

# ORIGINAL

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22

(CERTIFIED TRANSCRIPT)

MACRO INTERNATIONAL, INC. ✓

x - - - - - x

FOOD AND DRUG ADMINISTRATION

HEALTH AND NUTRITION: METHYL MERCURY

x - - - - - x

Wednesday, November 8, 2000

8:00 p.m.

*prob. Boston - pg 3,11*

Moderator: Lynn Halverson

1 P-R-O-C-E-E-D-I-N-G-S

2 (Whereupon, the focus group session  
3 proceeded, as follows:)

4 MS. HALVERSON: I want to thank  
5 everybody for being here this evening. My name  
6 is Lynn and I'll be the moderator for this  
7 evening's discussion.

8 I am not an expert on the topic we'll  
9 be talking about. I'm actually a professional  
10 moderator. I go all over the country, doing  
11 focus groups on lots of different topics. So,  
12 please, if you have a question and I can't answer  
13 it, please excuse me. It's just not my area of  
14 expertise.

15 But that also means that I have no  
16 vested interest in getting any particular kinds  
17 of answers from you. What I want to do is get  
18 each person around the table to be as open and  
19 honest with us as possible.

20 There are going to be no right or wrong  
21 answers to anything we're talking about today.  
22 So if you disagree with something someone says or

1 have a different viewpoint, please let us know.  
2 We don't have to arrive at any kind of consensus  
3 here tonight or anything. I just mainly want to  
4 hear exactly what everybody has to say.

5 Just a couple of bits of information  
6 before we get started. This is part of a much  
7 larger research project. I like to concentrate  
8 on what the groups are saying when we're meeting  
9 together so, rather than having me scribbling  
10 notes all the time during our discussion, I'm  
11 having them tape this.

12 There's a microphone up in the ceiling,  
13 there, in the middle. There's also a videotape  
14 camera, so that I have a backup tape.

15 What I do is, when I get back home, I  
16 send the tapes off to a transcriptionist and just  
17 have a written record of all the focus groups.

18 I was in Denver a couple of weeks ago  
19 and I have a stack of transcripts, like that  
20 (indicating), and I'll have a stack of  
21 transcripts from Boston and another stack from  
22 Washington, next week. That's how I keep track

1 of what's going on.

2           You're not going to be identified, by  
3 name, in those at all. It will simply be "The  
4 8:00 group in Boston on such and such a date."  
5 And that's how you'll be identified in there.  
6 So, please, don't worry that you, personally, are  
7 on the line for anything here tonight.

8           Also, because we're taping it, I need  
9 your cooperation on a couple of things. A lot of  
10 times, in a group discussion, we tend to talk  
11 over one another and sometimes have a private  
12 conversation with the person next to us.

13           If we can avoid that kind of thing, it  
14 would be really helpful because, basically, what  
15 happens is, if there's more than one person  
16 talking, the transcriptionist writes on there,  
17 "indiscernible," and I don't have any information  
18 about what you said.

19           So I'm going to kind of act as a  
20 traffic cop if we start talking over one another.  
21 If you'd just bear with me, that's why I'm doing  
22 that. I want to make sure that I get everybody's

1        comments down and that we can hear from everyone.

2                Also, I just wanted to let you know I  
3        have a couple of people who are here with me on  
4        this project, and they're taking notes in the  
5        back room back there. So they're listening to  
6        what we're talking about. Before we're done, I'm  
7        going to actually run back there and ask them  
8        some questions to see if there's anything I  
9        should be asking you that I haven't asked you  
10       yet.

11               That's kind of our ground rules, before  
12       we get started. And I guess I'd like to find out  
13       who we have around the table; maybe start with  
14       Christina and head around the table that way. If  
15       you could tell us your first name and how many  
16       people there are in your household.

17               PARTICIPANT: My name's Christina and I  
18       have two children -- seven and four -- and a  
19       husband.

20               MS. HALVERSON: Great.

21               Another thing I forgot to mention is  
22       that if you can talk up just about as loudly as I

1 am now, so that we can hear you in that tape.

2 Okay. You said you have four children?

3 PARTICIPANT: No; two children -- one  
4 is seven and one is four -- and a husband.

5 MS. HALVERSON: Okay. So that's, like,  
6 three children, right? No. (Laughter)  
7 Sometimes.

8 PARTICIPANT: It's debatable.

9 PARTICIPANT: My name is Phyllis and I  
10 have a 13-year-old daughter.

11 MS. HALVERSON: Okay.

12 PARTICIPANT: My name is Katherine (sp)  
13 and I live by myself.

14 MS. HALVERSON: All right.

15 PARTICIPANT: My name is Susie (sp) and  
16 I have a roommate.

17 MS. HALVERSON: A roommate. Okay.

18 PARTICIPANT: My name is Betsy and I  
19 have a 13-year-old daughter.

20 MS. HALVERSON: Okay.

21 PARTICIPANT: My name is Trevor and I  
22 have a 13-year-old daughter and 12-year-old son

1 and a five-year-old son and a wife.

2 MS. HALVERSON: Okay.

3 PARTICIPANT: My name is Holly and I  
4 have a roommate.

5 MS. HALVERSON: Okay.

6 PARTICIPANT: My name is Lori and I  
7 live alone.

8 MS. HALVERSON: All right.

9 PARTICIPANT: Tim. 15-year-old son and  
10 wife.

11 MS. HALVERSON: All right.

12 PARTICIPANT: Dominic. I live with my  
13 wife.

14 MS. HALVERSON: Okay.

15 PARTICIPANT: Arnold -- my wife and  
16 mother-in-law -- and it's good to get out.

17 (Laughter)

18 MS. HALVERSON: I thought that's what  
19 the 13-year-olds' parents would say.

20 Okay. I guess I'd like to start out by  
21 finding out just kind of your general impressions  
22 about contaminants that you think of, in terms of

1 the air you breathe, the water you drink, the  
2 foods you eat.

3 When I say "contaminants" -- "possible  
4 environmental contaminants," what do you think  
5 of?

6 PARTICIPANT: Pesticides.

7 MS. HALVERSON: Pesticides? Okay.

8 Holly, what did you say?

9 PARTICIPANT: Bacteria.

10 MS. HALVERSON: Bacteria.

11 PARTICIPANT: Pollution.

12 MS. HALVERSON: Pollution.

13 PARTICIPANT: Smoke.

14 MS. HALVERSON: Smoke? Okay.

15 PARTICIPANT: Dust.

16 MS. HALVERSON: All right.

17 PARTICIPANT: Bioengineered corn.

18 MS. HALVERSON: Okay. I'm hearing all  
19 different kinds of things in terms of  
20 contaminants.

21 And, in general, where do you think  
22 that you're more likely to be exposed to some of



1 these contaminants? Like, somebody mentioned  
2 pesticides. Christina, was that you?

3 PARTICIPANT: Right. In food.

4 MS. HALVERSON: In food? Okay.

5 PARTICIPANT: Fruit, vegetables.

6 MS. HALVERSON: All right. Are you  
7 more likely to be exposed to it in food you eat  
8 and water you drink or in the air you breathe? --  
9 for pesticides.

10 PARTICIPANT: I think the air is  
11 something you cannot control. We have no choice.  
12 But food and water, you may have some choices.

13 MS. HALVERSON: Okay. How about  
14 something like lead? Where would you expect --

15 PARTICIPANT: Water.

16 MS. HALVERSON: Water?

17 PARTICIPANT: Paint -- old paint.

18 MS. HALVERSON: All right.

19 PARTICIPANT: Old buildings.

20 MS. HALVERSON: Pardon?

21 PARTICIPANT: Old buildings -- in the  
22 ground.

1 MS. HALVERSON: Old buildings? All  
2 right.

3 How about mercury, as a contaminant?  
4 Where would you expect to find that?

5 PARTICIPANT: Swordfish.

6 PARTICIPANT: Fish.

7 PARTICIPANT: Water.

8 PARTICIPANT: Dental fillings.

9 MS. HALVERSON: All right. Dental  
10 fillings, fish -- I heard swordfish,  
11 specifically. Why, specifically, swordfish?

12 PARTICIPANT: As I understand it, it  
13 accumulates in swordfish more so than other fish.

14 MS. HALVERSON: All right.

15 Any other sources of mercury?

16 PARTICIPANT: Broken thermometers.

17 MS. HALVERSON: Okay.

18 What do you do, right now, to protect  
19 yourself from kind of environmental exposure to  
20 contaminants like these? Do you, personally, do  
21 anything? Elizabeth?

22 PARTICIPANT: We only buy organic fruit

1 and vegetables so, not specifically the ones  
2 you're talking about or the ones the group has  
3 talked about. We buy meats with no hormones. I  
4 have to tell you, when I'm in Boston, with  
5 (indiscernible) happening, I take as few breaths  
6 as I need to.

7 (Laughter)

8 MS. HALVERSON: Okay.

9 PARTICIPANT: I have an air purifying  
10 system that I use in the house.

11 MS. HALVERSON: All right.

12 PARTICIPANT: I try to keep off  
13 areas -- if they say "pesticide applied" -- you  
14 know, like on the grass.

15 MS. HALVERSON: Okay. So just, in  
16 general, you try to avoid contaminants like that?

17 PARTICIPANT: Yeah. Also, you know,  
18 make sure I wash things very carefully.

19 MS. HALVERSON: Okay. I want to switch  
20 gears just a little bit and talk about fish and  
21 seafood. how many of you do eat fish or seafood  
22 on a fairly regular basis?

1 (Show of hands)

2 ii The whole group. I'm the only one  
3 that doesn't.

4 Okay. And by eating it "on a regular  
5 basis," how often would you say that is?

6 PARTICIPANT: Twice a week.

7 MS. HALVERSON: Twice a week?

8 PARTICIPANT: Three times a week.

9 MS. HALVERSON: Three times a week.

10 Okay.

11 PARTICIPANT: Once a week.

12 PARTICIPANT: Once.

13 PARTICIPANT: Once a week.

14 MS. HALVERSON: Okay. I'm hearing a  
15 lot of "once" --

16 PARTICIPANT: Maybe twice a week.

17 MS. HALVERSON: -- "twice, three times  
18 a week."

19 Okay. And if you're eating seafood --  
20 what would you say are the advantages of eating  
21 seafood or fish?

22 PARTICIPANT: Omega 3 oils.

1 MS. HALVERSON: Okay.

2 PARTICIPANT: Low cholesterol.

3 PARTICIPANT: Good source of protein.

4 MS. HALVERSON: Okay. Do you tend to  
5 eat fish because it's something that's healthy  
6 for you or because it's something you like or  
7 both?

8 PARTICIPANT: Both.

9 PARTICIPANT: Both.

10 PARTICIPANT: I eat it because I like  
11 it.

12 MS. HALVERSON: All right. I think  
13 Phyllis was the one who mentioned the mercury in  
14 swordfish and that kind of thing. That's  
15 actually what we're going to be talking about  
16 today: methyl mercury in fish.

17 And what I'd like to do is pass out  
18 some information. And instead of going through  
19 and reading it, if you could just kind of go with  
20 me. We're going to go through it, section by  
21 section. Hopefully, we have enough. Are we  
22 short? Here, Trevor.

1           Okay. As you can see, the front page  
2 says this is a message for women who are  
3 pregnant, planning to become pregnant within the  
4 next six months, and nursing mothers about the  
5 need to limit eating certain seafood.

6           As you can tell, probably, we didn't  
7 recruit you because we thought all of you fit  
8 into that category, so don't worry about that.  
9 But what we were trying to do was just get a  
10 group of people together to talk about this  
11 particular issue.

12           If you turn to the first page -- let's  
13 read that introductory paragraph. This is kind  
14 of the summary of what we're going to be talking  
15 about. "Seafood can be an important part of a  
16 balanced diet for pregnant women and nursing  
17 mothers. It is a good source of high-quality  
18 protein, is low in fat, and contains Omega 3  
19 fatty acids that help your baby develop its  
20 immune and nervous systems.

21           "Some seafood, however, may contain  
22 high levels of a form of mercury called methyl

1 mercury that can harm the fetuses of pregnant  
2 women. By being informed about methyl mercury  
3 and knowing the kinds of fish that are safe to  
4 eat, you can prevent any harm to your baby and  
5 still enjoy the important health benefits of  
6 eating seafood."

7 Okay. If you were going to summarize  
8 for me, in just as plain english as you can, what  
9 the main part of that message is, what would it  
10 be?

11 PARTICIPANT: The effect of methyl  
12 mercury on pregnant women.

13 MS. HALVERSON: Okay. And, basically,  
14 what are they saying? Tim?

15 PARTICIPANT: Avoid it.

16 MS. HALVERSON: Avoid what?

17 PARTICIPANT: Methyl mercury.

18 MS. HALVERSON: Avoid methyl mercury.

19 PARTICIPANT: They're also saying, do  
20 your homework or know which fish are safe to eat  
21 versus which ones you should be aware of that may  
22 contain higher levels of it --

1 MS. HALVERSON: Okay.

2 PARTICIPANT: -- which, they say, can  
3 harm the fetus.

4 MS. HALVERSON: Okay. So let's say,  
5 you were a pregnant woman and you've read those  
6 couple of introductory paragraphs. What would  
7 your questions be at that time?

8 PARTICIPANT: What fish to avoid.

9 MS. HALVERSON: Okay. Any other  
10 questions you would have? Susie?

11 PARTICIPANT: I would just want to know  
12 what seafood to avoid because it says that  
13 although seafood can be really good for pregnant  
14 women, there are concerns. So I'd want to know  
15 which seafoods -- shellfish, just fish -- what,  
16 specifically, would be okay. Because it says  
17 that seafood is good.

18 MS. HALVERSON: Okay.

19 PARTICIPANT: I'd want to know who did  
20 the study, what's the authority.

21 MS. HALVERSON: All right.

22 PARTICIPANT: I would want to know more



1 about it. I wouldn't make a conclusion until I  
2 read more about it.

3 MS. HALVERSON: Okay. Let's go on --  
4 and we're going to answer most of those questions  
5 as we go along, but I was just curious to get  
6 what your initial questions would be.

7 The first section says, "How does  
8 methyl mercury get into fish?"

9 Before, we go on to that, how many of  
10 you had heard about this issue of methyl mercury  
11 in fish, before, and how many are saying, "I  
12 hadn't really heard about this kind of thing"?  
13 How many have heard about it?

14 (Show of hands)

15 MS. HALVERSON: Okay. And for how many  
16 is it a fairly new thing?

17 (Show of hands)

18 MS. HALVERSON: Okay. About one, two,  
19 three, four, it's relatively new, and the others  
20 have heard.

21 Phyllis, it sounds like you had heard a  
22 fair amount about it. How about the rest of you?

1 Have you heard a fair amount? Why is that,  
2 Holly; do you know?

3 PARTICIPANT: There was a point where  
4 it was all over the news.

5 MS. HALVERSON: Okay. Do you remember  
6 what the circumstances were?

7 PARTICIPANT: I don't remember the  
8 circumstances. I just remember it was in the  
9 news a lot. I don't remember if somebody had  
10 been sick on it or if it was just one of those  
11 study and research things they felt they had to  
12 really --

13 MS. HALVERSON: Okay. Lori, do you  
14 remember any more?

15 PARTICIPANT: It's probably the same.  
16 It was in the newspapers and on the news.

17 MS. HALVERSON: Okay.

18 PARTICIPANT: I wrote a paper in the  
19 early '90s about the possibility of the FDA  
20 regulating seafood the way they regulate meat. I  
21 found out quite a bit about it. Then, it wasn't  
22 so bad that it stopped me from eating fish.

1 MS. HALVERSON: Okay.

2 So, let's read this little section:

3 "How does methyl mercury get into fish? Mercury  
4 occurs naturally in the environment and is  
5 released, also, into the atmosphere, primarily  
6 from coal-burning power plants and waste  
7 incinerators.

8 "Traces of mercury get into ground  
9 water, accumulating in streams and oceans.  
10 Nearly all fish contain trace amounts of methyl  
11 mercury, which are not harmful to humans.

12 "Fish absorb methyl mercury from water  
13 as it passes over their gills and they feed on  
14 aquatic organisms. Long-lived, larger fish that  
15 feed on other fish accumulate the highest levels  
16 of mercury and pose the greatest risk to people  
17 who eat them."

18 Okay. When you read that information,  
19 is there new information to any of you in there?  
20 Susie?

21 PARTICIPANT: I would think that the  
22 bigger the fish, basically, the more of a chance

1 that you have of getting mercury into your  
2 system. I mean, it hasn't mentioned anything at  
3 all about shellfish. Going from that, I would  
4 say that shellfish would be okay, more so than  
5 larger fish, like swordfish.

6 MS. HALVERSON: Okay. Anything else?  
7 Dominic?

8 PARTICIPANT: I heard about it's not  
9 just the size but the age of the fish. And  
10 (indiscernible) tend to have more higher level of  
11 mercury contents.

12 MS. HALVERSON: Okay.

13 PARTICIPANT: I also thought it was  
14 cold water fish or fish that fed off the bottom  
15 more. There was some criteria they gave to judge  
16 how to pick your fish and I can't remember,  
17 really, what it was. But I thought it was cold  
18 water fish, your fatty fish, more than, like,  
19 sole and sea bass and stuff.

20 MS. HALVERSON: Any other comments or  
21 questions on this particular section?

22 PARTICIPANT: Is it the meat of the

1 fish or the liver or is it just all over?

2 MS. HALVERSON: Good question. I don't  
3 know the answer to that but that's a good  
4 question.

5 PARTICIPANT: I think it's all over the  
6 fish. It's not just part of the fish.

7 PARTICIPANT: Because if it was a  
8 certain part, they would then not sell that  
9 certain part. So it must be throughout.

10 MS. HALVERSON: Okay. Let's move on to  
11 the next section: "How can I protect my baby?  
12 You can protect your baby by limiting the kinds  
13 of fish you eat. The Food and Drug  
14 Administration and the Environmental Protection  
15 Agency recommend that you limit the amount of  
16 fish that you eat with high levels of mercury,  
17 and only eat fish that have low levels of mercury  
18 or no mercury in them."

19 Okay. Any comments or questions here?

20 PARTICIPANT: I think pregnant women  
21 can be told just to stay away from seafish.

22 MS. HALVERSON: To stay away from fish

1 from the sea?

2 PARTICIPANT: Of the sea. Yeah.

3 MS. HALVERSON: Okay.

4 PARTICIPANT: So maybe farm-raised fish  
5 is okay.

6 MS. HALVERSON: What do the rest of you  
7 think about that kind of suggestion?

8 PARTICIPANT: The first paragraph says  
9 "contains fatty acid that can help your baby to  
10 develop its immune and nervous system." So there  
11 is a positive to eating fish.

12 MS. HALVERSON: Okay.

13 PARTICIPANT: I would think that every  
14 obstetrician would be telling their patients  
15 this, if it was that important.

16 PARTICIPANT: You would think.

17 (Laughter)

18 MS. HALVERSON: Okay. Let's go on to  
19 the next section. This is talking about what  
20 fish have higher levels of mercury and shouldn't  
21 be eaten. "King Mackerel, shark, and swordfish  
22 have higher levels of mercury in them and should

1 not be eaten more than once a month.

2 "If you eat other fish, you should not  
3 eat King Mackerel, shark, or swordfish at all.  
4 Tuna steaks have moderate levels of mercury.  
5 Tuna steaks can be eaten three times a month.  
6 Canned tuna, which is made from smaller fish, has  
7 less mercury than tuna steaks. You can eat  
8 one-and-a-half six-ounce cans of tuna, every  
9 week, with no problems."

10 All right. Here we are, a roomful of  
11 pregnant women. Tim, you're in your first  
12 trimester here. You've just read this. How do  
13 you interpret this, as a pregnant woman?

14 PARTICIPANT: Well, it basically tells  
15 you what fish to avoid. I doubt anybody --  
16 unless they're really fish lovers -- would eat  
17 that much tuna fish, anyways. "You can eat  
18 one-and-a-half six-ounce cans of tuna, every  
19 week, with no problem." It just tells you what  
20 fish to avoid. I would avoid those.

21 MS. HALVERSON: Okay.

22 PARTICIPANT: It might be too late if

1 he's already in his first trimester and he's been  
2 eating swordfish every other day.

3 PARTICIPANT: I don't think I'd ever  
4 even think of eating shark, anyway. It's the  
5 only one on there that would strike me that I  
6 needn't think -- have to worry about -- would be  
7 swordfish.

8 MS. HALVERSON: Okay. Trevor?

9 PARTICIPANT: For the first trimester,  
10 I would stay away from the fish, anyway, because  
11 the baby's underdeveloped and doesn't have that  
12 defense mechanism. So, for the first trimester  
13 (indiscernible) I'll keep out.

14 MS. HALVERSON: So you would not eat  
15 what, then?

16 PARTICIPANT: I would not eat fish for  
17 the first trimester.

18 MS. HALVERSON: Any fish?

19 PARTICIPANT: Any fish.

20 MS. HALVERSON: Okay. And why would  
21 that be?

22 PARTICIPANT: Because the baby doesn't



1 have his defense mechanism built in yet. You  
2 know, pretty much, he's in the early stages --  
3 the first three months. (Indiscernible) So I'd  
4 stay away from it for that part.

5 MS. HALVERSON: Okay. Elizabeth?

6 PARTICIPANT: I think I'd be inclined  
7 to stay away from the types of fish that there  
8 are cautions with and eat other types.

9 MS. HALVERSON: Okay. There's a chart  
10 down here that says what fish have low levels of  
11 mercury or no mercury in them and a bunch of  
12 things. You would eat those?

13 PARTICIPANT: There are definitely  
14 things on that list, as I look at it, now, that I  
15 like. So my inclination would be to go with  
16 things that aren't going to cause any risk of  
17 harm -- but still eat fish.

18 I, for some reason, would feel a little  
19 bit comfortable doing some canned tuna, as long  
20 as I stayed within the restrictions that are  
21 recommended.

22 MS. HALVERSON: Okay. How about, you

1 go out to dinner and the restaurant says our  
2 special today is fresh tuna steak, grilled -- and  
3 you love fresh tuna steak. It says you can eat  
4 this three times a month. Would you?

5 PARTICIPANT: No, I wouldn't.

6 MS. HALVERSON: Why would that be?

7 PARTICIPANT: I guess because -- you  
8 know, if I'm going to treat myself to something I  
9 really like, I'd pick something else that I  
10 really like. I almost consider tuna, sort of a  
11 tuna sandwich or something as a staple kind of  
12 thing in my repertoire of things that I eat. So  
13 I might keep that in there a little bit because  
14 of a certain part of my routine.

15 But to get something at a restaurant  
16 that's going to be out-of-the-ordinary and  
17 special, I feel like I could just as easily pick  
18 something else that just wouldn't -- I would be  
19 very careful. That's just my inclination.

20 MS. HALVERSON: Okay. How about the  
21 rest of you? Arnold?

22 PARTICIPANT: All of these fish are

1 saltwater fish, including the ones below. I'm  
2 wondering about freshwater fish, like trout or  
3 bass or catfish. They don't mention any  
4 freshwater fish.

5 MS. HALVERSON: Okay. That's another  
6 good question, Arnold.

7 PARTICIPANT: Salmon can be freshwater.

8 PARTICIPANT: And it also talks about  
9 getting in streams -- somewhere in here -- it's  
10 streams and oceans -- from the ground. So I  
11 think one can make some kind of assumption there  
12 must be some mild levels in all fish.

13 MS. HALVERSON: Okay. Back to my  
14 question -- again, assuming you're a pregnant  
15 woman or a nursing mother or you're thinking of  
16 getting pregnant, and you're trying to decide:  
17 "Yeah, I like fish. My doctor says I need that  
18 high-quality protein. It's low in fat. It  
19 contains Omega 3 fatty acids. But I want a  
20 healthy baby." How do I make this decision with  
21 the information I have here?

22 Katherine, how would you decide?

1                   PARTICIPANT: Well, I'm a little jaded  
2 at this point. But I think if I was pregnant, I  
3 would be relatively cautious but I wouldn't go  
4 overboard. Because I know there are so many  
5 cautions for women when they're pregnant, I don't  
6 know how they maneuver and manage to eat anything,  
7 just because there are so many dreadful warnings.

8                   So I would probably, you know, stick  
9 within the guidelines that they discussed.

10                  MS. HALVERSON: Okay. Phyllis, how  
11 would you decide?

12                  PARTICIPANT: Well, if I went to a  
13 restaurant and they featured the tuna and it  
14 sounded really good and it's okay three times a  
15 month, I'll go for it.

16                  MS. HALVERSON: Okay. How do you make  
17 these kinds of decisions with this information?  
18 How closely do you follow these guidelines? Do  
19 you develop others for yourself?

20                  PARTICIPANT: I have a feeling that I  
21 would be really cautious about how many times, in  
22 nine months, I would eat fish. If I needed Omega

1 3, I would get it through supplements. There are  
2 other ways to get it.

3 I might find other ways to get the  
4 nutrients, without even risking the fish.

5 MS. HALVERSON: So you wouldn't eat any  
6 fish at all?

7 PARTICIPANT: I probably could go nine  
8 months without -- it wouldn't be any big loss for  
9 me. Shellfish, maybe. I mean, I like shellfish  
10 a lot.

11 PARTICIPANT: I don't feel this is  
12 enough information for me to make a decision.

13 MS. HALVERSON: What kind of  
14 information is it missing?

15 PARTICIPANT: I want to know what the  
16 effects are. I want -- you know, this is maybe  
17 someone's opinion. You know, I would really want  
18 a little bit more information, before -- I could  
19 very easily not eat those three fish that are  
20 high in -- you know, you're supposed to do  
21 without diet soda. You do without it when you're  
22 pregnant. You just make a choice. You don't

1 have to have it. But I would really want to know  
2 a little bit more about it.

3 MS. HALVERSON: All right.

4 PARTICIPANT: It could be a study by  
5 the beef council.

6 (Laughter)

7 PARTICIPANT: Yeah. You know, I don't  
8 believe everything I read. I need to know a  
9 little bit more information about it.

10 MS. HALVERSON: Actually -- we're going  
11 to move on -- this is information from the  
12 Environmental Protection Agency and Food and Drug  
13 Administration, based upon a study by the  
14 National Academy of Sciences. So it isn't the  
15 beef council.

16 There's a sentence of the bottom of  
17 this section -- page 2, here -- that says, "If  
18 methyl mercury can be harmful to my baby, why  
19 isn't it harmful for me or the rest of my  
20 family?" And then it says, "If you and the other  
21 adult members of your family consumes an average  
22 amount of seafood -- tuna sandwiches and salads,

1 the occasional fish steak -- the level of mercury  
2 in the seafood supply is not a risk. To be  
3 perfectly safe, fish with high levels of mercury  
4 should be eaten only once a month.

5 All right. When you hear that, what do  
6 you say? Susie?

7 PARTICIPANT: I don't think that  
8 answers the question, really, of why it's safe  
9 for other people in the family and not the baby.  
10 So I'm beginning to get more skeptical, like  
11 Christina, just because -- like she said, there  
12 aren't any effects -- you know -- I don't know.  
13 I don't think it answers the question.

14 MS. HALVERSON: Okay.

15 PARTICIPANT: There wasn't anything  
16 that based -- that shows you what they did to get  
17 the information that it's not harmful. They  
18 didn't say, "According to a study of" -- and you  
19 need at least a 30 people to make it a viable  
20 study. They didn't say, like, "According to the  
21 60 people we tested, we found these levels of  
22 mercury after eating fish for so many days or

1       whatever."

2                   There isn't anything that tells you it  
3       really is or isn't safe in this.  It's one  
4       viewpoint from where they're looking at but we  
5       don't know where they're coming from.

6                   MS. HALVERSON:  Okay.  Any other  
7       reactions?

8                   PARTICIPANT:  I'm concerned because I  
9       eat more than -- so I'm wondering how have I put  
10      myself at risk.

11                  MS. HALVERSON:  Okay.  So you eat more  
12      than what?

13                  PARTICIPANT:  Well, as far as  
14      swordfish, I probably have it, maybe, three or  
15      four times a month.

16                  MS. HALVERSON:  Okay.

17                  PARTICIPANT:  It's saying I should have  
18      only had it no more than once a month.  I'm  
19      wondering, how has that impacted me -- or  
20      potentially impacted me.

21                  PARTICIPANT:  I have a tuna sandwich  
22      four or five times a week.  So, I'm way over.



1 MS. HALVERSON: Okay.

2 PARTICIPANT: Yeah.

3 PARTICIPANT: That concerns me.

4 PARTICIPANT: I'd like to know if I  
5 should go on giving my children tuna fish.

6 MS. HALVERSON: And why would you say  
7 that, then?

8 PARTICIPANT: Well, if it's harmful to  
9 a fetus, what about a child?

10 MS. HALVERSON: Okay. Any other  
11 reactions to this information?

12 PARTICIPANT: I tend to feel that the  
13 older you are, the better chances you have of  
14 resisting it -- mercury. The younger you are --

15 PARTICIPANT: The larger you are, your  
16 body's bigger --

17 PARTICIPANT: -- the more susceptible.

18 MS. HALVERSON: And what do you mean by  
19 "resisting" the mercury?

20 PARTICIPANT: Well, not "resisting" it  
21 but, pretty much, whatever it's going to do to  
22 you, whatever the results of this, it wouldn't do

1 that much damage to you.

2 MS. HALVERSON: In your understanding,  
3 what does mercury do to you?

4 PARTICIPANT: I'm really not sure. It  
5 could make you -- I'm not sure. I'd be guessing.

6 MS. HALVERSON: Okay.

7 PARTICIPANT: I've heard that it can  
8 bring on Alzheimer's or it may have that type of  
9 impact.

10 PARTICIPANT: Brain damage.

11 PARTICIPANT: I thought it would be  
12 more neurological system damage that might occur  
13 that might lead to Parkinson's Disease or  
14 something like that.

15 MS. HALVERSON: Okay. How about if  
16 they provided this information and then provided  
17 you information about what, exactly, the possible  
18 effects of mercury would be? Would that be  
19 helpful to you?

20 PARTICIPANTS: Yes.

21 MS. HALVERSON: Okay. And what kinds  
22 of questions would you want answered in that

1 information?

2 PARTICIPANT: I'd like it to relate to  
3 what study it was done. What? -- did they take  
4 ten people?

5 PARTICIPANT: How long was the study.

6 PARTICIPANT: Where's the data.

7 MS. HALVERSON: Okay. So you want the  
8 data, basically?

9 PARTICIPANT: Yeah.

10 PARTICIPANT: Or at least something to  
11 back up what they're saying.

12 MS. HALVERSON: Okay. Question:  
13 Before we move on to the last section there, we  
14 have this chart on page 2 that says what fish  
15 have higher levels of mercury and shouldn't be  
16 eaten and what fish have low levels of mercury or  
17 no mercury in them.

18 I think Arnold mentioned -- I see  
19 mainly seafood on here and what about freshwater  
20 fish. What about fish that aren't mentioned on  
21 this list or seafood that isn't mentioned on it?  
22 Like, I see scallops and shrimp but I don't see

1 lobster. That's my favorite.

2 How do you decide for something that  
3 isn't on that list?

4 PARTICIPANT: I'd be concerned about  
5 catfish that live off the bottom of rivers, you  
6 know, which are highly polluted sometimes.

7 PARTICIPANT: The lobster scavenges  
8 also.

9 PARTICIPANT: Well, I'm like you. I  
10 love lobster. But I certainly don't have it more  
11 than four or five times a year, at the most. So  
12 I wouldn't worry about that. And I think about  
13 all the other things we eat that could be  
14 contaminated. It's almost impossible to avoid  
15 everything that is a possible contaminant. You  
16 would eat nothing.

17 MS. HALVERSON: How do you decide,  
18 then, for fish that aren't on this list? They're  
19 not on that high level of mercury and shouldn't  
20 be eaten list, but they're also not on the what  
21 fish have low levels of mercury.

22 PARTICIPANT: Maybe they weren't

1 tested.

2 PARTICIPANT: I don't know.

3 PARTICIPANT: They also could have  
4 other problems or situations. You know, they  
5 could be more likely to carry viruses or  
6 bacteria.

7 MS. HALVERSON: Any other?

8 PARTICIPANT: I would assume a lobster  
9 would be like a crab.

10 MS. HALVERSON: Okay. So you'd eat it,  
11 huh?

12 PARTICIPANT: Yeah.

13 PARTICIPANT: I'd want to know if there  
14 was a way to have some information about the  
15 things that aren't here. An if not, why not?  
16 Why isn't there some information about -- I mean,  
17 we know lobsters are scavengers and that's, you  
18 know, kind of gross. So why isn't there any  
19 information about that? What does it mean that  
20 there isn't any information about that?

21 MS. HALVERSON: All right. Let's say  
22 that you go to the grocery store. You're going

1 to cook a nice fish dinner with all those nice  
2 Omega 3 fatty acids for your family. You're a  
3 good mom, a good dad, good whatever. Here you  
4 are, cooking -- you want to cook fish. You're at  
5 the fish counter and you don't have this list  
6 with you but you can't remember what's on the  
7 list, what isn't on the list. How do you make a  
8 decision about what fish to serve?

9 PARTICIPANT: I usually ask what's the  
10 freshest.

11 MS. HALVERSON: Okay. And he says,  
12 "It's my King Mackerel."

13 PARTICIPANT: It's easy to remember  
14 those three. It's the bigger list that might be  
15 a little bit --

16 MS. HALVERSON: And, ever since this  
17 information, I've got a special deal on my King  
18 Mackerel, right?

19 (Laughter)

20 PARTICIPANT: He's giving you the one  
21 without the mercury.

22 MS. HALVERSON: He's giving you the one

1 without the mercury?

2 PARTICIPANT: My suspect is that the  
3 fish industry asked the Environmental Protection  
4 Agency to do this study. Because if this were an  
5 independent study, you would have a whole lot  
6 more information. It wouldn't be on the bias of  
7 mercury isn't going to harm you.

8 MS. HALVERSON: Okay.

9 PARTICIPANT: So, based on this, I  
10 think the fish industry or lobbyists were behind  
11 this.

12 PARTICIPANT: I wouldn't think they  
13 would do it because that would curtail the  
14 purchase of those fish. I would think maybe it's  
15 the environmentalists that's saying, we want to  
16 keep the reservoirs up, so let's scare people so  
17 they don't eat it.

18 MS. HALVERSON: Boy, you guys are  
19 cynical up here.

20 (Laughter)

21 PARTICIPANT: Welcome to the northeast.  
22 Skeptical. Let's not call it cynical; just

1 skeptical.

2 MS. HALVERSON: All right.

3 Let's go to this next section. What  
4 about the fish caught by sport fishers. Are they  
5 safe to eat. "There can be a risk of  
6 contamination from methyl mercury in fresh waters  
7 from natural and industrial causes."

8 Arnold, you were right.

9 "Check with your state or local public  
10 health department for any advisories warning of  
11 mercury in waters in your area."

12 So, you're going to go out and fish in  
13 the Charles?

14 PARTICIPANT: No.

15 MS. HALVERSON: Not in the Charles?

16 PARTICIPANTS: No.

17 PARTICIPANT: Not yet.

18 MS. HALVERSON: I'm going to up to  
19 northern Minnesota to my family's lake, where we  
20 go every summer, and I'm going to catch my  
21 northerns -- wall-eyes up there. What would your  
22 assumption be, then?



1 PARTICIPANT: It's very safe.

2 PARTICIPANT: There's no waste dumps  
3 there.

4 MS. HALVERSON: Okay. Should I be  
5 checking with the public health department,  
6 there, or do you just assume that that's safe? I  
7 invite you all to my fish fry at Grace Lake. Is  
8 it safe to eat?

9 PARTICIPANT: I would assume it would  
10 be.

11 PARTICIPANT: The lung contaminants are  
12 mostly from birds -- bird droppings in the water.

13 MS. HALVERSON: Okay. You're all  
14 pregnant women and I invite you up there. Would  
15 you eat my fish?

16 PARTICIPANT: As long as you cooked it  
17 and I just relaxed. Yes.

18 (Laughter)

19 PARTICIPANT: Not after getting the  
20 warnings, maybe; but before knowing about the  
21 warnings. I mean, I've been fishing, before, and  
22 I haven't thought about or worried about what the

1 condition of those fish would be. I mean, I can  
2 do it in the Charles -- I mean, there's certain  
3 places I would not do it but I don't think about  
4 that in every place that I've ever gotten fish.

5 MS. HALVERSON: All right. In general,  
6 we've read a lot of information about fish and  
7 methyl mercury and pregnant women and all of  
8 that. What general message are you getting out  
9 of this information?

10 PARTICIPANT: It's restricting the  
11 amount of fish you eat.

12 MS. HALVERSON: By "you," you mean --

13 PARTICIPANT: A person, especially  
14 pregnant women.

15 MS. HALVERSON: Okay.

16 PARTICIPANT: And type.

17 MS. HALVERSON: The amount and type of  
18 fish you eat?

19 PARTICIPANT: Yeah.

20 MS. HALVERSON: Okay. And you want to  
21 restrict it, you said.

22 PARTICIPANT: Well, limiting, as well

1 as be aware of the ones to avoid.

2 MS. HALVERSON: Okay.

3 PARTICIPANT: Well, in a sense, I feel  
4 there's sort of a mixed message on here. It's  
5 like, "Beware of these fish, but you can eat  
6 them." I mean, it's sort of like know the risk  
7 of what you're eating, I guess.

8 PARTICIPANT: For me, it's a couple of  
9 things. It is, you know, being concerned that,  
10 you know, too much fish can be harmful -- certain  
11 kinds. But, also, like so many other things, it  
12 just raises questions about what we're doing to  
13 the environment, and that's very frightening.

14 MS. HALVERSON: Okay. In terms of  
15 making information about this issue -- Holly  
16 brought up the issue of trying to weigh your  
17 risks. How do they provide information -- and  
18 this information is provided by the Environmental  
19 Protection Agency and the Food and Drug  
20 Administration. They're the ones that are trying  
21 to figure out -- we have this information -- it's  
22 actually from a study by the National Academy of

1 Sciences -- that has said there are potential  
2 risk that we didn't know about before.

3 We've always known that methyl mercury  
4 was in fish and that you don't want a whole lot  
5 of that, and a whole lot isn't good for anybody.  
6 But we didn't know, until this study, that  
7 there's a potential for it to cause problems in  
8 unborn children and newborns.

9 How do they get that level of risk over  
10 to the public, without over-scaring them?

11 PARTICIPANT: Pediatricians, I assume,  
12 would tell the pregnant mothers.

13 PARTICIPANT: Obstetricians.

14 MS. HALVERSON: Pediatricians and  
15 obstetricians.

16 PARTICIPANT: Yeah.

17 MS. HALVERSON: Okay.

18 PARTICIPANT: They need to tell you a  
19 little bit more. They just can't tell you this.

20 MS. HALVERSON: Okay. And the  
21 additional information you want is?

22 PARTICIPANT: I want to know: what is

1 the risk; what does it do. I want to know why  
2 it's okay for me -- because they didn't answer  
3 that.

4 MS. HALVERSON: Okay.

5 PARTICIPANT: I want to know where it's  
6 been proven and how it was proven.

7 MS. HALVERSON: Okay. Any other things  
8 you want to know?

9 PARTICIPANT: I'd like to know the  
10 effects of mercury on an adult; not just on a  
11 child. What would be the effect of eating too  
12 much mercury on an adult.

13 MS. HALVERSON: Okay. So, in order to  
14 get this information out, they're particularly  
15 concerned about getting the information out about  
16 the risks to newborn babies. In order to get  
17 that information out, how can they phrase it so  
18 that the whole population doesn't get scared and  
19 never eats fish again.

20 Remember -- I don't know if any of you  
21 remember, but when I was a kid, all of a sudden,  
22 we heard you can get cancer from eating bacon.

1 My mother stopped serving bacon at home. Do you  
2 remember that?

3 PARTICIPANT: Nitrates.

4 (Indiscernible simultaneous responses)

5 MS. HALVERSON: But it was a big scare  
6 at that time, so lots of mothers, like mine,  
7 stopped serving bacon. Well, obviously, they  
8 don't want to necessarily stop people from eating  
9 fish because there are all kinds of good things  
10 in them, too. But how do you get that relative  
11 risk across to people?

12 PARTICIPANT: Well, you could certainly  
13 structure a carefully formulated PR campaign,  
14 reaching out to people in a variety of ways.

15 MS. HALVERSON: Okay. And what do they  
16 need to say in terms of telling you about the  
17 risks but, also, on the other hand, not  
18 over-scaring you?

19 PARTICIPANT: They need to tell you the  
20 truth. They can tell you -- you know, if it is  
21 not good for you, then don't eat it. You know,  
22 they just need to tell you exactly what the study

1       said -- what the truth is. Then you can make up  
2       your own mind.

3                   PARTICIPANT: And you need facts to  
4       know whether or not you want to go ahead with  
5       this. There are no facts in this.

6                   PARTICIPANT: I wouldn't worry about  
7       scaring pregnant women because, if this is this  
8       harmful, they should be scared and they shouldn't  
9       do it, you know. They should have pamphlets in  
10      an obstetrician's office, or they should -- when  
11      you go for your visit, that should be one other  
12      thing your obstetrician goes over with you; you  
13      know, don't smoke, don't drink diet soda, limit  
14      your coffee --

15                  PARTICIPANT: No alcohol.

16                  PARTICIPANT: -- no alcohol, watch out  
17      for fish. You know? Just add it to the list.

18                  MS. HALVERSON: Okay.

19                  PARTICIPANT: Tell Martha Stewart.

20                  (Laughter)

21                  MS. HALVERSON: Okay. Let's look at  
22      this last section. They have reminders. It

1 says, "Remember, to protect your baby, avoid  
2 eating fish with high levels of mercury, and only  
3 eat fish with low levels of mercury or no mercury  
4 in them.

5 "Check with your local public health  
6 department to see if there are any advisories on  
7 methyl mercury before you eat fish caught in  
8 local waters."

9 If they had told you what the risks  
10 were, is that enough information in a summary for  
11 you?

12 PARTICIPANT: You mean, if they added  
13 risks to -- along with this?

14 MS. HALVERSON: If they had had a  
15 section here, earlier, talking about what the  
16 risks were.

17 PARTICIPANT: Well, I think it would be  
18 good. It would make it a little bit more  
19 informative. But then they'd have to tell you  
20 such and such a study was conducted with blah,  
21 blah, blah and this is the effects. So I  
22 would --



1 MS. HALVERSON: So you really want to  
2 hear about that.

3 PARTICIPANT: -- want to have that,  
4 also, besides what the effects are.

5 PARTICIPANT: This is sort of in a  
6 vacuum. It just says: Fish has mercury;  
7 somehow, we know it's not good for fetuses; and,  
8 somehow, we know it's okay for adults. But  
9 there's no indication of how they know these  
10 little bits of information.

11 MS. HALVERSON: Okay.

12 PARTICIPANT: I'd also like to find out  
13 what the EPA is doing to lessen the  
14 contamination. In other words, if it's from  
15 factories and coal-burning power plants or waste  
16 incinerators, what are they doing at those sites  
17 to prevent mercury from getting into the air and  
18 water? And that gets back to the environmental  
19 issues.

20 PARTICIPANT: I think, here in the  
21 northeast, if somebody's going to tell us there  
22 are risks to something, they need to give us all

1 of the information. Because when we hear -- for  
2 me, personally, when I hear "risks," I'm a little  
3 skeptical and maybe not completely trusting.

4 So how concerned do I need to be and  
5 how much do I need to restrict, you know, my fish  
6 intake? And I won't feel like those are  
7 questions I can answer unless I have all of the  
8 information that's available, which includes the  
9 data, which includes, you know, the question of  
10 how do you know it's harmful to, you know,  
11 children in their developmental stages.

12 How do you know it's not harmful for  
13 adults unless they consume more than this amount.  
14 You know, what are the facts behind that?

15 Otherwise, you know, I'm going to set  
16 some firm limits around what I do, and it is  
17 going to restrict my fish intake. I'm going to  
18 be more cautious than they tell me to be because  
19 I don't trust them unless I have all the  
20 information.

21 PARTICIPANT: But wouldn't you also  
22 have to be concerned about where the fish comes

1 from? Like, Legal Seafoods says they buy the  
2 best fish, but not all fish are created equal.

3 So you could have certain fish farmed  
4 or caught in certain areas that would have more  
5 carcinogens -- if it is carcinogens -- or more  
6 pollutants in it than other fish. So how do you  
7 know, when you go into a fish market, what's your  
8 best option as far as where it's caught.

9 PARTICIPANT: And it doesn't really  
10 address aquaculture, which is growing fish on  
11 farms, which may have no mercury in it. And that  
12 could be the alternative, but that's sort of not  
13 addressed here.

14 PARTICIPANT: Unless the farm is near,  
15 like, a coal-burning facility.

16 PARTICIPANT: Well, it depends on where  
17 they get their water from. But, usually, they're  
18 grown in beds or troughs or something, so it  
19 would depend on where you get your water. But I  
20 still think it would be more minimal than  
21 being -- living in waters infested with whatever.

22 MS. HALVERSON: Tim. Yeah. Tim had a

1 comment, and then Elizabeth.

2 PARTICIPANT: I suppose, if I read this  
3 and I were a pregnant woman, I would definitely  
4 avoid this: better to be safe than sorry.

5 MS. HALVERSON: You would avoid what?

6 PARTICIPANT: Avoid whatever it said  
7 here; "fish with a high level of mercury."

8 MS. HALVERSON: Those three fish?

9 PARTICIPANT: However, it might be that  
10 six months from now, they'll come out and say,  
11 "You know, mercury is really good for you."

12 (Laughter)

13 PARTICIPANT: However, at this point,  
14 reading this, I would rather be safe than sorry.

15 MS. HALVERSON: Okay. Elizabeth?

16 PARTICIPANT: I was just going to say,  
17 for me -- I think that's a good point. For me,  
18 it would be similar with fish, to the way that I  
19 shop for my produce or my meat. Then, if I knew  
20 there were safer places where it was grown and  
21 where I could buy it, then that would be  
22 something I could be comfortable with.

1 MS. HALVERSON: Okay.

2 PARTICIPANT: And, like some other  
3 people have said, if my doctor, who I had  
4 trusting relationship with, told me it was okay  
5 to do certain things and not okay to do other  
6 things, I would believe that because I have a  
7 relationship and already have established trust  
8 in that doctor.

9 MS. HALVERSON: Okay. Now, at the very  
10 bottom, they have "For further information," and  
11 then they have two websites; one for the  
12 Environmental Protection Agency and one for the  
13 Food and Drug Administration. Would having those  
14 websites, where you could go to get more  
15 information, be enough to answer your kinds of  
16 questions, Christina?

17 PARTICIPANT: No, I think it should be  
18 right in this paper.

19 MS. HALVERSON: Okay. How about the  
20 rest of you?

21 PARTICIPANT: If the information was  
22 there, I would have hoped they would have

1 included it in the general information they put  
2 here.

3 MS. HALVERSON: Okay. All right.

4 What I'd like to do now is actually  
5 have someone from the Food and Drug  
6 Administration come in here and talk with us for  
7 a couple of minutes because Dr. Alan Levy (sp),  
8 who is with the Center for Food Safety and  
9 Nutrition, is here.

10 Actually, Katherine, if I could clear  
11 off the chair next to you, we'll let him come in  
12 and -- I think I hear the door.

13 (Dr. Levy joins the focus group.)

14 DR. LEVY: Should I bring a chair?

15 MS. HALVERSON: We have a chair cleared  
16 off for you.

17 This is Dr. Alan Levy from the Food and  
18 Drug Administration --

19 DR. LEVY: Hi.

20 MS. HALVERSON: -- who is here to ask  
21 questions and answer questions.

22 DR. LEVY: One question I have is what

1 questions do you have, given what you've just  
2 read? What did you think was new and interesting  
3 about any of this information? Was any of it new  
4 and interesting?

5 PARTICIPANT: How long has this problem  
6 been around? I mean, is this something that's  
7 been in the last decade, two decades? Has it  
8 always been, and just been researched?

9 DR. LEVY: Well, the hazards of mercury  
10 have been known for a very long time. The fact  
11 that the major source of human exposure to  
12 mercury is fish has been known. And, in fact,  
13 FDA has in place, action levels that limit the  
14 amounts of mercury that can be in fish that are  
15 sold commercially.

16 Another, you know, the recreational  
17 caught fish -- which we can't really control very  
18 well -- the local state departments of game and  
19 fish and recreation generally post advisories  
20 about waters that are contaminated with mercury.  
21 And that's one way that people can become  
22 informed about that kind of hazard.

1                   Commercially-caught fish -- as I said,  
2                   there are action levels --

3                   MS. HALVERSON:   And by "action levels,"  
4                   do you mean --

5                   PARTICIPANT:   How are they measured?

6                   MS. HALVERSON:   -- yeah.

7                   PARTICIPANT:   I mean, whether you get a  
8                   batch of fish -- you've trolled for fish and it  
9                   gets dumped on the top of the boat, at what point  
10                  does that mercury get measured?

11                  DR. LEVY:   We don't measure every fish,  
12                  obviously.

13                  One thing that is kind of well known --  
14                  at least within the fishery industry -- is that  
15                  mercury levels in fish are primarily a function  
16                  of the size of fish -- of ocean-going fish. I  
17                  mean, they absorb the mercury from the water, and  
18                  it's ubiquitous and those fish at the top of the  
19                  food chain that live a long time and eat other  
20                  fish, those are where it accumulates.

21                  So the species that are problematic,  
22                  that are likely to have high levels of mercury



1 are the ones that are mentioned in the advisory.  
2 And most other fish, have relatively low levels.  
3 The one problematic species is tuna, which has  
4 moderate levels of mercury, and it depends a lot  
5 on the particular form in which it's eaten.

6 Most -- tuna filets and sushi-type tuna  
7 come from fairly large fish and they tend to have  
8 higher levels of mercury. The kind of tuna that  
9 you get in canned tuna tends to be much smaller  
10 and has less mercury. So for the same level of  
11 mercury, you can eat a lot more canned tuna than  
12 you can tuna filet.

13 PARTICIPANT: Does heating fish make  
14 any difference? So, if you had sushi as opposed  
15 to grilled, it --

16 DR. LEVY: No. Mercury is not --

17 PARTICIPANT: -- still retains --

18 DR. LEVY: -- going to be affected.

19 PARTICIPANT: It's not affected.

20 DR. LEVY: It's not going to be  
21 affected.

22 PARTICIPANT: How does the body absorb

1 liquid? Because if it's ubiquitous in the water  
2 and we're swimming in that water, I mean, how --  
3 are we not absorbing mercury in some form that  
4 way, too?

5 DR. LEVY: The primary way we get  
6 mercury is through fish.

7 PARTICIPANT: And it gets digested into  
8 our bloodstream?

9 DR. LEVY: Well, the mercury that is  
10 absorbed in the fish is in the form of methyl  
11 mercury. This is a little complicated. But  
12 methyl mercury, which is an organic form of  
13 mercury, is really, by far, the more toxic  
14 mercury. Elemental mercury is actually very --  
15 it's not hardly absorbed at all by the body.

16 You can, you know, eat mercury --  
17 elemental mercury and it probably won't make much  
18 difference. It's only when it gets in organic  
19 form -- methylated form that it really is a  
20 problem -- and the fish methylate it. So the  
21 kind that they have is real --

22 PARTICIPANT: Does it accumulate in any

1 organ of the body or is it all evenly  
2 distributed? -- in the human; like when you eat  
3 the fish that has methyl mercury.

4 DR. LEVY: It's complicated. It  
5 actually is fairly widespread through the body.  
6 It mainly is in the muscle tissue. And it  
7 actually leaches out, slowly, from the body. So  
8 it's not like it builds up, over and over,  
9 forever. It actually leaches out, but it's slow.

10 The half-life of mercury in the body is  
11 three to six months, which is why pregnant women  
12 have to worry about it even before they are  
13 pregnant. Because the baby is mainly at risk in  
14 the first trimester.

15 MS. HALVERSON: And Christina had a  
16 question that wasn't addressed in her; which is,  
17 what exactly does it do to the baby?

18 DR. LEVY: It affects neural  
19 development. We don't know exactly how. We  
20 don't really know the mechanism by which it has.  
21 But it has neural effects, nervous system  
22 effects.

1                   Most of what we know about mercury  
2 comes from these acute cases of really very acute  
3 mercury poisoning when they're prepared, usually  
4 through kinds of pollution.

5                   PARTICIPANT: So is this just the  
6 fetuses or children at a certain age?

7                   DR. LEVY: Well, fetuses are much more  
8 at risk because the nervous system is developing.

9                   PARTICIPANT: So after it's  
10 developed -- like, if I'm an infant --

11                   DR. LEVY: Everyone is -- at high  
12 enough levels, mercury is toxic for everybody.

13                   PARTICIPANT: But if it's -- say, the  
14 size of an infant and the size of an adult. Is  
15 it more harmful to an infant, because of their  
16 size, than it is to an adult?

17                   DR. LEVY: Well, it's always going to  
18 be dose-dependent. And, you know, if an infant  
19 ate an adult-sized portion --

20                   PARTICIPANT: Well, they don't eat it  
21 until they're a year old, anyway.

22                   DR. LEVY: The main source of their

1 sensitivity is not really -- it's still specific  
2 in them. But it's that the neural development  
3 puts them really at risk. That's why they're  
4 really a special group.

5 PARTICIPANT: Is the FDA considering  
6 inspecting fish the way the Department of  
7 Agriculture inspects meat?

8 DR. LEVY: We don't do that. That's  
9 not the way we regulate things. What we tend to  
10 do is set standards, and that it is illegal not  
11 to adhere to the standards. So, if we identify a  
12 fish that exceeds the standard, that's violative  
13 and we can take action against it.

14 PARTICIPANT: But is it periodically  
15 checked, across the board?

16 DR. LEVY: But we don't do proactive  
17 testing.

18 PARTICIPANT: Yeah. So you don't send  
19 out inspectors, the way the Department of  
20 Agriculture does.

21 DR. LEVY: No, we don't. We don't do  
22 that for anything.

1                   PARTICIPANT: Does Agriculture reduce  
2 the risk of mercury in fish?

3                   DR. LEVY: Agriculture -- farm-raised  
4 fish is not the problem for mercury because the  
5 water quality is under the control of the  
6 producer, and they're generally quite careful  
7 about mercury levels in the water. So  
8 farm-raised fish, as a rule, are going to be  
9 quite low in mercury.

10                   MS. HALVERSON: Commercially-caught  
11 fish in the oceans -- they're not regulated by  
12 Agriculture, then?

13                   DR. LEVY: No, they're not.

14                   PARTICIPANT: You know, this is very  
15 interesting to me because, as I had mentioned, I  
16 wrote a paper on this. There was apparently some  
17 turf battle between the Department of Agriculture  
18 and the FDA over the possibility of inspecting  
19 fish.

20                   DR. LEVY: Actually, between the Marine  
21 Fisheries and FDA.

22                   PARTICIPANT: Yeah. So, what is

1       happening -- what FDA and the Department of  
2       Agriculture is doing with meat is taking on the  
3       responsibility of inspecting it and regulating  
4       it.

5                What you're saying is that the FDA is  
6       going to just issue these warnings to people, and  
7       it's up to the public to inform themselves about  
8       this fish and not eat it or avoid it. That's  
9       very different than meat.

10               DR. LEVY: Oh, it is; there's no  
11       question. I mean, the inspection -- meat is not  
12       regulated by Food and Drug. Food and Drug  
13       regulates processed foods -- all processed foods  
14       and fruits and vegetables and fish. That is our  
15       authority.

16               And the authority we have over fish is  
17       shared, to some extent, with the National Marine  
18       Fisheries Service, which is actually in the  
19       Department of Commerce. In recent years, we've  
20       taken more of an active role with respect to  
21       fish.

22               Agriculture has never been involved

1 with commercial fish caught in the wild.  
2 Although they actually have the authority over  
3 farm-raised fish.

4 PARTICIPANT: I just think it's very  
5 interesting; the way the weight of the decision  
6 about what to eat is different with fish than  
7 with meat. With meat, if you buy meat in a  
8 grocery store, you know it's been inspected. You  
9 don't know if fish has been inspected, nor do you  
10 know, unless you've read all this stuff plus a  
11 hundred other studies, what's harmful and what  
12 isn't. So it's an interesting difference.

13 DR. LEVY: It's true that there is no  
14 proactive inspection system for fish. The actual  
15 context for this information is that we do have  
16 these standards for mercury levels that can be in  
17 fish. They've been set, you know, 20 years ago.

18 What has happened, recently, is that  
19 there have been some new studies coming in on the  
20 special populations, and that have looked at the  
21 developmental effects of mercury on unborn babies  
22 and the subsequent effects -- essentially the



1 learning disability effects.

2           These studies indicate that the action  
3 levels that we have in place for fish are not  
4 protective enough for this -- the fetuses. And  
5 the dilemma that we have is that to lower the  
6 action levels, so they're protective of fetuses,  
7 it would actually put the availability of certain  
8 kinds of fish in question. We would lose some  
9 fish.

10           MS. HALVERSON: Like King Mackerel,  
11 shark, and swordfish?

12           DR. LEVY: Well, those, in particular  
13 but also tuna.

14           The point of this information is this  
15 might be a way to communicate the information --

16           (Interruption in audiotaping)

17           (Audiotaping resumes, the discussion in  
18 progress, as follows:)

19           PARTICIPANT: I guess what confuses me  
20 is you keep saying there's standard levels of  
21 mercury in fish, yet there's no viable inspection  
22 on it. Who adheres to these standards? Is it

1 just a trust level?

2 DR. LEVY: No, no. The standards are  
3 enforced, after the fact, and when we find  
4 violative products. We don't do -- what you do  
5 in Agriculture in meat inspection -- meat and  
6 poultry inspection is that every plant actually  
7 has inspectors in it. And they actually do  
8 positive testing as things go through the  
9 assembly line.

10 What we do is we only look at things  
11 after the fact. But when we do find something is  
12 violated, we can take action against it. But we  
13 don't have inspectors in plants.

14 PARTICIPANT: So you're saying if a  
15 restaurant came up and people got sick, then  
16 you'd go in after -- I'm confused what you do  
17 after the fact. I need an example, I guess.

18 DR. LEVY: Every once in a while, we do  
19 random tests of fish from a supplier. It's not  
20 just totally random; we actually target them to  
21 where we think the risks are. So we would test  
22 swordfish. And when we find that swordfish above

1 the action level, we take action.

2 PARTICIPANT: Which would mean that you  
3 don't use swordfish from that area and sell it --  
4 where it was caught?

5 DR. LEVY: We would go to the producer  
6 or distributor and say you have to recall this,  
7 this is not acceptable, it's a violative thing.  
8 And we would take action against it and remove it  
9 from the market.

10 But we don't do that all the time. We  
11 only do that once in a while, and we don't have  
12 anybody in the plant.

13 PARTICIPANT: Is the distributor  
14 expected to test his own fish?

15 DR. LEVY: No. What keeps the -- the  
16 incentive is that he can get caught, and if he  
17 gets caught and there are penalties and he can  
18 also -- his reputation is --

19 PARTICIPANT: How would he know that?  
20 I mean, how would he know that there would be  
21 high levels of mercury in the fish that he has?  
22 Should he know?

1 DR. LEVY: He should know.

2 PARTICIPANT: It depends on where the  
3 fish is caught. There's certain areas where --

4 DR. LEVY: But, mainly, depending on  
5 the size of the fish.

6 PARTICIPANT: So if he got a batch of  
7 swordfish, he should automatically know that's  
8 high in mercury and shouldn't sell it?

9 DR. LEVY: No, no, no. Not all  
10 swordfish is going to exceed the action level.  
11 But if it does, we can take action against it.  
12 But we don't have a positive set of inspections.

13 PARTICIPANT: So it sounds like you  
14 have some information about methyl mercury being  
15 particularly harmful to fetuses and you're trying  
16 to decide how to get this across.

17 DR. LEVY: Correct.

18 PARTICIPANT: With a new president who  
19 would love to support the industry and not  
20 support new regulations. We are in  
21 Massachusetts.

22 DR. LEVY: Have they actually decided?

1 PARTICIPANTS: No.

2 PARTICIPANT: I have to ask if you're  
3 telling us, with your tie, to eat bananas.

4 (Laughter)

5 DR. LEVY: I have a collection of food  
6 ties.

7 PARTICIPANT: But this is long-term  
8 effects. This isn't something that somebody  
9 would eat at one time and get ill from it. This  
10 is something that, over time, the accumulation of  
11 the methyl mercury will impact the infant as the  
12 infant grows and develops and goes to school and  
13 finds out they have a learning disorder and it  
14 could be traced to the mercury? Is that --

15 DR. LEVY: The effect is a long-term  
16 effect. It actually takes place -- the damage  
17 would be done at this critical period.

18 PARTICIPANT: What would be recognized?

19 DR. LEVY: It would not be recognized  
20 until much later.

21 PARTICIPANT: Until many years later,  
22 when the child is ADHD --

1 DR. LEVY: Yes. And, in fact, this is  
2 one of the problems -- the lemons here: it's  
3 very, very difficult, at that point, to trace  
4 back and attribute what was the cause.

5 PARTICIPANT: I mean, now you find a  
6 lot of Attention Deficit Disorder and they're  
7 really not saying where it is coming from.  
8 People are speculating whether it's too much TV  
9 or MTV or whatever. But maybe it could be coming  
10 from eating too much fish -- you know -- I mean,  
11 is that a possibility?

12 DR. LEVY: Yes, that's why we're --  
13 yes, that is a possibility. That is why we're  
14 interested in this.

15 PARTICIPANT: So my daughter is on  
16 medication, now, because I ate fish.

17 DR. LEVY: There is a very, very low  
18 likelihood that you'd ever be able to test for  
19 that. But --

20 PARTICIPANT: But, I mean, that could  
21 be why --

22 DR. LEVY: -- now that we have this

1 research, that now is a possibility. Our ability  
2 to attribute a given case of Attention Deficit to  
3 the mother's diet of fish, you know, 12 years ago  
4 is zero. There's no way.

5 PARTICIPANT: Are there other ways to  
6 ingest mercury into the body? Fish is the only  
7 way?

8 DR. LEVY: Well, no. I mean, fish is  
9 by far the most important way. But mercury is  
10 very ubiquitous in the environment.

11 PARTICIPANT: So a woman could have  
12 obtained it from some other means. Yet you're  
13 saying that it had to be from fish.

14 DR. LEVY: Fish is the major source of  
15 human exposure. The other kinds of sources would  
16 be, you know, exposure to really high levels that  
17 are pollution-related or something like that. A  
18 spill could happen.

19 PARTICIPANT: When you do research,  
20 there's certainly places within this country --  
21 areas within this country that eat more fish than  
22 others. There are, certainly -- around the

1 world, there are countries whose diets are much  
2 higher in fish than our country. How do you do  
3 this -- I mean, where does the research take  
4 place?

5 DR. LEVY: That's, in fact, what has  
6 happened, in that the research has demonstrated  
7 the relationship between mercury learning  
8 disability in children. It's not happened in  
9 this country; it's happened in --

10 MS. HALVERSON: The research has not  
11 happened in this country.

12 DR. LEVY: No. Because our population  
13 doesn't eat enough fish and it's just too  
14 troublesome.

15 But there's a study that's been done in  
16 the Sayshells (sp) Island, which is an island in  
17 the Indian Ocean which eats a lot of fish, and  
18 another study that has been done in the Faro (sp)  
19 Island, which is somewhere off the coast of  
20 northern Europe, where they eat a lot of mammals.  
21 Mercury is also concentrated in males and things  
22 like that.



1                   PARTICIPANT:  What about Japan?  Japan  
2  generally has a very high intake of fish.

3                   DR. LEVY:  They haven't done a study.

4                   PARTICIPANT:  And they haven't in  
5  Alaska, where they eat a lot of mammal-type?

6                   DR. LEVY:  Yeah.  Again, there are  
7  three studies that have been done in the last 15  
8  years; one in New Zealand, one in the Faro  
9  Islands, and one in the Sayshells Islands.  And  
10 it's those studies which really are the basis for  
11 the recent consensus that this is a problem.

12                   PARTICIPANT:  What about emotional  
13 disorders?  Could that also be considered?

14                   DR. LEVY:  I think --

15                   PARTICIPANT:  Oppositional Defiant  
16 Disorders or bipolar disorders.  Would that have  
17 anything to do with mercury?

18                   DR. LEVY:  I don't think we know  
19 anything like that.  We don't really understand  
20 what the neural basis is for those.

21                   PARTICIPANT:  But there seems to be a  
22 greater occurrence of those issues, too.  So I'm

1 wondering.

2 DR. LEVY: We don't know.

3 PARTICIPANT: Given all this  
4 information, what is down the line to start to  
5 back it or do more research?

6 DR. LEVY: The need to do more research  
7 is always there. But, based on what we have now,  
8 I think we are pretty certain that we need to do  
9 some kind of public education about this, and  
10 certainly target pregnant women so that they can  
11 make important choices about their diet.

12 PARTICIPANT: Doesn't the AMA or the  
13 Journal of American Medicine -- I mean, don't you  
14 submit that type of information to them so that  
15 they can --

16 DR. LEVY: We do, and then they have  
17 that.

18 PARTICIPANT: I would think that would  
19 be an article that they would do.

20 DR. LEVY: I mean, there are articles  
21 on this.

22 (Indiscernible simultaneous discussion)

1 DR. LEVY: It's not like this is a  
2 secret within the scientific community.

3 The sad truth is that when we talk to  
4 doctors about adding this to their curriculum of  
5 what they tell pregnant women that they need to  
6 worry about, they are not real impressed that  
7 this is -- they have lots of things that are  
8 clamoring to be on their list and there are lots  
9 of risks that pregnant women are exposed to.

10 And there are lots of constituencies  
11 who would like the doctors to spend some time  
12 explaining the risk. And, as far as they're  
13 concerned, this is not one of their top  
14 priorities. This is not that important.

15 MS. HALVERSON: And I guess the major  
16 reason -- one of the major reasons you're doing  
17 these focus groups is that here there is some  
18 research about something that you know has  
19 potential interest and could be of use to the  
20 population and how do you best communicate that  
21 message. That's why we're here; to try and  
22 figure out how to do that.

1           FDA has attempted to get it to doctors  
2           and that kind of thing. But in terms of what do  
3           you need to know and what does the general  
4           population need to know, that's really why we're  
5           here.

6           PARTICIPANT: You're going to have a  
7           hard time convincing pregnant women to take this  
8           seriously if their doctor doesn't agree with it.

9           DR. LEVY: I don't think doctors are  
10          going to disagree with it. They're not going to  
11          disagree.

12          PARTICIPANT: They just don't make it a  
13          priority.

14          PARTICIPANT: But if they just pass it  
15          off, like, well, you know.

16          PARTICIPANT: I think if pregnant women  
17          knew that there is a chance that if they ingested  
18          fish that their child may develop these types of  
19          problems, I think they're going to think twice.  
20          The question is receiving this information.

21          PARTICIPANT: Yeah. But you still need  
22          that confirmation from your doctor when you're

1 pregnant most of the time.

2 PARTICIPANT: I would question my  
3 doctor's concern and find a different one.

4 PARTICIPANT: Yeah.

5 PARTICIPANT: I just had a different  
6 question. One is about this limited list of  
7 seafoods. I'm wondering why -- why?

8 DR. LEVY: Why is this limited?

9 PARTICIPANT: Yeah. Why don't we have  
10 information about other things that are also  
11 commonly eaten? Because, the fact of the matter  
12 is, people would want to know. If you're going  
13 to give them this much, they're going to want to  
14 know, "What about my other favorite seafoods."

15 DR. LEVY: And a problem with a list is  
16 how long do you want it to be. There are 4,000  
17 species of fish, so we could have a really long  
18 list.

19 PARTICIPANT: Most places don't  
20 serve -- you don't go to your local fish market  
21 and say, "Which of the 4,000 fish would you like  
22 to buy today." I mean, generally, they'll have

1 15 or 20 varieties -- if that many -- that are  
2 common varieties that are available. So you  
3 don't look for something that's going to be  
4 exotic.

5 PARTICIPANT: It's what's common in the  
6 marketplace, you know, and what consumers seem to  
7 buy a lot of. And those are the things that are  
8 important to know about. I think lobster is  
9 pretty popular in the northeast.

10 DR. LEVY: Lobster could easily be on  
11 that list.

12 PARTICIPANT: On the high list or on  
13 the low list?

14 DR. LEVY: On the low list.

15 But there are two reasons why something  
16 could or could not be on the list. Those fish  
17 that are on the high list are really the major  
18 issues of concern.

19 PARTICIPANT: Why even bother with a  
20 low list? Why even bother with a low risk?

21 PARTICIPANT: Because it still has  
22 risk.

1 DR. LEVY: One of the things we seem to  
2 be finding is that people like to know what is  
3 safe, as well as unsafe.

4 PARTICIPANT: I think if you didn't  
5 have a low list, people would avoid everything.

6 PARTICIPANT: I think so. Yeah.

7 DR. LEVY: That's what we found.  
8 People like some specificity about what's safe,  
9 and how extensive that should be is an issue that  
10 we actually have.

11 PARTICIPANT: Well, people are  
12 concerned today with diet and nutrition and, you  
13 know, the same reasons why people want to eat  
14 fish. I mean, you hear fish is supposed to be  
15 good for your diet, good for your heart; you  
16 know, all these benefits. So, here, people are  
17 eating fish, thinking they're doing something  
18 good for themselves, when, in fact, they may not  
19 be serving themselves as well. So it's just to  
20 know the information.

21 PARTICIPANT: I think you could hire a  
22 PR firm and give them a huge job to undertake on

1 a very sensitive issue. I don't know if the  
2 FDA --

3 DR. LEVY: The dilemma here -- you  
4 know, it's actually an easy -- some things are  
5 easy. Talking to pregnant women about risks to  
6 their babies is actually very easy and they are  
7 very responsive.

8 And our problem is not communicating  
9 with pregnant women. We have lots of ways that  
10 we can communicate to pregnant women. And we can  
11 easily have an effect on pregnant women.

12 The problem is that those ways that we  
13 have are generally mass media-type channels,  
14 which are going to reach pregnant women, but  
15 they're also going to reach the general  
16 population. We don't have a good way to target  
17 the message so that only pregnant women hear it.  
18 Pregnant women are such -- you can't just have  
19 only them hear the message. Everyone is going to  
20 hear it.

21 PARTICIPANT: They'll just put an ad  
22 for a medicine -- medication prescription that



1 will combat this, on television, and take care of  
2 the whole thing.

3 DR. LEVY: The issue that we have --  
4 and that we're kind of interested in getting  
5 input from you in these groups -- is how could we  
6 frame this message so that it reaches pregnant  
7 women and is effective in getting them to respond  
8 in a good way; but it doesn't necessarily alarm  
9 everyone else and have inappropriate effects on  
10 seafood consumption.

11 We're kind of interested in the  
12 spillover issues. And there's two kinds of  
13 spillovers that we're kind of interested in --  
14 and this is something I'd like to hear your  
15 comment about -- and it's, to what extent this  
16 message is going to be seen by people who aren't  
17 pregnant as having an effect on them and  
18 affecting how they're going to eat their fish.

19 And the other spillover is, to what  
20 extent are people going to mistakenly assume that  
21 fish which aren't, in fact, high in mercury need  
22 to be avoided, as well. So we're interested in

1 both of those, to the extent that we can concoct  
2 messages that minimize those kinds of spillover.

3 PARTICIPANT: Well, don't forget,  
4 pregnant women are mothers, wives, cooks, the  
5 whole works. And, pretty much, we need to get  
6 the message out. People will eat fish if you  
7 give them the right message and people will not  
8 eat fish when you give the right message.

9 So, pretty much, get the message out  
10 because the sooner you get the message out, then  
11 you affect people who need to be affected and  
12 people who need to be aware will be aware. But  
13 if you hold a message in and keep it in, pretty  
14 much, nothing is going to happen. You're going  
15 to still be saying it 15 years from now.

16 DR. LEVY: We appreciate that.

17 PARTICIPANT: I don't see how you can  
18 filter out just pregnant women and target just  
19 them because pregnancy is a temporary condition.  
20 It's not like targeting a certain ethnic group or  
21 a certain religion or whatever. It's temporary.  
22 And, inevitably, pregnant women are going to

1 discuss this topic with people who aren't  
2 pregnant.

3 DR. LEVY: Exactly. Yes.

4 MS. HALVERSON: How do you put the  
5 information out there -- let's say, in Family  
6 Circle magazine or something like that, that any  
7 of us would pick up at the grocery store -- and  
8 not just overly scare people?

9 PARTICIPANT: I think if you could do  
10 recommended servings. I remember reading about  
11 salmon, saying that they recommended having two  
12 servings per week or something like that. And if  
13 you had more, then it kind of counteracts it, so  
14 you're best off just keeping within the  
15 recommended servings.

16 So, if they're saying for pregnant  
17 women to avoid this -- and, to me, it makes sense  
18 that a fetus, while developing -- I mean, it's so  
19 small, your body certainly can't fight it,  
20 especially your body, at that point.

21 I mean, I could see how it wouldn't  
22 scare anybody: "If I'm not pregnant, it's not

1 going to have any impact." You know, most people  
2 don't overdo fish, anyway. I can see where the  
3 concern probably is for the fishing industry;  
4 that they don't want to have, all of a sudden,  
5 people stop eating fish. That's probably where  
6 you're trying to get the balance.

7 DR. LEVY: We have to deal with the  
8 industry. We don't want a message that  
9 inappropriately --

10 PARTICIPANT: Right. That's why I see  
11 the dilemma.

12 But, I think, in this culture, people  
13 don't generally overeat fish.

14 PARTICIPANT: You really have a message  
15 here for everybody. You're saying, to be safe,  
16 fish with high levels of mercury should be eaten  
17 only once a month. That's the message for  
18 everybody.

19 Then you say, if you're pregnant, it's  
20 even more important, blah, blah, blah, blah,  
21 blah.

22 DR. LEVY: That's a good example. That

1 once-a-month prescription is really intended to  
2 be just for pregnant women. And someone who  
3 isn't pregnant could easily and safely eat it  
4 more than once a month.

5 PARTICIPANT: That doesn't say that.

6 PARTICIPANT: They're going to have to  
7 be more specific about what the effects it has on  
8 the fetus and how that effect doesn't affect you.

9 DR. LEVY: Yes. I think that's --

10 PARTICIPANT: But, then, would you open  
11 yourself to lawsuits if all these mothers have  
12 all these kinds that -- somebody's going to say,  
13 there's a class action suit somewhere for all the  
14 people that weren't warned.

15 PARTICIPANT: Like the tobacco  
16 industry.

17 DR. LEVY: The FDA has a public health  
18 interest here. I mean, we're not too concerned  
19 about law suits or anything. You know, we have a  
20 public health interest and we want to put out a  
21 message that actually is going to -- is  
22 appropriate for this risk.

1           We want pregnant women to be much more  
2 mindful about the mercury levels in the fish they  
3 eat.

4           PARTICIPANT: I think that you  
5 basically want the fish industry to be seen, like  
6 the alcohol industry, for pregnant women. When  
7 you're pregnant, you just don't -- you know what  
8 I mean? Alcohol is fine for everyone else, in  
9 moderation, of course. But that's kind of the  
10 point that I'm getting.

11           So I think that what Christina was  
12 saying about just adding it onto the list -- if  
13 doctors don't want to do that, there are still  
14 other ways for women to know; that it's just  
15 something -- it's a temporary condition and,  
16 while you're pregnant, you don't drink. You can  
17 drink before, you can drink after.

18           That's the point that I'm getting.  
19 Because I'm not too overly concerned about eating  
20 mercury -- or eating fish, you know, as a  
21 23-year-old person who's not going to get  
22 pregnant anytime soon.

1                   PARTICIPANT: What you want to do is  
2 create word-of-mouth among all women; women who  
3 have friends who are pregnant, mothers who have  
4 daughters who are pregnant. So it's really all  
5 women who you want to get the message out to; not  
6 just pregnant women.

7                   DR. LEVY: I think we understand that.  
8 In fact, a message -- we talk about pregnant  
9 women and women who are trying to get pregnant  
10 and women of child-bearing age. That's actually  
11 fairly broad.

12                   PARTICIPANT: Well, do you put it in a  
13 pamphlet that can be distributed?

14                   DR. LEVY: I think something like that  
15 is easy to do and we'll almost certainly do  
16 something like that.

17                   And the main way we would probably get  
18 this message out is -- it's a fairly easy matter  
19 to engage the news channels, the health sections  
20 of the newspapers, women's magazines. When we  
21 want to get health messages out, that's the -- we  
22 use the mass media; both electronic and print.

1 And it's easy to get it out.

2 The problem is that when you do it that  
3 way, you're reaching the general population.

4 PARTICIPANT: You're also at the mercy  
5 of how they present it, too.

6 DR. LEVY: We have some --

7 PARTICIPANT: Couldn't you --

8 DR. LEVY: We need the message to be  
9 framed and stated in a way that makes it -- it's  
10 effective but it doesn't have these kinds of  
11 spillovers. So the kinds of comments that are  
12 kind of interesting to us is when people talk  
13 about this and they talk about fish and how  
14 pregnant women have to avoid fish; and really,  
15 the message is supposed to be, you're supposed to  
16 avoid high-mercury fish -- fish with high  
17 mercury.

18 PARTICIPANT: I'd make it a -- you know  
19 those rags they have at the cash register that  
20 say, "Woman born with three heads"? -- put it in  
21 one of those.

22 (Laughter)



1 (Indiscernible simultaneous discussion)

2 DR. LEVY: What about the information  
3 that you saw today? One of the main things we  
4 want to get to is that we're really not talking  
5 about fish, per se; we're talking about  
6 high-mercury fish. And what we're really talking  
7 about is a woman's diet and how much she's eating  
8 and there are lots of choices that she could make  
9 to substitute high-mercury fish with low-mercury  
10 fish -- and there's no room to eat less fish.

11 PARTICIPANT: I would definitely take  
12 that one line out that says --

13 DR. LEVY: Which line were you  
14 thinking?

15 PARTICIPANT: It says, "To be perfectly  
16 safe, fish with high levels of mercury should be  
17 eaten once a month." That line, I don't think,  
18 needs to be in here. That's to the general  
19 public, I think you're talking about.

20 DR. LEVY: Okay.

21 PARTICIPANT: I'm sort of feeling like,  
22 you know, the first thing that needs to be said

1 is "You need to be concerned about these kinds of  
2 fish." Then tell the reasons why.

3 Because, for me, it was difficult to  
4 sort of read this in this way -- feeling  
5 frustrated -- it's a trust thing; it's like,  
6 "Give me the punch line and then tell me why."

7 But, you know, you give me these -- not  
8 you -- these little bits of information but it  
9 feels like a long time before I know what I  
10 really need to know; which is, these are the  
11 three kinds of fish that I need to be concerned  
12 about if I'm pregnant.

13 So, in terms of how the message is  
14 delivered, that, for me as a pregnant woman,  
15 would be --

16 PARTICIPANT: Yeah. I think that's a  
17 good idea. I think people are sophisticated  
18 enough to know that they don't need to avoid all  
19 fish, but just A, B, and C fish. I mean,  
20 certainly there are other things like that -- I  
21 can't think of an example at the moment. But  
22 there are other things that one avoids, where you

1       avoid a certain category; and not the whole  
2       thing.

3                       The other comment I have is about --  
4       I'm sure you think I'm very cynical, at this  
5       point. The government seems, in general, to  
6       worry too much about the industry and what their  
7       reaction is going to be.

8                       Certainly, that was very clear with  
9       this Firestone tire situation, where the  
10      government knew, perfectly well, that there were  
11      lots of problems with these tires. But the  
12      industry pressured them, so much, not to say  
13      anything, that until 127 people were killed,  
14      nothing came out.

15                      So my reaction is don't worry about the  
16      fishing industry. Just get the information out  
17      there. People will continue to eat fish because  
18      they like it and it's good for them. And,  
19      eventually, it will sort out; which fish isn't  
20      good for pregnant women.

21                      PARTICIPANT: But you also have the  
22      case of Alar in apples, where the pesticide,

1 Alar, was supposed to be dangerous -- and don't  
2 eat any apples. Then, that study was blown away  
3 as being faulty. So you have to be careful.

4 PARTICIPANT: Well, I guess my concern  
5 is, you can do pamphlets, you can go through the  
6 public health department, you could go through  
7 WIC (sp), you could go through your extension  
8 services and the f-net (sp) programs.

9 But if the doctors aren't going to buy  
10 into it and support it -- when you go back to  
11 your doctor and say, "Look, I heard this message  
12 about fish. What's this all about?" You're  
13 still going to want to hear from your doctor --  
14 "They're right. I should have -- I didn't put it  
15 on a list of priorities, but just avoid these  
16 fish and you'll be fine."

17 DR. LEVY: I don't think that's very  
18 likely.

19 PARTICIPANT: But maybe the route is on  
20 the outside, back to the doctor, and let the  
21 doctor support it. Even putting pamphlets in the  
22 offices of the obstetricians and when they go in,

1 they can ask: "This is in your office. Is this  
2 all I have to avoid?" "I read this. Is this all  
3 I have to avoid?"

4 PARTICIPANT: It would be nice if there  
5 was a pamphlet that said all the different things  
6 that pregnant women should avoid.

7 (Indiscernible simultaneous discussion)

8 PARTICIPANT: There is. When you go in  
9 for your six-week checkup, you get a ton of  
10 paperwork. You also get a video. You get  
11 everything, now. So you're totally educated  
12 about what you should do and what you shouldn't  
13 do and everything else. It's like a welcome  
14 packet that you get.

15 MS. HALVERSON: Welcome to pregnancy.

16 (Laughter)

17 PARTICIPANT: Yeah. It could totally  
18 be added to it.

19 DR. LEVY: That's exactly what we're  
20 talking about. There are many constituencies  
21 that are advocating to get on that list. And  
22 that list is already so long that many pregnant

1 women really don't pay much attention to it.  
2 It's just too long. So there's constraints on  
3 that. And getting it on that list is not really  
4 a big deal.

5 PARTICIPANT: This doesn't belong on a  
6 no-no list; it belongs on a list of cautions.

7 PARTICIPANT: Well, yeah. But when you  
8 get that list, it doesn't say, "Don't." It says,  
9 "Limit your consumption of caffeine. Limit your  
10 consumption of alcohol" -- actually, no. "Limit  
11 your consumption of diet soda." It doesn't say,  
12 "Don't drink diet soda." You know, "Limit your  
13 consumption of high-mercury fish, such as" blah,  
14 blah, blah.

15 DR. LEVY: I mean, that's almost --  
16 we're not really worried too much about that.

17 The reason why that list and all those  
18 things is seen as useful and valuable is you  
19 already know about that. If they had heard, for  
20 the first time, from their doctors about  
21 caffeinated soda or something, I don't know how  
22 effective that would be.

1           The fact is, doctors have a certain  
2 domain of expertise, which is medicine -- and  
3 they have a lot of authority in that area. But  
4 people really don't rely on doctors to tell them  
5 about foods, as a rule. People do learn a lot  
6 about dietary risk factors, but they generally  
7 don't use their doctors. That's really coming  
8 through all kinds of news and health materials.

9           PARTICIPANT: Doctors weren't trained  
10 in nutrition.

11          DR. LEVY: Right.

12          PARTICIPANT: But they're starting to  
13 come around.

14          DR. LEVY: And they're, certainly --

15          PARTICIPANT: But I think they do, more  
16 so when you're pregnant.

17          DR. LEVY: I think pregnant women seem  
18 to be insatiable in terms of their interest in  
19 identifying the risk, and they're very, very  
20 motivated to seek out information and to follow  
21 recommendations. They are, in some ways, one of  
22 the easiest audiences to deal with, which is why

1 we're not really worried too much about  
2 convincing pregnant women. They're easy.

3 PARTICIPANT: I think if you put this,  
4 like, say, Women's Day magazine -- an article,  
5 health alert. But you need to make sure that  
6 every question that we've asked is in that  
7 article: what the effects are; how it won't  
8 affect you, as a grown adult; how you should not  
9 stop eating fish; if you're pregnant or you plan  
10 to get pregnant or you're nursing, you should  
11 avoid these three fish because they cause such  
12 and such. I don't see what the problem is.

13 DR. LEVY: I don't think -- there's no  
14 problem. The problem is not pregnant women.

15 PARTICIPANT: That would make me -- if  
16 I'm not pregnant, I would look at it and say,  
17 okay, I understand I can still eat fish.

18 I mean, I think anyone with some  
19 intelligence will realize, well, you know -- it's  
20 just like fat, you know. You're not supposed to  
21 eat -- it's okay to have butter once in a while  
22 but you're not supposed to eat it every day in



1 everything you eat.

2 So why is it going to be so hard to  
3 limit certain fish? I mean, why should we worry  
4 about stepping on people's toes when it has to do  
5 with our health? Why should we even worry about  
6 that? Why shouldn't we just say the truth and  
7 let it fall?

8 PARTICIPANT: Because it comes from an  
9 industry that has a lot of lobbyists.

10 PARTICIPANT: Yeah, I know. But, I  
11 mean, really, why did you bother bringing it up?

12 (Laughter)

13 DR. LEVY: Our dilemma is that we have  
14 to deal with the industry and we have to --

15 PARTICIPANT: Well, if it's something  
16 that's --

17 DR. LEVY: -- frame the message.

18 PARTICIPANT: -- bad, I mean --

19 (Indiscernible simultaneous discussion)

20 DR. LEVY: The industry is probably  
21 going to be one of the major ways that this  
22 information gets put out.

1                   What we're kind of looking at here is  
2                   how to construct these messages so that they  
3                   reach the people that need to have them and we  
4                   want to reach, and don't have inappropriate  
5                   spillover effects on the other people who are,  
6                   unavoidably, going to get the message.

7                   PARTICIPANT: I think you need to  
8                   target women because I think women take care of  
9                   the shopping. They have the babies. They do  
10                  most of the cooking, you know. The majority.

11                  MS. HALVERSON: Our time is up.

12                  DR. LEVY: Well, that's what we're sort  
13                  of interested in.

14                  MS. HALVERSON: I want to thank all of  
15                  you for being here. And thank you, Alan, for  
16                  answering our questions.

17                  (Whereupon, the focus group session was  
18                  concluded)

19

20

21

22

