorie needs for pregnant women and children or provide a web link to access calorie information. (0032)	See Q and A VIII.1.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	"Calorie needs" confuses the public. (D0193)	We moved this information to Q and A VIII.1. The chart does not address calorie needs.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	WHAT TO DO Other	
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Include recommendation on consumption of raw fish for those pregnant, breastfeeding and children under the age of 2 years. (D0028)	See Q and A VIII.2.

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Main Issue	Sub-Issue	Comment	Response
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	WHY THIS ADVICE IS IMPORTANT	
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	List the major nutrients provided by fish and the corresponding health function. And, also state a few of the health benefits for the general public. (D0032)	See Q and A IV.1.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Explain the health risks of mercury consumption and describe how eating fish with lower levels of mercury enables a consumer to experience the health benefits of fish while minimizing risk. (D0226)	See Q and A IV.1 and V.1 for information on nutrients and mercury.
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Rewrite: "Fish contains important nutrients for brain and eye development in growing fetuses, infants who are breastfed, and young children. Fish provides essential health benefits for the general public. Most people do not currently eat the recommended amount of fish to take in essential nutrients for brain and heart health." (0056)	See Q and A IV.1. and V.3
Guidance remains confusing for consumers	<i>Suggestions to improve clarity</i>	Move this section under Key Message and before Who Should Know, and clearly define the health benefits to the developing fetus and child so mothers are motivated to eat fish to gain the nutrients. For example: It is important for women to eat fish while they are pregnant because omega-3s help the baby's brain develop. (D0193)	We have considered these comments in updating our advice and Q's and A's.
Guidance remains confusing for consumers	<i>Suggestions for Q's and A's</i>	Commenters suggested organizing the Q's and A's and offered revisions.	The Q's and A's have been reorganized and revised taking into consideration input from numerous commenters and they reflect the updated advice.
Guidance remains confusing for consumers	<i>Additional tables/charts needed</i>	Some commenters suggested that providing a chart or infographic would be beneficial. (0075, D0179)	The advice now contains a chart with clear categories: best choices, good choices, and choices to avoid.
Guidance remains confusing for consumers	<i>Additional tables/charts needed</i>	One very useful communication device to help consumers make health-promoting seafood choices is a chart that sorts all commonly sold varieties into clear, sensible categories, such as "best choices," "good choices within limits," and "choices to avoid." (D0179)	The advice now contains a chart with clear categories: best choices, good choices, and choices to avoid.

Summary Table of Responses to Public Comments on FDA-EPA Fish Advice

Main Issue	Sub-Issue	Comment	Response
Guidance remains confusing for consumers	<i>Additional tables/charts needed</i>	A simplified chart highlighting the different seafood recommendations would help consumers see at-a-glance which species to avoid, and which ones they could safely consume to reach the minimum while staying below the maximum recommended levels. (0058)	The advice now contains a chart with clear categories: best choices, good choices, and choices to avoid.
Guidance remains confusing for consumers	<i>Additional tables/charts needed</i>	Use graphics to show serving size, e.g., http://oehha.ca.gov/fish/special_reports/advisorylakes/res.html (D0193)	We have included a graphic to show serving size.
Guidance remains confusing for consumers	<i>Additional tables/charts needed</i>	Example of omega-3/Hg chart http://www.ehib.org/topic.jsp?topic_key=8 (D0193)	The advice now contains a chart. Our technical web page also provides a sortable table with mercury values.
Guidance remains confusing for consumers	<i>Relationship to Dietary Guidelines</i>	There were conflicting comments (in following rows) regarding whether or not to follow the 2010 Dietary Guidelines for Americans (“DGA” or “Dietary Guidelines”):	The current FDA-EPA advice for pregnant/breastfeeding women is to consume 2 to 3 servings of 4 ounces of a variety of fish per week, and this advice is consistent with the DGA 2015 advice that pregnant and breastfeeding women consume at least 8 and up to 12 ounces of a variety of seafood per week from choices that are lower in methyl mercury.
Guidance remains confusing for consumers	<i>Relationship to Dietary Guidelines</i>	Advice offered by FDA and EPA should mirror that included in DGA to minimize the confusion from conflicting sets of advice (D0229, 0058) and should include the same phrases such as “the benefits of fish outweigh the harm of mercury.” (0020)	The updated advice is consistent with the DGA but is focused on a more specific audience and minimizing mercury exposure to that group.
Guidance remains confusing for consumers	<i>Relationship to Dietary Guidelines</i>	The advice should not track the Dietary Guidelines for Americans 2010 as they derive in part from previous government advice, including the 2004 advice, and need additional updating. (0064)	We considered the DGA recommendations, along with information from other sources and this advice updates and expands on the 2004 advice. The revised advice is consistent with the DGA recommendation that women who are pregnant or breastfeeding consume at least 8 and up to 12 ounces of a variety of seafood per week from choices that are lower in methyl mercury, but is focused on a more specific audience and minimizing mercury exposure to that group.

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Main Issue	Sub-Issue	Comment	Response
Guidance remains confusing for consumers	<i>Relationship to Dietary Guidelines</i>	FDA/EPA advice is not needed as it would be redundant and potentially conflicting with the Dietary Guidelines. (0062)	The FDA-EPA advice may reach a different audience than the audience for the Dietary Guidelines, so the advice is not redundant. The current FDA-EPA advice for pregnant/breastfeeding women is to consume 2 to 3 servings of 4 ounces of a variety of fish per week from the “best choices” category, and this advice is consistent with the DGA advice.
Guidance remains confusing for consumers	<i>Relationship to Dietary Guidelines</i>	Dietary Guidelines for Americans 2010 reads, “women who are pregnant or breastfeeding consume at least 8 and up to 12 ounces of a variety of seafood per week” The Advice should match. (0097)	The current FDA-EPA advice is for pregnant/breastfeeding women to consume 2 to 3 servings of 4 ounces of a variety of fish per week from the “best choices” category, and this advice and is consistent with the DGA advice and is written in a manner easily understood by the target audience.
Guidance remains confusing for consumers	<i>Advice for other populations needed</i>	Commenters suggested other subpopulations that would benefit from advice:	
Guidance remains confusing for consumers	<i>Advice for other populations needed</i>	<ul style="list-style-type: none"> Those that consume >24 ounces. of fish per week (D0106/D0103/D0101/D0097/D0095/D0092/D0235) 	The advice now contains a chart that clearly shows which fish are good options for people who eat more than the recommended 2-3 servings per week.
Guidance remains confusing for consumers	<i>Advice for other populations needed</i>	<ul style="list-style-type: none"> All Americans (0075, 006, D0078, 0025, 0086, 0058, 0094) 	As discussed in Q and A VIII.3, the general population is not the primary target audience for this advice.
Guidance remains confusing for consumers	<i>Advice for other populations needed</i>	<ul style="list-style-type: none"> People who consume more than 12 ounces per week, such as recreational fishers, subsistence fishers, and racial/ethnic sub-populations (0064) 	The advice now contains a chart that clearly shows which fish are good options for people who eat more than the recommended 2-3 servings per week. The advice also recommends checking for fish advisories for fish caught by family and friends.
Guidance remains confusing for consumers	<i>Advice for other populations needed</i>	<ul style="list-style-type: none"> Those with hyper-sensitivities to mercury (D0174) 	There is not sufficient data about hyper-sensitivity to mercury from fish consumption to be incorporated into the advice.
Guidance remains confusing for consumers	<i>Advice for other populations needed</i>	“Women of childbearing age” (not “women who might become pregnant) should be added to the list of populations who should not consume fish higher in mercury. (0027, 0025)	We have considered this comment in updating our advice and Q’s and A’s.

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Main Issue	Sub-Issue	Comment	Response
Source of fish		A number of commenters believe that mercury contamination varies greatly by source of the fish and this information is missing from the draft advice. (D0062, 0017, D0040, D0008, D0026, 0027, 0028, 0061, D0222, D0187, D0062, D0033, D0047)	We do not have sufficient data for summarization of methylmercury levels based on source, type, or location of most fish. Q and A Section VII addresses the issue of locally caught fish.
Source of fish		Imported [high mercury] vs. US [low mercury] (D0062, D0040, D0026)	We do not have sufficient data for summarization of methylmercury levels based on source but available data does not suggest that levels vary between imported and domestically sourced fish.
Source of fish		Farmed vs wild - what are the differences in mercury, specifically related to salmon? (D0062, 0027, D0026, D0033)	Although the manner in which fish were raised or harvested (e.g., whether fish is farmed or wild) is beyond the scope of this consumption advice, we note that the 2010 FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption concluded that the levels of mercury are in the same range for farmed and wild seafood.
Source of fish		Provide more information on freshwater fish. (D0051)	We have included all fish for which we have sufficient methylmercury data . State and local fish advisories include location-specific information.
Source of fish		West coast U.S. hook and line fisherman catch younger, thus lower mercury, albacore. (0028, D0047)	We do not have data for mercury levels in hook and line caught albacore tuna from the West Coast to make a different recommendation for those fish.
Source of fish		Aquaculture results in negligible methylmercury accumulation. (0061)	Although the manner in which fish were raised or harvested (e.g., whether fish is farmed or wild) is beyond the scope of the consumption advice, we note that the 2010 FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption concluded that the levels of mercury are in the same range for farmed and wild seafood.
Source of fish		The risk for many wild fish from inland sources is distinct from the selections available through primary seafood commerce. The national advice should distinguish these risks by source through more emphasis on the advisories across states and regions that are available to account for these inland risks. (D0222)	We have addressed the issue of where to find information about the safety of fish caught by family and friends in Section VII of the Q's and A's.

Summary Table of Responses to Public Comments on FDA-EPA Fish Advice

Main Issue	Sub-Issue	Comment	Response
Point-of-Purchase messages	<i>Labeling products</i>	Some commenters want government regulations to have the mercury content or warnings on the labels of fish products, in particular, tuna. (D0108, D0052, D0083, D0064, D0174, D0035, D0087, D0085, D0067, D0031, D0080, D0211)	Whether to promulgate regulations regarding mercury content or warnings is beyond the scope of this advice.
Point-of-Purchase messages	<i>Post where sold</i>	Some commenters want to require cautionary advice, such as mercury content of fish, how much is safe to consume, and/or color-coded charts, be posted where fish is sold. (D0091, D0084, D0075, 0074, D0055, D0059, 0064, D0076, 0094, D0207, D0231, D0233, D0235, D0106/D0101/D0100 /D0099/D0096/D0095/D0092/D0089/D0086/ D0071/D0079)	Whether to promulgate requirements regarding the posting of mercury-related information is beyond the scope of this consumption advice.
Point-of-Purchase messages	<i>Post in medical offices and program offices</i>	Two commenters mentioned in addition to posting color coded signs where fish is sold, displaying them in medical offices and waiting rooms of public programs, such as WIC, child health, and prenatal programs will disseminate the message to a wider audience, particularly low income families. (D0234, D0235)	We will consider this suggestion as we identify and evaluate additional ways to deliver our advice regarding fish consumption.
Other sources of omega-3 fatty acids	<i>Foods</i>	Provide information about other food sources of omega-3 fatty acids because:	
Other sources of omega-3 fatty acids	<i>Foods</i>	1. Some people do not eat fish (such as vegetarian or vegan diets, fish allergy, cost of fish, and dislike of the taste or smell of fish) (D0185)	The issue of omega 3 sources other than fish is beyond the scope of the advice, which focuses on fish consumption. We understand that some people do not eat fish. This advice is intended to provide helpful information to those individuals who do eat fish, and to emphasize the benefits of fish consumption for those in the target audience that might be able to increase their fish consumption.
Other sources of omega-3 fatty acids	<i>Foods</i>	2. To avoid any mercury exposure (0037, D0034, 0020)	The issue of omega 3 sources other than fish is beyond the scope of the advice, which focuses on fish consumption. We do provide recommendations for consumption of fish with low mercury concentrations so that consumers can minimize their exposure to mercury.
Other sources of omega-3 fatty acids	<i>Foods</i>	3. Popular low mercury fish have low omega-3 concentrations (0027, 0057, 0064)	The issue of omega 3 sources other than fish is beyond the scope of the advice, which focuses on fish consumption.

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Main Issue	Sub-Issue	Comment	Response
Other sources of omega-3 fatty acids	<i>Supplements</i>	Provide advice on using fish oil supplements and recommended daily intakes for EPA and DHA. (D0003, D0183)	We have considered these comments in updating our advice and Q's and A's.
Ignores other contaminants		Advice ignores other contaminants found in fish, including PCBs, Cd, Pb, and radioactivity, that could increase the risks of other adverse effects. (0017, D0006, 0039, 0019, D0220, D0226)	See Q and A V.6.
Influenced by industry		Advice is unduly influenced by the fishing industry. (D0032, D0034, D0182)	FDA and EPA received comments on the draft advice from a wide range of interested parties that include environmental and health promotion organizations, the fishing industry, academia, the retail food industry, dieticians, mothers concerned about their diets, and the population as a whole. This updated advice was prepared to be as beneficial to pregnant mothers and children on the basis of the best information available to the agencies.
Sustainability		The advice should include information on sustainable fish. FDA/EPA should consider the ecological ramifications of encouraging Americans to consume two to three times more fish than what they consume now. Revise the list of 7 fish "lower in mercury" to include more ecologically sustainable small, low-trophic level fish, e.g., anchovies, sardines. (D0186, 0057, 0023, D0184, D0110, D0034, 0065, D0218, D0226)	See Q and A VIII.5.
Source of mercury contamination		More work should be done to end mercury contamination. (D0065, D0076, D0186, D0056, D0090, D0104, D0056)	This comment is beyond the scope of the fish advice.
Source of mercury contamination		Include additional exposure due to dental fillings. (D0034)	This comment is beyond the scope of the fish advice.