Wednesday, November 8, 2000
8:00 p.m.
prob. Boston - pg 3,11

Moderator: Lynn Halverson
Whereupon, the focus group session proceeded, as follows:

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

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

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

There are going to be no right or wrong answers to anything we're talking about today. So if you disagree with something someone says or
have a different viewpoint, please let us know.

We don't have to arrive at any kind of consensus here tonight or anything. I just mainly want to hear exactly what everybody has to say.

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

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

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

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

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

Also, because we're taping it, I need
your cooperation on a couple of things. A lot of
times, in a group discussion, we tend to talk
over one another and sometimes have a private
corveration with the person next to us.
If we can avoid that kind of thing, it
would be really helpful because, basically, what
happens is, if there's more than one person
talking, the transcriptionist writes on there,
"indiscernible," and I don't have any information
about what you said.

So I'm going to kind of act as a
traffic cop if we start talking over one another.
If you'd just bear with me, that's why I'm doing
that. I want to make sure that I get everybody's
comments down and that we can hear from everyone.

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

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

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

MS. HALVERSON: Great.

Another thing I forgot to mention is that if you can talk up just about as loudly as I
am now, so that we can hear you in that tape.

Okay. You said you have four children?

PARTICIPANT: No; two children -- one

is seven and one is four -- and a husband.

MS. HALVERSON: Okay. So that's, like,

three children, right? No. (Laughter)

Sometimes.

PARTICIPANT: It's debatable.

PARTICIPANT: My name is Phyllis and I

have a 13-year-old daughter.

MS. HALVERSON: Okay.

PARTICIPANT: My name is Katherine (sp)

and I live by myself.

MS. HALVERSON: All right.

PARTICIPANT: My name is Susie (sp) and

I have a roommate.

MS. HALVERSON: A roommate. Okay.

PARTICIPANT: My name is Betsy and I

have a 13-year-old daughter.

MS. HALVERSON: Okay.

PARTICIPANT: My name is Trevor and I

have a 13-year-old daughter and 12-year-old son
and a five-year-old son and a wife.

MS. HALVERSON: Okay.

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

MS. HALVERSON: Okay.

PARTICIPANT: My name is Lori and I live alone.

MS. HALVERSON: All right.

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

MS. HALVERSON: All right.

PARTICIPANT: Dominic. I live with my wife.

MS. HALVERSON: Okay.

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

(Laughter)

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

Okay. I guess I'd like to start out by finding out just kind of your general impressions about contaminants that you think of, in terms of
the air you breathe, the water you drink, the foods you eat.

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

PARTICIPANT: Pesticides.


Holly, what did you say?

PARTICIPANT: Bacteria.

MS. HALVERSON: Bacteria.

PARTICIPANT: Pollution.

MS. HALVERSON: Pollution.

PARTICIPANT: Smoke.

MS. HALVERSON: Smoke? Okay.

PARTICIPANT: Dust.

MS. HALVERSON: All right.

PARTICIPANT: Bioengineered corn.

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

And, in general, where do you think that you're more likely to be exposed to some of
these contaminants? Like, somebody mentioned pesticides. Christina, was that you?

PARTICIPANT: Right. In food.

MS. HALVERSON: In food? Okay.

PARTICIPANT: Fruit, vegetables.

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

PARTICIPANT: I think the air is something you cannot control. We have no choice.

But food and water, you may have some choices.

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

PARTICIPANT: Water.

MS. HALVERSON: Water?

PARTICIPANT: Paint -- old paint.

MS. HALVERSON: All right.

PARTICIPANT: Old buildings.

MS. HALVERSON: Pardon?

PARTICIPANT: Old buildings -- in the ground.
MS. HALVERSON: Old buildings? All right.

How about mercury, as a contaminant?

Where would you expect to find that?

PARTICIPANT: Swordfish.

PARTICIPANT: Fish.

PARTICIPANT: Water.

PARTICIPANT: Dental fillings.

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

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

MS. HALVERSON: All right.

Any other sources of mercury?

PARTICIPANT: Broken thermometers.

MS. HALVERSON: Okay.

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

PARTICIPANT: We only buy organic fruit
and vegetables so, not specifically the ones
you're talking about or the ones the group has
talked about. We buy meats with no hormones. I
have to tell you, when I'm in Boston, with
(indiscernible) happening, I take as few breaths
as I need to.

(Laughter)

MS. HALVERSON: Okay.

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

MS. HALVERSON: All right.

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

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

PARTICIPANT: Yeah. Also, you know,
makes sure I wash things very carefully.

MS. HALVERSON: Okay. I want to switch
gears just a little bit and talk about fish and
seafood. How many of you do eat fish or seafood
on a fairly regular basis?
ii The whole group. I'm the only one that doesn't.

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

PARTICIPANT: Twice a week.

MS. HALVERSON: Twice a week?

PARTICIPANT: Three times a week.

MS. HALVERSON: Three times a week.

Okay.

PARTICIPANT: Once a week.

PARTICIPANT: Once.

PARTICIPANT: Once a week.

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

PARTICIPANT: Maybe twice a week.

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

Okay. And if you're eating seafood --

what would you say are the advantages of eating seafood or fish?

PARTICIPANT: Omega 3 oils.
MS. HALVERSON: Okay.

PARTICIPANT: Low cholesterol.

PARTICIPANT: Good source of protein.

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

PARTICIPANT: Both.

PARTICIPANT: Both.

PARTICIPANT: I eat it because I like it.

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

And what I'd like to do is pass out some information. And instead of going through and reading it, if you could just kind of go with me. We're going to go through it, section by section. Hopefully, we have enough. Are we short? Here, Trevor.
Okay. As you can see, the front page says this is a message for women who are pregnant, planning to become pregnant within the next six months, and nursing mothers about the need to limit eating certain seafood.

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

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

"Some seafood, however, may contain high levels of a form of mercury called methyl
mercury that can harm the fetuses of pregnant women. By being informed about methyl mercury and knowing the kinds of fish that are safe to eat, you can prevent any harm to your baby and still enjoy the important health benefits of eating seafood."

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

PARTICIPANT: The effect of methyl mercury on pregnant women.

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

PARTICIPANT: Avoid it.

MS. HALVERSON: Avoid what?

PARTICIPANT: Methyl mercury.

MS. HALVERSON: Avoid methyl mercury.

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

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

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

PARTICIPANT: What fish to avoid.

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

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

MS. HALVERSON: Okay.

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

MS. HALVERSON: All right.

PARTICIPANT: I would want to know more
about it. I wouldn't make a conclusion until I read more about it.

MS. HALVERSON: Okay. Let's go on --

and we're going to answer most of those questions as we go along, but I was just curious to get what your initial questions would be.

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

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

How many have heard about it?

(Show of hands)

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

(Show of hands)

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

Phyllis, it sounds like you had heard a fair amount about it. How about the rest of you?
Have you heard a fair amount? Why is that, Holly; do you know?

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

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

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

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

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

MS. HALVERSON: Okay.

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

So, let's read this little section:

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

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

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

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

PARTICIPANT: I would think that the bigger the fish, basically, the more of a chance
that you have of getting mercury into your system. I mean, it hasn't mentioned anything at all about shellfish. Going from that, I would say that shellfish would be okay, more so than larger fish, like swordfish.

MS. HALVERSON: Okay. Anything else? Dominic?

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

MS. HALVERSON: Okay.

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

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

PARTICIPANT: Is it the meat of the
fish or the liver or is it just all over?

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

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

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

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

Okay. Any comments or questions here?

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

MS. HALVERSON: To stay away from fish
from the sea?

PARTICIPANT: Of the sea. Yeah.

MS. HALVERSON: Okay.

PARTICIPANT: So maybe farm-raised fish is okay.

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

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

MS. HALVERSON: Okay.

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

PARTICIPANT: You would think.

(Laughter)

MS. HALVERSON: Okay. Let's go on to the next section. This is talking about what fish have higher levels of mercury and shouldn't be eaten. "King Mackerel, shark, and swordfish have higher levels of mercury in them and should
not be eaten more than once a month.

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

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

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

MS. HALVERSON: Okay.

PARTICIPANT: It might be too late if
he's already in his first trimester and he's been eating swordfish every other day.

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

MS. HALVERSON: Okay. Trevor?

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

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

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

MS. HALVERSON: Any fish?

PARTICIPANT: Any fish.

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

PARTICIPANT: Because the baby doesn't
have his defense mechanism built in yet. You
know, pretty much, he’s in the early stages --
the first three months. (Indiscernible) So I’d
stay away from it for that part.

MS. HALVERSON: Okay. Elizabeth?

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

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

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

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

MS. HALVERSON: Okay. How about, you
I go out to dinner and the restaurant says our special today is fresh tuna steak, grilled -- and you love fresh tuna steak. It says you can eat this three times a month. Would you?

PARTICIPANT: No, I wouldn't.

MS. HALVERSON: Why would that be?

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

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

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

PARTICIPANT: All of these fish are
saltwater fish, including the ones below. I'm wondering about freshwater fish, like trout or bass or catfish. They don't mention any freshwater fish.

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

PARTICIPANT: Salmon can be freshwater.

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

MS. HALVERSON: Okay. Back to my question -- again, assuming you're a pregnant woman or a nursing mother or you're thinking of getting pregnant, and you're trying to decide:

"Yeah, I like fish. My doctor says I need that high-quality protein. It's low in fat. It contains Omega 3 fatty acids. But I want a healthy baby." How do I make this decision with the information I have here?

Katherine, how would you decide?
PARTICIPANT: Well, I'm a little jaded at this point. But I think if I was pregnant, I would be relatively cautious but I wouldn't go overboard. Because I know there are so many cautions for women when they're pregnant, I don't how they maneuver and manage to eat anything, just because there are so many dreadful warnings. So I would probably, you know, stick within the guidelines that they discussed.

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

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

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

PARTICIPANT: I have a feeling that I would be really cautious about how many times, in nine months, I would eat fish. If I needed Omega
3, I would get it through supplements. There are other ways to get it.

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

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

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

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

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

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

MS. HALVERSON: All right.

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

(Laughter)

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

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

There's a sentence of the bottom of this section -- page 2, here -- that says, "If methyl mercury can be harmful to my baby, why isn't it harmful for me or the rest of my family?" And then it says, "If you and the other adult members of your family consumes an average amount of seafood -- tuna sandwiches and salads,
the occasional fish steak -- the level of mercury
in the seafood supply is not a risk. To be
perfectly safe, fish with high levels of mercury
should be eaten only once a month.

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

PARTICIPANT: I don't think that
answers the question, really, of why it's safe
for other people in the family and not the baby.

So I'm beginning to get more skeptical, like
Christina, just because -- like she said, there
aren't any effects -- you know -- I don't know.

I don't think it answers the question.

MS. HALVERSON: Okay.

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

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

MS. HALVERSON: Okay. Any other reactions?

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

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

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

MS. HALVERSON: Okay.

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

PARTICIPANT: I have a tuna sandwich four or five times a week. So, I'm way over.
MS. HALVERSON: Okay.

PARTICIPANT: Yeah.

PARTICIPANT: That concerns me.

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

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

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

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

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

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

PARTICIPANT: -- the more susceptible.

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

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

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

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

MS. HALVERSON: Okay.

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

PARTICIPANT: Brain damage.

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

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

PARTICIPANTS: Yes.

MS. HALVERSON: Okay. And what kinds of questions would you want answered in that
PARTICIPANT: I'd like it to relate to what study it was done. What? -- did they take ten people?

PARTICIPANT: How long was the study.

PARTICIPANT: Where's the data.

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

PARTICIPANT: Yeah.

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

MS. HALVERSON: Okay. Question:

Before we move on to the last section there, we have this chart on page 2 that says what fish have higher levels of mercury and shouldn't be eaten and what fish have low levels of mercury or no mercury in them.

I think Arnold mentioned -- I see mainly seafood on here and what about freshwater fish. What about fish that aren't mentioned on this list or seafood that isn't mentioned on it?

Like, I see scallops and shrimp but I don't see
lobster. That’s my favorite.

How do you decide for something that isn’t on that list?

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

PARTICIPANT: The lobster scavenges also.

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

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

PARTICIPANT: Maybe they weren’t
PARTICIPANT: I don't know.

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

MS. HALVERSON: Any other?

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

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

PARTICIPANT: Yeah.

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

MS. HALVERSON: All right. Let's say that you go to the grocery store. You're going
to cook a nice fish dinner with all those nice
Omega 3 fatty acids for your family. You're a
good mom, a good dad, good whatever. Here you
are, cooking -- you want to cook fish. You're at
the fish counter and you don't have this list
with you but you can't remember what's on the
list, what isn't on the list. How do you make a
decision about what fish to serve?

PARTICIPANT: I usually ask what's the
freshest.

MS. HALVERSON: Okay. And he says,
"It's my King Mackeral."

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

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

(Laughter)

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

MS. HALVERSON: He's giving you the one
without the mercury?

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

MS. HALVERSON: Okay.

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

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

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

(Laughter)

PARTICIPANT: Welcome to the northeast.

Skeptical. Let's not call it cynical; just
skeptical.

MS. HALVERSON: All right.

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

Arnold, you were right.

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

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

PARTICIPANT: No.

MS. HALVERSON: Not in the Charles?

PARTICIPANTS: No.

PARTICIPANT: Not yet.

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

PARTICIPANT: There's no waste dumps there.

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

PARTICIPANT: I would assume it would be.

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

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

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

(Laughter)

PARTICIPANT: Not after getting the warnings, maybe; but before knowing about the warnings. I mean, I've been fishing, before, and I haven't thought about or worried about what the
condition of those fish would be. I mean, I can do it in the Charles -- I mean, there's certain places I would not do it but I don't think about that in every place that I've ever gotten fish.

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

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

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

PARTICIPANT: A person, especially pregnant women.

MS. HALVERSON: Okay.

PARTICIPANT: And type.

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

PARTICIPANT: Yeah.

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

PARTICIPANT: Well, limiting, as well
as be aware of the ones to avoid.

MS. HALVERSON: Okay.

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

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

MS. HALVERSON: Okay. In terms of making information about this issue -- Holly brought up the issue of trying to weigh your risks. How do they provide information -- and this information is provided by the Environmental Protection Agency and the Food and Drug Administration. They're the ones that are trying to figure out -- we have this information -- it's actually from a study by the National Academy of
44

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

MS. HALVERSON: Okay.

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

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

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

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

Remember -- I don't know if any of you remember, but when I was a kid, all of a sudden, we heard you can get cancer from eating bacon.
My mother stopped serving bacon at home. Do you remember that?

PARTICIPANT: Nitrates.

(Indiscernible simultaneous responses)

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

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

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

PARTICIPANT: They need to tell you the truth. They can tell you -- you know, if it is not good for you, then don't eat it. You know, they just need to tell you exactly what the study
said -- what the truth is. Then you can make up your own mind.

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

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

PARTICIPANT: No alcohol.

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

MS. HALVERSON: Okay.

PARTICIPANT: Tell Martha Stewart.

(Laughter)

MS. HALVERSON: Okay. Let's look at this last section. They have reminders. It
says, "Remember, to protect your baby, avoid
eating fish with high levels of mercury, and only
eat fish with low levels of mercury or no mercury
in them.

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

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

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

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

PARTICIPANT: Well, I think it would be
good. It would make it a little bit more
informative. But then they'd have to tell you
such and such a study was conducted with blah,
blah, blah and this is the effects. So I
would --
MS. HALVERSON: So you really want to hear about that.

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

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

MS. HALVERSON: Okay.

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

PARTICIPANT: I think, here in the northeast, if somebody's going to tell us there are risks to something, they need to give us all
of the information. Because when we hear -- for
me, personally, when I hear "risks," I'm a little
skeptical and maybe not completely trusting.

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

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

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

PARTICIPANT: But wouldn't you also
have to be concerned about where the fish comes
from? Like, Legal Seafoods says they buy the best fish, but not all fish are created equal.

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

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

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

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

MS. HALVERSON: Tim. Yeah. Tim had a
PARTICIPANT: I suppose, if I read this and I were a pregnant woman, I would definitely avoid this: better to be safe than sorry.

MS. HALVERSON: You would avoid what?

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

MS. HALVERSON: Those three fish?

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

(Laughter)

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

MS. HALVERSON: Okay. Elizabeth?

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

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

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

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

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

PARTICIPANT: If the information was there, I would have hoped they would have
included it in the general information they put here.

MS. HALVERSON: Okay. All right.

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

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

(Dr. Levy joins the focus group.)

DR. LEVY: Should I bring a chair?

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

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

DR. LEVY: Hi.

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

DR. LEVY: One question I have is what
questions do you have, given what you've just
read? What did you think was new and interesting
about any of this information? Was any of it new
and interesting?

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

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

Another, you know, the recreational
caught fish -- which we can't really control very
well -- the local state departments of game and
fish and recreation generally post advisories
about waters that are contaminated with mercury.
And that’s one way that people can become
informed about that kind of hazard.
Commercially-caught fish -- as I said,

there are action levels --

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

PARTICIPANT: How are they measured?

MS. HALVERSON: -- yeah.

PARTICIPANT: I mean, whether you get a

batch of fish -- you've trolled for fish and it
gets dumped on the top of the boat, at what point
does that mercury get measured?

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

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

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

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

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

DR. LEVY: No. Mercury is not --

PARTICIPANT: -- still retains --

DR. LEVY: -- going to be affected.

PARTICIPANT: It's not affected.

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

PARTICIPANT: How does the body absorb
liquid? Because if it's ubiquitous in the water
and we're swimming in that water, I mean, how --
are we not absorbing mercury in some form that
way, too?

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

PARTICIPANT: And it gets digested into
our bloodstream?

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

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

PARTICIPANT: Does it accumulate in any
organ of the body or is it all evenly
distributed? -- in the human; like when you eat
the fish that has methyl mercury.

DR. LEVY: It's complicated. It
actually is fairly widespread through the body.
It mainly is in the muscle tissue. And it
actually leaches out, slowly, from the body. So
it's not like it builds up, over and over,
forever. It actually leaches out, but it's slow.
The half-life of mercury in the body is
three to six months, which is why pregnant women
have to worry about it even before they are
pregnant. Because the baby is mainly at risk in
the first trimester.

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

DR. LEVY: It affects neural
development. We don't know exactly how. We
don't really know the mechanism by which it has.
But it has neural effects, nervous system
effects.
Most of what we know about mercury comes from these acute cases of really very acute mercury poisoning when they're prepared, usually through kinds of pollution.

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

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

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

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

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

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

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

DR. LEVY: The main source of their
sensitivity is not really -- it's still specific
in them. But it's that the neural development
puts them really at risk. That's why they're
really a special group.

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

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

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

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

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

DR. LEVY: No, we don't. We don't do
that for anything.
PARTICIPANT: Does Agriculture reduce the risk of mercury in fish?

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

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

DR. LEVY: No, they're not.

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

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

PARTICIPANT: Yeah. So, what is
happening -- what FDA and the Department of Agriculture is doing with meat is taking on the responsibility of inspecting it and regulating it.

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

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

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

Agriculture has never been involved
with commercial fish caught in the wild. Although they actually have the authority over farm-raised fish.

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

DR. LEVY: It's true that there is no proactive inspection system for fish. The actual context for this information is that we do have these standards for mercury levels that can be in fish. They've been set, you know, 20 years ago. What has happened, recently, is that there have been some new studies coming in on the special populations, and that have looked at the developmental effects of mercury on unborn babies and the subsequent effects -- essentially the
learning disability effects.

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

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

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

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

(Interuption in audiotaping)

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

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

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

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

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

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

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

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

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

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

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

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

Should he know?
DR. LEVY: He should know.

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

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

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

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

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

DR. LEVY: Correct.

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

DR. LEVY: Have they actually decided?
PARTICIPANTS: No.

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

(Laughter)

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

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

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

PARTICIPANT: What would be recognized?

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

PARTICIPANT: Until many years later, when the child is ADHD --
DR. LEVY: Yes. And, in fact, this is one of the problems -- the lemons here: it's very, very difficult, at that point, to trace back and attribute what was the cause.

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

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

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

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

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

DR. LEVY: -- now that we have this
research, that now is a possibility. Our ability
to attribute a given case of Attention Deficit to
the mother's diet of fish, you know, 12 years ago
is zero. There's no way.

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

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

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

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

PARTICIPANT: When you do research,
there's certainly places within this country --
areas within this country that eat more fish than
others. There are, certainly -- around the
world, there are countries whose diets are much
higher in fish than our country. How do you do
this -- I mean, where does the research take
place?

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

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

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

But there's a study that's been done in
the Sayshells (sp) Island, which is an island in
the Indian Ocean which eats a lot of fish, and
another study that has been done in the Faro (sp)
Island, which is somewhere off the coast of
northern Europe, where they eat a lot of mammals.
Mercury is also concentrated in males and things
like that.
PARTICIPANT: What about Japan? Japan generally has a very high intake of fish.

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

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

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

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

DR. LEVY: I think --

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

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

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

DR. LEVY: We don't know.

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

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

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

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

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

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

(Indiscernible simultaneous discussion)
DR. LEVY: It's not like this is a secret within the scientific community. The sad truth is that when we talk to doctors about adding this to their curriculum of what they tell pregnant women that they need to worry about, they are not real impressed that this is -- they have lots of things that are clamoring to be on their list and there are lots of risks that pregnant women are exposed to. And there are lots of constituencies who would like the doctors to spend some time explaining the risk. And, as far as they're concerned, this is not one of their top priorities. This is not that important.

MS. HALVERSON: And I guess the major reason -- one of the major reasons you're doing these focus groups is that here there is some research about something that you know has potential interest and could be of use to the population and how do you best communicate that message. That's why we're here; to try and figure out how to do that.
FDA has attempted to get it to doctors and that kind of thing. But in terms of what do you need to know and what does the general population need to know, that's really why we're here.

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

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

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

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

PARTICIPANT: I think if pregnant women knew that there is a chance that if they ingested fish that their child may develop these types of problems, I think they're going to think twice.

The question is receiving this information.

PARTICIPANT: Yeah. But you still need that confirmation from your doctor when you're
pregnant most of the time.

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

PARTICIPANT: Yeah.

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

DR. LEVY: Why is this limited?

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

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

PARTICIPANT: Most places don't
serve -- you don't go to your local fish market
and say, "Which of the 4,000 fish would you like
to buy today." I mean, generally, they'll have
15 or 20 varieties -- if that many -- that are common varieties that are available. So you don't look for something that's going to be exotic.

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

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

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

DR. LEVY: On the low list.

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

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

PARTICIPANT: Because it still has risk.
DR. LEVY: One of the things we seem to be finding is that people like to know what is safe, as well as unsafe.

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

PARTICIPANT: I think so. Yeah.

DR. LEVY: That’s what we found.

People like some specificity about what’s safe, and how extensive that should be is an issue that we actually have.

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

PARTICIPANT: I think you could hire a PR firm and give them a huge job to undertake on
a very sensitive issue. I don’t know if the

FDA --

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

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

The problem is that those ways that we
have are generally mass media-type channels,
which are going to reach pregnant women, but
they’re also going to reach the general
population. We don’t have a good way to target
the message so that only pregnant women hear it.

Pregnant women are such -- you can’t just have
only them hear the message. Everyone is going to
hear it.

PARTICIPANT: They’ll just put an ad
for a medicine -- medication prescription that
will combat this, on television, and take care of the whole thing.

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

We're kind of interested in the spillover issues. And there's two kinds of spillovers that we're kind of interested in -- and this is something I'd like to hear your comment about -- and it's, to what extent this message is going to be seen by people who aren't pregnant as having an effect on them and affecting how they're going to eat their fish. And the other spillover is, to what extent are people going to mistakenly assume that fish which aren't, in fact, high in mercury need to be avoided, as well. So we're interested in
both of those, to the extent that we can concoct messages that minimize those kinds of spillover.

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

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

DR. LEVY: We appreciate that.

PARTICIPANT: I don't see how you can filter out just pregnant women and target just them because pregnancy is a temporary condition. It's not like targeting a certain ethnic group or a certain religion or whatever. It's temporary. And, inevitably, pregnant women are going to
discuss this topic with people who aren't pregnant.

DR. LEVY: Exactly. Yes.

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

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

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

I mean, I could see how it wouldn't scare anybody: "If I'm not pregnant, it's not
going to have any impact." You know, most people
don't overdo fish, anyway. I can see where the
concern probably is for the fishing industry;
that they don't want to have, all of a sudden,
people stop eating fish. That's probably where
you're trying to get the balance.

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

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

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

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

Then you say, if you're pregnant, it's
even more important, blah, blah, blah, blah,

blah.

DR. LEVY: That's a good example. That
once-a-month prescription is really intended to be just for pregnant women. And someone who isn't pregnant could easily and safely eat it more than once a month.

PARTICIPANT: That doesn't say that.

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

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

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

PARTICIPANT: Like the tobacco industry.

DR. LEVY: The FDA has a public health interest here. I mean, we're not too concerned about law suits or anything. You know, we have a public health interest and we want to put out a message that actually is going to -- is appropriate for this risk.
We want pregnant women to be much more mindful about the mercury levels in the fish they eat.

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

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

That’s the point that I’m getting.

Because I’m not too overly concerned about eating mercury -- or eating fish, you know, as a 23-year-old person who’s not going to get pregnant anytime soon.
PARTICIPANT: What you want to do is create word-of-mouth among all women; women who have friends who are pregnant, mothers who have daughters who are pregnant. So it’s really all women who you want to get the message out to; not just pregnant women.

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

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

DR. LEVY: I think something like that is easy to do and we’ll almost certainly do something like that.

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

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

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

DR. LEVY: We have some --

PARTICIPANT: Couldn't you --

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

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

(Laughter)
(Indiscernible simultaneous discussion)

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

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

DR. LEVY: Which line were you thinking?

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

DR. LEVY: Okay.

PARTICIPANT: I'm sort of feeling like, you know, the first thing that needs to be said
is "You need to be concerned about these kinds of fish." Then tell the reasons why.

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

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

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

PARTICIPANT: Yeah. I think that's a good idea. I think people are sophisticated enough to know that they don't need to avoid all fish, but just A, B, and C fish. I mean, certainly there are other things like that -- I can't think of an example at the moment. But there are other things that one avoids, where you
avoid a certain category; and not the whole
thing.

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

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

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

PARTICIPANT: But you also have the
case of Alar in apples, where the pesticide,
Alar, was supposed to be dangerous -- and don't eat any apples. Then, that study was blown away as being faulty. So you have to be careful.

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

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

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

PARTICIPANT: But maybe the route is on the outside, back to the doctor, and let the doctor support it. Even putting pamphlets in the offices of the obstetricians and when they go in,
they can ask: "This is in your office. Is this all I have to avoid?" "I read this. Is this all I have to avoid?"

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

(Indiscernible simultaneous discussion)

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

MS. HALVERSON: Welcome to pregnancy.

(Laughter)

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

DR. LEVY: That's exactly what we're talking about. There are many constituencies that are advocating to get on that list. And that list is already so long that many pregnant
women really don’t pay much attention to it. It’s just too long. So there’s constraints on that. And getting it on that list is not really a big deal.

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

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

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

The reason why that list and all those things is seen as useful and valuable is you already know about that. If they had heard, for the first time, from their doctors about caffeinated soda or something, I don’t know how effective that would be.
The fact is, doctors have a certain domain of expertise, which is medicine -- and they have a lot of authority in that area. But people really don't rely on doctors to tell them about foods, as a rule. People do learn a lot about dietary risk factors, but they generally don't use their doctors. That's really coming through all kinds of news and health materials.

PARTICIPANT: Doctors weren't trained in nutrition.

DR. LEVY: Right.

PARTICIPANT: But they're starting to come around.

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

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

DR. LEVY: I think pregnant women seem to be insatiable in terms of their interest in identifying the risk, and they're very, very motivated to seek out information and to follow recommendations. They are, in some ways, one of the easiest audiences to deal with, which is why
we're not really worried too much about convincing pregnant women. They're easy.

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

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

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

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

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

Participant: Because it comes from an industry that has a lot of lobbyists.

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

(Laughter)

Dr. Levy: Our dilemma is that we have to deal with the industry and we have to--

Participant: Well, if it's something that's--

Dr. Levy: -- frame the message.

Participant: -- bad, I mean--

(Indiscernible simultaneous discussion)

Dr. Levy: The industry is probably going to be one of the major ways that this information gets put out.
What we're kind of looking at here is how to construct these messages so that they reach the people that need to have them and we want to reach, and don't have inappropriate spillover effects on the other people who are, unavoidably, going to get the message.

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

MS. HALVERSON: Our time is up.

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

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

(Whereupon, the focus group session was concluded)
CERTIFICATE OF TRANSCRIBER

I, LORI A. GERHARDT, Tape Transcriber, do hereby certify that the foregoing pages are a true and accurate transcription made by me, to the best of my ability, from a copy of the audiotape(s) provided me; that any inaudible or unintelligible tape segments are parenthetically indicated within the body of the transcript; that the proper designations of speakers were not always clear from the recording; and that I am neither counsel for, related to, nor employed by any of the parties to the action in which this proceeding took place; and, further, that I am not a relative or employee of any attorney or counsel employed by the parties thereto, nor financially or otherwise interested in the outcome of the action.

Lori A. Gerhardt

Word-for-Word Reporters & Transcribers *** Nationwide/24-Hours
(301) 431-3300 & (202) 775-1842 & (888) 752-3376