## ORIGINAL

1	(CERTIFIED TRANSCRIPT)
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3	MACRO INTERNATIONAL, INC.
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7	FOOD AND DRUG ADMINISTRATION
8	HEALTH AND NUTRITION: METHYL MERCURY
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L 2	
1.3	Tuesday, November 14, 2000
L 4	6:00 p.m.
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18	Moderator: Lynn Halverson
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- 1 P-R-O-C-E-E-D-I-N-G-S
- MODERATOR: Wow, and you guys all know
- 3 what's going on, huh?
- 4 CHORUS: Yeah.
- 5 MODERATOR: Okay. What we're going to
- be talking about today is, basically, how
- 7 consumers should be informed about health risks.
- 8 I'm sure that as you are going through pregnancy
- 9 your doctor has given you all kinds of
- 10 information about health risks and potential
- 11 health risks. What kinds of information do they
- 12 give you in terms of what you should do, not do,
- 13 eat, and not eat, those kinds of things?
- 14 PARTICIPANT: No smoking.
- 15 MODERATOR: No smoking. Okay.
- 16 PARTICIPANT: Not too much caffeine.
- 17 MODERATOR: Okay. That's why you guys
- 18 left all the diet coke for me.
- 19 PARTICIPANT: Just about all of it.
- 20 MODERATOR: Oh.
- 21 PARTICIPANT: Take your vitamins and
- 22 all.

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1 MODERATOR: Okay.
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- 2 PARTICIPANT: What cheeses you can't
- 3 eat.
- 4 MODERATOR: Hmm. Why is that?
- 5 PARTICIPANT: I'm not sure why, but you
- 6 can't have certain types of cheese, like, I think
- 7 it's a Brie cheese that you can't eat. You can't
- 8 have Caesar salad dressing.
- 9 MODERATOR: Because?
- 10 PARTICIPANT: It's got raw egg in it.
- 11 Can't have any raw eggs.
- 12 PARTICIPANT: Really?
- 13 PARTICIPANT: Yeah. Well, that's what
- 14 mine says
- MODERATOR: All right. What other
- 16 advice do you get?
- 17 PARTICIPANT: My doctor's all quick.
- 18 Any advice I get, I read on my own. But I'll
- 19 think on it while they're answering.
- 20 PARTICIPANT: I read -- I was telling
- 21 them earlier, I read a study -- I don't know what
- it was, who put it out -- but they were saying

that if you go to a restaurant it's best not to

- drink their ice tea because they don't -- you
- don't know how long it has been steeping and
- 4 bacteria could form in there.
- 5 MODERATOR: Oh.
- 6 PARTICIPANT: So, it's best not to
- 7 drink tea from an unknown source, basically,
- 8 unless you make it yourself.
- 9 PARTICIPANT: Water is always best.
- MODERATOR: Okay.
- 11 PARTICIPANT: No MSG.
- MODERATOR: No MSG? Okay.
- 13 PARTICIPANT: He's been talking to me a
- 14 lot about water and cranberry juice and stuff
- 15 like that.
- 16 MODERATOR: Okay. What kinds of foods
- 17 do they tell you you should be eating? Do they
- 18 say anything?
- 19 PARTICIPANT: Fruits and vegetables.
- 20 MODERATOR: Fruits and vegetables.
- 21 PARTICIPANT: No empty calories.
- 22 MODERATOR: Okay.

- 1 PARTICIPANT: It's just a balance.
- 2 MODERATOR: Okay.
- PARTICIPANT: Balanced, you know,
- 4 pyramid. You should follow the pyramid.
- 5 MODERATOR: All right.
- 6 PARTICIPANT: So many of your wheats
- 7 and cereals and grains.
- 8 MODERATOR: Um-hmm. Shawna, you
  - 9 mentioned protein I think?
- 10 PARTICIPANT: Yeah, because we take
- 11 vitamins. So, I guess, from the iron. We need
- more iron.
- MODERATOR: Okay. How about things
- 14 like meats and fishes, do you tend to eat -- what
- 15 kinds of things do you tend to eat there?
- 16 PARTICIPANT: Lots of chicken.
- MODERATOR: Chicken.
- 18 PARTICIPANT: Yeah. Lots of chicken.
- MODERATOR: Why is that?
- 20 PARTICIPANT: Because it's good. Like,
- 21 I don't eat meat or fish. I only eat poultry,
- 22 but I know you know you need so much iron and

- because I don't eat red meat, I like -- I try to
- 2 compensate with broccoli and other things that
- 3 are iron fortified.
- 4 PARTICIPANT: I hear fish is good.
- 5 MODERATOR: Okay. Why would you eat
- 6 fish?
- 7 PARTICIPANT: I forget why it is.
- 8 PARTICIPANT: Brain food.
- 9 PARTICIPANT: Huh?
- 10 PARTICIPANT: Brain food.
- 11 (Laughter.)
- 12 PARTICIPANT: You'll make a three in
- 13 it.
- 14 PARTICIPANT: It's just the vitamins in
- it, I've heard whatever.
- MODERATOR: Okay. So, are you eating
- more fish while you're pregnant or less or --?
- 18 PARTICIPANT: Probably about the same.
- 19 MODERATOR: Okay. Anyone else?
- 20 Monica?
- 21 PARTICIPANT: I --
- 22 MODERATOR: So, red meat, white meat,

- 1 poultry, fish.
- 2 PARTICIPANT: As long as it's cooked
- 3 and not raw.
- 4 MODERATOR: Okay. And, Edy, you don't
- 5 eat --
- 6 PARTICIPANT: I don't eat fish or beef.
- MODERATOR: Why is that?
- PARTICIPANT: Just have no taste for
- 9 them.
- MODERATOR: Rose, how about you?
- 11 PARTICIPANT: Mostly, the red meats.
- 12 As for the fish, he had mentioned to me not to
- eat anything like swordfish or anything from that
- 14 group.
- MODERATOR: Why was that?
- PARTICIPANT: He said there's a higher
- chance of bacteria in it, even if it's cooked
- 18 fully.
- MODERATOR: Hmm, okay. Kathy?
- PARTICIPANT: Kathy just eats.
- 21 (Laughter.)
- PARTICIPANT: I do. When I'm not

- 1 pregnant I eat really good, but I don't eat red
- 2 meat when I'm not pregnant. But for the protein
- 3 and all of that, I don't have -- there's no
- 4 reason like because I don't want you to kill an
- 5 animal that I won't eat it. I'll eat it while
- 6 I'm pregnant.
- 7 MODERATOR: Poultry you eat, fish?
- PARTICIPANT: Um-hmm. Baked, yeah.
- 9 Oh, yeah. I love fish. I eat a lot of fish. I
- 10 like that.
- 11 MODERATOR: About how much fish do you
- 12 eat, then?
- PARTICIPANT: I don't know, once -- at
- 14 least once or twice a month.
- 15 MODERATOR: Okay. Shawna?
- 16 PARTICIPANT: I eat. The only thing I
- 17 will not eat is liver.
- 18 (Laughter.)
- 19 PARTICIPANT: Anything else, I will eat
- 20 it.
- 21 MODERATOR: Okay. So, you like red
- 22 meat, white meat, fish?

- 1 PARTICIPANT: Yeah, pork.
- MODERATOR: Okay. All right. How
- 3 about other kinds of environmental contaminants
- 4 that could get into the air that you breath or
- 5 water you drink?
- 6 PARTICIPANT: Lead.
- 7 MODERATOR: Okay.
- 8 PARTICIPANT: To make sure your paint
- 9 is okay, your house isn't too old, and if it is,
- 10 get it fixed.
- 11 MODERATOR: Okay. Are there any
- environmental contaminants in air, water or food
- that you've been particularly warned about or
- 14 that you're --
- 15 CHORUS: Secondhand smoke.
- MODERATOR: Secondhand smoke, okay.
- 17 PARTICIPANT: Just being around it.
- 18 MODERATOR: All right. How about
- 19 things like pesticides? Have you heard anything
- 20 about -- concerns about pesticides?
- PARTICIPANT: Well, we had -- when our
- 22 dogs had fleas, we had to have the Terminex come.

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I That was a pain because I had to clear it with
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- 2 the doctor to make sure I could be around
- 3 whatever they were using, and then I had to wait
- 4 on the Terminex man to clear it with them and
- 5 make sure they knew I was pregnant. So, you
- 6 should take care of that, because anything you
- 7 touch, that stuff can get -- I guess it would get
- 8 in your pores or -- you know, you don't want to
- 9 touch that and go to wipe your child's nose or
- 10 something. So, you have to pay attention.
- MODERATOR: Okay. You had mentioned
- lead as a possibility, and water, you said?
- PARTICIPANT: Just in the paint, and
- then it's probably in the water too.
- MODERATOR: How about mercury? Have
- 16 you ever heard of that as a contaminant?
- 17 PARTICIPANT: No.
- PARTICIPANT: I think that's one of the
- 19 things that they talk about in fish, they
- 20 could -- some fish have the mercury.
- 21 MODERATOR: Okay. Any other places you
- 22 would hear mercury?

1 PARTICIPANT: I thought you would find

- 2 it in water.
- MODERATOR: In water? All right. What
- 4 kinds of precautions do you think that the
- 5 government or industry should be taking to
- 6 prevent people, in general, or pregnant woman in
- 7 particular, from these sorts of environmental
- 8 contaminants?
- 9 PARTICIPANT: Much of it, you can get
- 10 out of the magazines that -- I don't know about
- 11 everybody, but even though this is my second
- 12 pregnancy, I'm big on reading the Parenting
- magazine, American baby and you get a lot of good
- information out of there. At my doctor's office
- they have their shelves that have the pamphlets.
- 16 Nobody's going to sit down and just give you
- every bit of information that you need. You're
- 18 going to have to look some. So, I -- personally,
- 19 I think it's sufficient. It's out there in
- 20 pamphlets. They print it out in the magazines
- and stuff. That's what your doctor's for.
- MODERATOR: Okay. Edy, you were --

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1 PARTICIPANT: Yeah, I agree. You know,
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- 2 it's in all the books, and in the parenting books
- 3 and magazines and so forth. Even U.S. News and
- 4 World Report, there's always something in there.
- 5 You just have to read what's out there. And I
- 6 agree no doctor is going to sit and tell you.
- 7 It's up to you to, you know, inform yourself.
- 8 MODERATOR: So, what kind of
- 9 information do you get from your doctor, then?
- 10 PARTICIPANT: Basically, on your
- 11 vitamins, what to eat, what to cut out, your
- 12 salts, what you -- that you get enough rest. The
- things that you need to do to allow your body to
- 14 go through the changes it needs and to properly
- 15 pass on that nutrition that you get.
- 16 PARTICIPANT: And he needs to make sure
- you're healthy each time you go there.
- MODERATOR: Okay. In terms of general
- information about maybe I want to eat more of
- this, less of that, you say you're getting that
- 21 more from other sources than your doctor?
- PARTICIPANT: Yeah.

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1 PARTICIPANT: Well, if it's something
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- 2 that makes you feel -- sorry. If it's something,
- 3 like if I go and I complain that I'm tired, he'll
- 4 run down quickly, what are you doing and try to
- 5 tell me to eat more of the raw vegetables, or
- 6 more of the red meats for iron or something like
- 7 that. He'll help me to adjust that way, but
- 8 he'll quickly tell me that -- he was quick to
- 9 tell me to cut out -- I was allowed one soda
- 10 every day. But, I guess it depends on how open
- 11 you are how comfortable you are with your doctor.
- MODERATOR: How about the rest of you,
- 13 where do you get information?
- 14 PARTICIPANT: Well, I think some comes
- 15 from the doctor, but only if it strikes a
- 16 concern. Like, not -- I went to the doctor this
- past Monday, but four weeks before that when I-
- 18 had gone, I had lost weight. He was quick to
- 19 jump at -- what are you eating, what's -- you
- 20 know, and everything. To, you know, to jump into
- 21 the food issue and stuff. But, like this past
- time, I had gained a couple of pounds and there

- 1 was no mention of any kind of food. I think it
- depends, also, if it's your first pregnancy, your
- 3 doctor would probably -- I can remember back, and
- I think my doctor discussed more with me at my
- first pregnancy than I've heard in the pregnancy
- 6 since then.
- 7 PARTICIPANT: Usually when you're
- 8 pregnant, people will -- and when people find out
- 9 that you're pregnant, they give you information.
- 10 (Laughter.)
- 11 PARTICIPANT: Oh, do this and do that,
- 12 from the waitress at the restaurants. You weigh
- it, you know, see which one you think is
- 14 whatever. But, take your doctor's information
- and like she says, stuff in the magazines and on
- 16 television. If you've had a baby before, then
- 17 you kind of know, you know.
- 18 MODERATOR: Okay.
- 19 PARTICIPANT: I get a lot of
- information from What to Expect When You're
- 21 Expecting, that book.
- MODERATOR: Okay.

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1 PARTICIPANT: It's helpful.
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- 2 MODERATOR: Okay. What I'd like to do
- 3 is pass out some information that they're
- 4 considering providing. If we could just kind of
- 5 go through this together. Basically the first
- 6 page says, this is a message for women who are
- 7 pregnant, planning to become pregnant within the
- 8 next six months, nursing mothers about the need
- 9 to limit eating certain seafood.
- 10 I would like to just read it kind of
- 11 section by section and do some discussion. The
- 12 first part says that seafood can be an important
- part of a balanced diet for pregnant women and
- 14 nursing mothers. It is a good source of high
- 15 quality protein, is low in fat and contains Omega
- 16 III fatty acids that help your baby develop it's
- 17 immune and nervous systems. Some seafood,
- 18 however, may contain high levels of a form of
- 19 mercury, called methyl mercury, which can harm
- 20 the fetuses of pregnant women. By being informed
- 21 about methyl mercury and knowing the kinds of
- 22 fish that are safe to eat, you can prevent any

1 harm to your baby and still enjoy the important

- 2 health benefits of eating seafood.
- In our earlier discussion I think Rose
- 4 and Edy had mentioned that their doctors or
- 5 someone had said something about concerns about
- 6 eating seafood at some point or another. For the
- 7 rest of you, is this new information?
- 8 PARTICIPANT: This is new to me,
- 9 because in the beginning of my pregnancy it was
- 10 still summer and we live at the beach, and my
- 11 husband was fishing every night so we were having
- 12 fresh fish every night for dinner. You know, for
- a good month during the first part of my
- 14 pregnancy, you know, we've had, you know, as a
- 15 side dish we'd have fish or as a main course we
- 16 would have fish because there was tons of fish.
- 17 I didn't know about this.
- MODERATOR: How about anymore?
- 19 PARTICIPANT: I wasn't aware of this
- 20 either?
- 21 MODERATOR: Rose, you said your doctor
- 22 mentioned something about swordfish?

1 PARTICIPANT: Swordfish was the only

- one I recalled him saying. He mentioned others,
- 3 but that's the only one I can recall.
- 4 MODERATOR: Okay. But you said it had
- 5 something to do with bacteria?
- 6 PARTICIPANT: Bacteria, I think.
- 7 PARTICIPANT: I just remember reading
- 8 an article about mercury in certain fish.
- 9 MODERATOR: All right. So, here you
- 10 are six intelligent, pregnant, women. You're
- 11 reading these first couple of paragraphs. What
- 12 kinds of things are you thinking reading that?
- PARTICIPANT: Oh, my God. I hope I
- 14 didn't eat this.
- 15 PARTICIPANT: I know, that's what I'm
- 16 thinking. I'm my thinking, oh, my goodness. Did
- 17 I do something wrong and how come I, you know --
- 18 I mean, I read a lot. My doctor has even told
- me, and when he tells me something new, you know
- 20 I don't jump right on him. I go home. I find
- 21 out everything. I do my research and everything.
- 22 You know, and then I come back with my questions.

- 1 I have not -- you know.
- PARTICIPANT: I read it and I say, boy,
- 3 I'm glad I'm eating seafood. And then, as far --
- 4 in the positive side with the Omega III, gee, I
- 5 maybe really maybe should try to eat some
- 6 seafood. So, it's both negative and positive for
- 7 me.
- 8 MODERATOR: Any other reactions to
- 9 those first couple paragraphs? Kathy?
- 10 PARTICIPANT: Just that -- I know about
- 11 the Omega III fatty acid helping with the nervous
- 12 system. I didn't know about the immune system
- part, but I knew about the nervous system.
- 14 That's why I tried to eat more, but now I look at
- 15 it and say, oh God, I hope that, you know, I
- 16 haven't eaten the wrong fish or anything.
- 17 PARTICIPANT: Well, there's good and
- 18 bad in everything.
- 19 PARTICIPANT: Right.
- 20 PARTICIPANT: It seems like, you know,
- 21 you want to be knowledgeable and read about
- 22 everything and then I've heard on the flip side,

- don't read anything because you're going to worry
- 2 yourself to death. There are people from way
- 3 back when have had babies, healthy babies, and
- 4 they didn't have any information. So, it just
- 5 makes you wonder.
- 6 MODERATOR: Okay. Let's go onto the
- 7 next section. How does methyl mercury get into
- 8 fish? Mercury occurs naturally in the
- 9 environment and is released also into the
- 10 atmosphere primarily from coal burning power
- 11 plants and waste incinerators. Traces of mercury
- 12 get into ground water accumulating in streams and
- oceans. Nearly all fish contain trace amounts of
- 14 · methyl mercury, which are not harmful to humans.
- 15 Fish absorb methyl mercury from water as it
- 16 passes over their gills and as they feed on
- 17 aquatic organisms. Long lived, larger fish that
- 18 feed on other fish accumulate the highest levels
- of mercury and pose the greatest risk to people
- 20 who eat them.
- 21 All right. So, you've read that
- information. What does that say to you?

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1 PARTICIPANT: I'm thinking the
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- 2 environment and power plants and why are they
- dumping all these wastes in our oceans. That's
- 4 where I am.
- 5 MODERATOR: Okay.
- 6 PARTICIPANT: I'm just thinking -- I'm
- 7 hoping there's a list, you know, down here that
- 8 will tell me that the fish that I'm eating
- 9 (indiscernible). I mean, because, you know, it's
- 10 saying -- I'm trying not to, you know, really
- look forward, because I know you're wanting, you
- 12 know, prime information here. I'm thinking, you
- 13 know, I'm getting -- I'm nervous. Thinking, you
- know -- and why isn't this information provided
- and where would you find this information?
- 16 PARTICIPANT: How come this isn't in
- the magazines or in the doctors' offices.
- 18 PARTICIPANT: How do we know that they
- just didn't make this up for us to read, also?
- 20 For tonight, to get our reaction to the new
- information that's put out, too. So, don't worry
- 22 yet.

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1 (Laughter.)
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- 2 MODERATOR: That's my job, scare
- 3 pregnant women.
- 4 (Laughter.)
- 5 PARTICIPANT: I don't think they're
- 6 going to stick six pregnant women in a room and
- 7 do that.
- 8 MODERATOR: Okay. Any other reactions
- 9 to what we've read so far there?
- 10 PARTICIPANT: Just makes you want to
- 11 get more information on it, like she said, what
- 12 fish, in particular.
- MODERATOR: Okay. Let's read the very
- 14 next section then. What are the risks for methyl
- mercury to my baby? Methyl mercury can be
- 16 dangerous to the fetus because it effects the
- 17 body's developing nervous system, which can
- 18 result in learning disabilities later in life.
- 19 It takes about six months for methyl mercury to
- 20 be eliminated from the body. That's why safe
- 21 seafood eating is especially important
- 22 immediately before becoming pregnant, as well as

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1 during pregnancy. The first trimester of
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- 2 pregnancy is a particularly critical period in a
- 3 baby's development.
- 4 PARTICIPANT: My goodness. I know.
- 5 MODERATOR: What do you say?
- 6 PARTICIPANT: What do you say?
- 7 MODERATOR: Um-hmm. You've read this
- 8 now.
- 9 PARTICIPANT: I'm still just really
- 0 nervous, you know.
- 1 MODERATOR: Okay.
- PARTICIPANT: With my last pregnancy, I
- 3 craved shrimp. So, I started on my research, you
- 4 know, to find out how harmful this is, because,
- 5 you know, I thought -- it was three years ago.
- .6 It's when all the dead fish were popping up on
- 17 the Potomac, you know. I wanted to know what was
- 8 happening then and if that could effect these
- L9 shrimp that I was eating and stuff. Like I said,
- 20 I did my research and everything seemed to be
- 21 fine. Okay. It's fine. Go ahead and eat your
- 22 shrimp. So, this wasn't available -- if shrimp's

effected by this, I wonder why it wasn't effected

- 2 all those years ago to me.
- MODERATOR: Okay. What else? What are
- 4 the other reactions to this section?
- 5 PARTICIPANT: Well, it's -- that's a
- long time, six months for it to be eliminated
- from your body. That's a concern.
- pARTICIPANT: I'm just wondering, what
- 9 is safe seafood eating? I'm curious to know what
- 10 they're --
- 11 PARTICIPANT: No seafood eating.
- 12 PARTICIPANT: What is -- yeah, because
- 13 we -- salmon is high on my list. I love salmon
- and flounder with shrimp, tuna. So, I'm
- beginning, now, I'm kind of with you wondering,
- 16 you know, now I'm trying to think, what have I
- 17 eaten, or you know, or what do I need to at.
- 18 Where am I going to find the information on fish?
- 19 I mean, because other stuff you can look on
- 20 your -- but you can't --
- 21 (Indiscernible, multiple speakers.)
- 22 PARTICIPANT: If you're eating fresh

- seafood or fresh food, and it's good for you
- 2 and --
- 3 PARTICIPANT: Right. I thought I was
- 4 eating real healthy the other night, eating
- 5 salmon. I had some Friday night, a big piece
- 6 too.
- 7 PARTICIPANT: My mother-in-law made it
- 8 for dinner tonight. I didn't eat it. She made
- 9 me some chicken. But, now, I read this and, you
- 10 know, I felt safe that I haven't eaten any of
- this, particularly because it takes so long to be
- 12 eliminated from the body. You know, like she was
- 13 talking about, I didn't know I was pregnant and
- in the summer we had a really bad time for
- 15 allergies, and all of a sudden I developed
- 16 allergies over the summer because of this
- 17 terrible weather we had. If it's raining and I
- 18 would get these horrible headaches, and I was
- 19 taking allergy medicine and Tylenol 3 with
- 20 codeine like several times a week. It was when I
- 21 was pregnant and didn't know it, but I mean,
- 22 that's really short-term effects, not long term

- 1 like this.
- 2 PARTICIPANT: Yeah. You couldn't --
- 3 you could have not even been planning to have
- 4 your baby and had the fish, and then it's still
- in your body three months later after you're
- 6 pregnant.
- 7 MODERATOR: Okay. What do you think
- 8 about this first sentence where they say, methyl
- 9 mercury can be dangerous to the fetus because it
- 10 effects the baby's developing nervous system
- 11 which can result in learning disabilities later
- 12 in life?
- 13 PARTICIPANT: See, I have a concern
- about that because, you know, how can they tell
- when a child is six that its learning disability
- is associated to the fact that its mother ate
- 17 fish six months before she conceived the child?
- I mean, how is that possible to determine that?
- 19 PARTICIPANT: Or that you ate it, not
- 20 knowing that you were pregnant, you ate the fish
- 21 that your husband just caught and it's in your
- 22 system for six months while this fetus is

1 developing, and that's the most critical time is

- 2 right there for the first trimester?
- 3 PARTICIPANT: I don't want to be
- 4 paranoid about this thing.
- 5 PARTICIPANT: Like your controlling
- 6 something, and like you said, back in the day
- 7 they didn't have all this junk floating back out
- 8 into our water everything was very natural. When
- 9 they said fresh fish, it was fresh. You know, it
- 10 wasn't a coal plant -- wasn't even a coal plant
- 11 there that was putting a return flow back out
- 12 into our water.
- MODERATOR: Okay. Let's move onto to
- 14 the next section, then. It says, how can I
- protect my baby? You can protect your baby by
- limiting the kinds of fish you eat. The Food and
- 17 Drug Administration and the Environmental
- 18 Protection Agency recommend that you limit the
- amount of fish that you eat with high levels of
- 20 mercury and only eat fish that have low levels of
- 21 mercury or no mercury in them.
- So, when you read that paragraph --

- 1 PARTICIPANT: It makes you want to see
- 2 the list at the bottom of the page.
- MODERATOR: Okay. (Laughter.) The
- 4 what where? We haven't gotten there yet.
- 5 PARTICIPANT: Well, when she mentioned
- 6 it. No, I haven't read the last page; you can
- 7 see columns down it.
- 8 MODERATOR: You want to read -- you
- 9 want to see what --
- 10 PARTICIPANT: You want to find out more
- information, what fish contain it, what has low
- 12 levels and none in them.
- MODERATOR: Okay.
- 14 PARTICIPANT: Right now, it's like,
- where are you going to find that? You know,
- other than going home and pulling up the
- 17 Internet.
- 18 PARTICIPANT: How do you know -- I
- 19 mean, not know -- but how come certain fish would
- 20 have lower levels than other fish? I mean, if
- one fish has a high level, why wouldn't they all?
- 22 Especially if they're all in the same, you know,

- pond of water or body of water.
- 2 PARTICIPANT: Supposedly, it was
- 3 talking about larger fish and eating a type of
- 4 fish.
- 5 PARTICIPANT: A longer life fish.
- 6 PARTICIPANT: Right.
- 7 PARTICIPANT: So, they're eating fish
- 8 that have already contained the mercury maybe.
- 9 PARTICIPANT: Also, it could -- how do
- 10 you know where they all come from? Like this
- 11 batch of fish comes out of this body of water.
- 12 This batch comes out of this body of water. If
- there's no coal plant or anything returning junk
- 14 into this water, then these fish probably --
- 15 PARTICIPANT: Yeah, but I can't catch
- the fish for myself. I go to Giant and get them.
- 17 PARTICIPANT: But that's what I'm
- 18 saying, for somebody that doesn't, you know -- I
- 19 go to Giant and get mine or Costco and get the
- 20 big thing of salmon.
- 21 PARTICIPANT: It seems like smaller
- 22 fish eat off plants and things in the water. I

would seem like the mercury would hook onto those

- and, like; the smaller fish would get it quicker
- 3 than the bigger.
- 4 MODERATOR: Monica?
- 5 PARTICIPANT: I mean, I'm listening to
- 6 everything you're saying, but the only thing
- 7 that's concentrating in my mind, or thinking
- about, is, you know, when I'm going to the next
- 9 doctor visit to ask him, you know, is there a way
- 10 to check the level in your body or even see if
- there is a way to speed the process of getting it
- 12 out.
- PARTICIPANT: I wouldn't want to try
- 14 to --
- 15 PARTICIPANT: I'm not going to --
- PARTICIPANT: I wouldn't want to know
- 17 at this --
- 18 PARTICIPANT: I'm not even going to,
- 19 not now.
- 20 (Indiscernible, multiple speakers.)
- 21 MODERATOR: One at a time. One at a
- 22 time. I'm sorry, Kathy and then Laura and

- 1 then --
- 2 PARTICIPANT: I'll watch it from here
- on out, but I can't turn back time. I mean,
- 4 it -- especially if it's something that's going
- 5 to cause learning disabilities later, six years
- from now. I mean, it's not going to show up now,
- 7 so --
- 8 PARTICIPANT: And you can do other
- 9 things to help your child before then.
- 10 PARTICIPANT: Yeah. Just start paying
- 11 attention.
- 12 PARTICIPANT: Breastfeeding alone helps
- 13 that. But, I was going to say, anything in
- 14 moderation, too. But, Ms. Monica -- seemed a
- 15 daily bite of the day.
- 16 PARTICIPANT: Just saying, the blood
- 17 test, you know.
- PARTICIPANT: Don't worry about it.
- 19 PARTICIPANT: I wouldn't want to know
- 20 at this point, because if my child didn't crawl
- 21 at six months I'd panic. Oh, my goodness, it's
- the mercury; it's the fish.

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1 PARTICIPANT: It's the fish.
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- 2 PARTICIPANT: You're going to panic
- 3 now, anyway.
- 4 PARTICIPANT: This child's doomed.
- 5 PARTICIPANT: I have to agree there. I
- 6 don't want to know at this point because I can't
- 7 turn around. It's already in there. So, I hope
- 8 she liked it as much as I did when I ate it, but
- 9 I mean there's nothing I can do.
- 10 PARTICIPANT: It's too late at this
- 11 point, you know. It's like, I'm old, and they
- want me to have amniocentesis. I'm not going to
- 13 do it.
- 14 PARTICIPANT: Right. That's what I was
- 15 going to say. It's the same type of thing.
- PARTICIPANT: It's the same thing. You
- 17 know, I turned it down. The only factor is, I'm
- 18 old. So, it's just not worth it to risk -- isn't
- 19 worth it to me. You know, I'll just live with
- the way things are and hope for the best. So,
- 21 you just can't -- you can't focus on it. You
- 22 just can't.

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1 PARTICIPANT: I agree with you.
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- 2 MODERATOR: Okay. Let's move on then
- and we'll go to the section that says, what fish
- 4 have higher levels of mercury and shouldn't be
- 5 eaten? King mackerel, shark and swordfish have
- 6 higher levels of mercury in them and should not
- 7 be eaten more than once a month. If you eat
- 8 other fish, you should not eat king mackerel,
- 9 shark or swordfish at all. Tuna steaks have
- 10 moderate levels of mercury. Tuna steaks can be
- 11 eaten three times a month. Canned tuna, which is
- 12 made from smaller fish, has less mercury than
- 13 tuna steaks. You can eat one and a half
- 14 six-ounce cans of tuna every week with no
- 15 problems.
- 16 Basically, we were talking before the
- 17 group -- the heading, what fish have higher
- levels of mercury and shouldn't be eaten, should
- just be over the king mackerel, shark and
- 20 swordfish. Then tuna steaks have moderate
- 21 levels, so it's slightly less. And then tuna
- 22 fish in a can is in a different category itself.

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1 So, when you read all of this -- Monica?
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- 2 PARTICIPANT: I'm thinking, you can't
- 3 catch these fish in the Bay. I am home free.
- 4 (Laughter.)
- 5 PARTICIPANT: I don't even know what
- 6 some of these are.
- 7 PARTICIPANT: I'm -- you know. I'm
- 8 just glad that these are fish that I don't eat,
- 9 you know.
- 10 MODERATOR: Okay.
- 11 PARTICIPANT: It's like, schew.
- 12 PARTICIPANT: Like, tuna fish still,
- 13 that canned tuna, yeah. I don't like that
- 14 statement that it has some in it, because you
- think you're eating tuna fish, you think I'm
- 16 having a healthy lunch today.
- 17 PARTICIPANT: But it says --
- 18 PARTICIPANT: I know. You can have it
- once a week with no problem.
- 20 PARTICIPANT: I'm sure that you don't
- 21 eat one and half six-ounce cans by yourself.
- 22 PARTICIPANT: Right. Right.

1 PARTICIPANT: You know, you can make a

- 2 can --
- PARTICIPANT: But see, when I had my
- 4 first son I had gestational diabetes and I was
- 5 put on a very strict diet. One of the things
- 6 that I could eat was a can of tuna, and I think
- 7 two tablespoons of mayonnaise, was my lunch every
- 8 day for I think -- well, while I was -- five days
- 9 a week. Okay, so every day, five days a week for
- 10 lunch for, I think, when do you have the test?
- 11 At twenty-eight weeks you have the test, you
- 12 know. So, for seven weeks of my pregnancy,
- 13 because I delivered him early. You know, so for
- 14 seven weeks I'm eating more than they recommend,
- 15 right there.
- 16 PARTICIPANT: Well, can I ask you --
- 17 is he --
- 18 PARTICIPANT: He's dead.
- 19 PARTICIPANT: No, he's not.
- 20 PARTICIPANT: Oh, yes he is.
- 21 PARTICIPANT: Is he really?
- PARTICIPANT: Yeah. He died, but I

can't blame that on mercury. I mean, but yeah.

- 2 He died of SIDS.
- 3 PARTICIPANT: Aww.
- 4 PARTICIPANT: That's what they're
- 5 saying. But, you know, they don't know what
- 6 causes that, which it could be, mercury, you
- 7 know? It could have been high levels of that in
- 8 his system. I mean, if you think about that.
- 9 But, for seven weeks I had a can a day. So --
- 10 PARTICIPANT: But I don't know if
- they've had any research on mercury, have they?
- 12 I mean, about fish or anything?
- PARTICIPANT: Right. So, I mean, you
- 14 don't know.
- 15 PARTICIPANT: Does it make you wonder
- 16 now?
- 17 PARTICIPANT: I'm starting to, yeah. I
- 18 probably will -- I will probably mention it to
- one of the ladies at the Falfidation (ph.) about
- 20 that.
- 21 PARTICIPANT: Right.
- 22 PARTICIPANT: You know?

1 MODERATOR: What do the rest of you

- 2 think? Rose?
- 3 PARTICIPANT: I didn't think about tuna
- 4 fish. I mean, I thought it was something that
- 5 was very healthy and something that should be
- 6 eaten at least once a week for the protein and
- 7 other sources. But reading this now, even though
- 8 it says one can a week is fine, it still -- I
- 9 thought of, what's going to happen? What are the
- 10 possibilities? See, my son takes Ritalin, and it
- 11 makes you wonder, you know, is that part of the
- reason he's hyperactive, because I did eat a lot
- of seafood back then, but then again, that was
- 14 seven years ago. So, to think about with this
- one, I mean, my pregnancy's been very hard. So,
- 16 you know, it makes you wonder, what are you doing
- 17 wrong or what can you do at this point to correct
- any mistakes that you've made.
- 19 PARTICIPANT: Then, with her tuna fish
- 20 diet I wonder, because with my last one I was
- 21 borderline gestational diabetes, and so they
- 22 didn't put me on the diet. I was just humongous,

- 1 but my blood pressure was fine. But if there
- were to put me on tuna fish, I don't even eat the
- 3 stuff, so I would hope they would come up with an
- 4 alternative for me.
- 5 PARTICIPANT: Did they give you other
- 6 choices besides tuna fish and you just chose to
- 7 eat that?
- 8 PARTICIPANT: I chose, yeah. It was
- 9 different. It was a menu of different items, and
- 10 it's like, you know, for me it was what was most
- 11 convenient. What was most convenient was taking
- 12 a can of tuna fish, my two things of mayonnaise
- and my half an apple to work every day for lunch.
- 14 That was what was convenient for me. So -- and,
- 15 you know, now you take that and you put it with
- the nervous system and having a hyperactive child
- or an ABA for the Ritalin, yeah. And it's like,
- what did it do to the child? I mean, if you ate
- 19 high quantities, you know. So, if that's what
- 20 it's doing, why aren't our doctors, you know,
- 21 especially here where you're saying that the Food
- 22 and Drug Administration, I mean, they're aware of

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this. Why haven't all doctors, OB's --
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- 2 PARTICIPANT: Like, why does he know
- 3 something --
- 4 PARTICIPANT: Why don't they tell us?
- 5 PARTICIPANT: Yeah. Because my first
- 6 son, you know, he would have been nine years
- 7 old -- wait a minute, yeah, nine years old this
- 8 past July. He would have been nine years old.
- 9 You know, now here's -- you know, this is my
- 10 fifth pregnancy and I haven't heard -- never,
- 11 ever, you know, in nine years heard anything
- about this, you know. So, why aren't we being
- informed? It raises concern.
- MODERATOR: Okay. Now, when you read
- this, and we'll look at the -- let's go ahead and
- look at that bottom chart, which is what fish
- 17 have low levels of mercury or no mercury in them
- and it lists a bunch of fish here. When you read
- 19 all of this information together about the
- 20 different fish and what has it and what doesn't,
- 21 what kinds of decisions do you, as an expectant
- 22 mother, then make? I mean, how do you use that

- information?
- 2 PARTICIPANT: Most of the fish I eat
- 3 are in this category. I'm grateful that I don't
- 4 eat mackerel, shark or swordfish, but I think I'm
- 5 going to keep this fish on a low level. I'm not
- 6 going to eat as much fish while I'm pregnant.
- 7 But, then I'm thinking, then it'll be something
- 8 else. You know, it's --
- 9 PARTICIPANT: I told you in the
- 10 beginning, I heard good things about eating fish.
- 11 That's what the books that I've read recently --
- 12 PARTICIPANT: Like the Omega IIIs.
- PARTICIPANT: Huh?
- 14 PARTICIPANT: Like the Omega III acids
- 15 that you get from them.
- PARTICIPANT: Oh, yeah. Right. I hear
- 17 it's good to eat fish. So, I started to think
- when I read this the other day that I'm going to
- 19 start eating some fish, then you hear this today.
- 20 So, like I said, you're going to hear good and
- 21 bad in everything.
- PARTICIPANT: It's always something.

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1 PARTICIPANT: There's always something.
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- When my oldest son, he's seventeen, when he was a
- 3 baby it was put them on their stomachs. If you
- 4 put them on their back, they'll choke to death.
- 5 and they'll die. So, everyone put them on their
- 6 stomach. Well, guess what? Now that my other son
- 7 was born, put them on the back. He would not
- 8 sleep on his back. So, I'm like wait a minute.
- 9 This is ridiculous. I put him on his stomach, he
- 10 went to sleep. I was like, you know what, my
- 11 other one was fine. Next thing they'll do is
- tell us to stand them on their heads. So, you
- 13 know, it's always something. They -- it just
- 14 makes a cycle, I think.
- 15 PARTICIPANT: But me, reading this,
- 16 even though these have low levels and no mercury
- in them at all, knowing that, you know, if you
- 18 can eat enough of the low to make it medium or
- 19 high. I probably won't eat any type of seafood
- for the rest of my pregnancy. You know, maybe a
- 21 shrimp here or there because it's kind of hard to
- 22 go -- to turn down.

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- 1 PARTICIPANT: But that's in moderation.
- PARTICIPANT: Yeah. You know, I mean,
- 3 I probably will just avoid it, you know, and I
- 4 will be an advocate out there telling all
- 5 pregnant women, stay away from fish.
- 6 PARTICIPANT: Let's just hope no one
- 7 starts to crave for fish.
- 8 PARTICIPANT: I will probably stay
- 9 within -- they're saying the amount that I eat
- now, but I ate during the summer a lot more tuna
- 11 because I would just throw it on some lettuce and
- 12 call it a salad. It was light. It was quick for
- 13 work. It was done. So, now that I think about
- 14 that, I did eat probably more than a can and a
- 15 half in one week during the summer.
- 16 MODERATOR: Don't be nervous.
- 17 PARTICIPANT: But, I mean, no, because
- 18 I have -- like I said, I had my daughter four
- 19 years ago and I don't believe my eating habits
- 20 changed much. I'm more lax this time, whereas I
- 21 didn't do sodas or anything with her. Now, this
- 22 time I'll drink sodas. So, you know, next thing

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I know I turn the page and it's going to be
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- 2 something about the read meat that I've eaten
- 3 and --
- 4 PARTICIPANT: Yeah. I'm wondering
- 5 about the asterisk here.
- 6 PARTICIPANT: Yeah, what's that?
- 7 PARTICIPANT: I don't see any asterisk
- 8 down there.
- 9 MODERATOR: The asterisk is the next
- 10 page. It says, breaded fish sticks, fish
- 11 sandwiches and imitation crabmeat are generally
- made from these fish and have low levels of
- 13 mercury. It wasn't a trick there.
- 14 PARTICIPANT: No, no. I know. I was
- 15 wondering for the next page.
- MODERATOR: All right. So, some of you
- 17 are saying -- I heard Monica say, I'm not eating
- 18 fish. Shawna, where are you?
- 19 PARTICIPANT: It says, you know, I'm
- 20 glad that I didn't eat mackerel or shark or
- 21 swordfish, but I'm going to stay away from fish.
- 22 MODERATOR: Even the ones that have low

- l levels or no mercury in them?
- 2 PARTICIPANT: Yeah. Just because I
- 3 don't, you know -- I'm not a big craver for fish
- 4 anyway. So, it's not like I have to have to have
- 5 it. So, I'll just wait until I'm --
- 6 PARTICIPANT: I have a question. What
- 7 about the fish that are not even listed on here,
- 8 because see, I was eating bluefish. They're not
- 9 even on here.
- 10 MODERATOR: Okay. What would you
- 11 assume about fish that aren't on this list?
- PARTICIPANT: They don't have any.
- 13 PARTICIPANT: They're not a problem.
- 14 PARTICIPANT: I'm assuming.
- 15 PARTICIPANT: Or they would've
- 16 mentioned it if it was really high.
- 17 PARTICIPANT: Or they would've
- 18 mentioned it.
- 19 PARTICIPANT: Right.
- 20 PARTICIPANT: It was just, maybe just a
- 21 trace and not important enough to actually list.
- MODERATOR: Well, how about the

difference between fish that aren't mentioned at

- 2 all and the ones that are listed as -- have low
- or no mercury in them. Is there any difference
- 4 between them?
- 5 PARTICIPANT: I'd be looking them up.
- PARTICIPANT: I'd have to, when I left
- here, if it were blues that I have been eating
- 8 and it's not on here, I would look that up just
- 9 to satisfy my own curiosity, because you can't
- 10 change what you did in the summertime. It's not
- 11 going to go away, but I guess just to satisfy
- 12 the -- just to know.
- 13 PARTICIPANT: Some of the fish are
- 14 listed that I had this summer, you know, but
- 15 bluefish were one of the fish and it's not
- 16 listed.
- 17 PARTICIPANT: I'd like to no which ones
- 18 have no mercury out of these.
- 19 PARTICIPANT: Yeah, because then it
- 20 would make you -- then you could get your good
- 21 stuff with knowing that it's good.
- 22 PARTICIPANT: I'm glad we're talking

about this now. So, now that we know about it

- 2 we can be more aware of it.
- 3 PARTICIPANT: Now we can become one of
- 4 those women when somebody tells you that they're
- 5 pregnant, well, let me tell you what not to do.
- 6 (Laughter.)
- 7 PARTICIPANT: Watch the fish.
- 8 PARTICIPANT: This isn't posted
- 9 anywhere. Stay away from mackerels.
- 10 MODERATOR: You've asked, how about the
- 11 difference between the ones with the low levels
- of mercury or no mercury in them, dividing the
- list up somehow. Why is that important to you?
- 14 PARTICIPANT: Because we want to stay
- 15 away from mercury totally, unless -- although
- there are some things on there -- it wasn't
- mercury part of the fish that was good for you,
- 18 right?
- 19 PARTICIPANT: Um-umm.
- 20 PARTICIPANT: I mean, I don't remember
- 21 reading anything about that.
- 22 MODERATOR: About mercury being good

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1 for you?
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- 2 PARTICIPANT: Right.
- MODERATOR: Okay.
- 4 PARTICIPANT: The fish is good for you,
- or some seafood. So, why would we want even a
- 6 low level? What if we eat like a lot of it,
- 7 how --
- 8 MODERATOR: Is there a problem, do you
- 9 think, eating fish with low levels of mercury?
- 10 PARTICIPANT: Yeah.
- 11 PARTICIPANT: Is it just the methyl
- mercury? Because it says it's a form of mercury
- called methyl mercury. So, these fish that have
- 14 mercury, does that necessarily mean that it's the
- 15 methyl mercury or is it just mercury? Does it
- 16 make a difference?
- 17 MODERATOR: Okay. That's a good
- 18 question. So, on the line where it says, what
- 19 fish have low levels of mercury or no mercury in
- 20 them, you would like to know is it a specific --
- 21 PARTICIPANT: Is it this bad mercury.
- 22 Is it the one that can harm the fetus of the

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1 pregnant woman? Is it all the same? Is it just
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- 2 mercury? And, if it's just mercury, why did they
- 3 pull out methyl mercury?
- 4 MODERATOR: Okay.
- 5 PARTICIPANT: My reasoning for wanting
- to know which have low and which have none would
- 7 be the fact that tuna, they're saying, you know,
- 8 tuna has a smaller amount of mercury in it than
- 9 in the other three that were listed. They
- 10 recommend that you only eat one and a half six
- 11 ounce cans a week. So, if it has a low level
- 12 and, okay, a portion is like this big
- 13 (indicating) and you're eating a piece of fish
- like this, and you want to have it twice a week,
- are you then eating enough to be the same as
- le eating the piece of the shark or the swordfish or
- 17 the mackerel? You know, so that to me would be
- 18 why I would want to know which ones have a low
- 19 level so that I could just eliminate them from my
- 20 diet and not eat a big enough portion to be
- 21 adequate to one of the others.
- PARTICIPANT: Right. That's why I

- 1 said; I just wouldn't eat any fish at all,
- 2 period. You never know how much of the low that
- 3 you eat could be high.
- 4 PARTICIPANT: Does two lows make a
- 5 high?
- 6 PARTICIPANT: Yeah, right. See what
- 7 I'm saying.
- PARTICIPANT: Exactly.
- 9 MODERATOR: Okay. Let's go onto the
- next page. We've already read that part about
- 11 the breaded fish sticks; fish sandwiches and
- imitation crabmeat are generally made from these
- 13 fish and have low levels of mercury. How would
- 14 you respond to them? Like that imitation
- 15 crabmeat?
- 16 PARTICIPANT: That stuff tastes pretty
- 17 good, doesn't it guys? What do you think?
- PARTICIPANT: I eat a lot of fish
- 19 sticks. I like them.
- MODERATOR: You do eat a lot of fish
- 21 sticks?
- PARTICIPANT: Um-hmm.

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1 MODERATOR: Okay. So, how would you
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- 2 respond to that then, Shawna?
- 3 PARTICIPANT: I would respond by not
- 4 buying any more fish sticks and substituting fish
- 5 sticks for something else on the menu.
- 6 PARTICIPANT: Another question I have
- 7 also, when I see this breaded fish sticks, you
- 8 know, I'll sometimes buy breaded fish sticks to
- 9 have on a weekend or a non-school day, you know,
- 10 with some macaroni and cheese, because those are
- things that my husband will not let me fix for
- dinner for my children. Now, if this is harmful
- to my baby's nervous system it stays in, at what
- 14 age should a child -- you know, should I feed it
- to my eighteen month old who is still developing?
- Or to my three year old, or is it -- you know, at
- 17 what age is it then safe to give to your child?
- 18 PARTICIPANT: Right.
- 19 PARTICIPANT: Right, and for yourself.
- 20 PARTICIPANT: In the beginning, you
- 21 mentioned nursing mothers. Well, I nurse my
- 22 children. So, then should I stay away from these

- fish, you know, the entire time that I'm nursing
- 2 my child? Does it pass through mother's milk?
- PARTICIPANT: See, that opens a whole
- 4 new door.
- 5 PARTICIPANT: Yeah.
- 6 PARTICIPANT: Do the children at home
- 7 stop eating -- like she said -- do the children
- 8 at home stop eating it?
- 9 PARTICIPANT: Why do they serve it in
- 10 school?
- 11 PARTICIPANT: Does it mess up their
- 12 development?
- 13 PARTICIPANT: They get them fish
- 14 thingy?
- 15 (Laughter.)
- PARTICIPANT: I mean, because our
- 17 children's brains are still developing. I mean,
- they tell you to give them whole milk, you know,
- until the age of two because they need the fat to
- 20 develop their brain. You know, that's what
- 21 they're -- you know, and so they're still
- 22 developing. So, is this stuff getting into their

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nervous system while it's still developing,
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- 2 because those things develop -- you know, for --
- 3 it's concerning to me.
- 4 MODERATOR: Let's read the next
- section, which says, if methyl mercury can be
- 6 harmful to my baby, why isn't it harmful for me
- 7 or the rest of my family?
- PARTICIPANT: Oh.
- 9 MODERATOR: If you and the other adult
- 10 members of your family consume 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
- 14 perfectly safe, fish with high levels of mercury
- should be eaten only once a month.
- 16 Does that section answer your
- 17 questions?
- 18 PARTICIPANT: No. I want to know what
- 19 it will do to me --
- 20 PARTICIPANT: Or to them.
- 21 PARTICIPANT: -- or what it's doing to
- 22 my body, you know. What it's doing to my

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children's body if they go over the recommended
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- amount, you know? My husband, you know, he went
- 3 through a time where, I don't know, sometimes I
- 4 think he's pregnant because he'll go through a
- 5 time when he takes that premixed salad stuff and
- 6 he'll throw it in a bowl and he puts his tuna on
- 7 top of it, and he seals it up and he takes it to
- 8 work. Then he dumps his salad dressing on it and
- 9 he eats it. He'll do that everyday. But he
- 10 doesn't eat just a can of tuna; he eats two cans
- of tuna a day when he does that. He went through
- a time when he would do that, you know, a couple
- 13 of times a week.
- PARTICIPANT: I was doing it before I
- 15 got pregnant because I was planning to get
- 16 pregnant. As part of doing the Adkins Diet, you
- can have stuff like that with fish or your
- 18 chicken, as much of that as you want to consume.
- 19 So, I ate a lot of that bag of salad, can of
- tuna, hard-boiled egg, that was my lunch, or
- 21 salmon or whatever, but at the same time I would
- 22 make tuna fish salad and I was feeding it to him.

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So, does it have anything to do with him by his
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- 2 eating so much? He's a big man. He'll eat two
- 3 to three tuna sandwiches, which is well over a
- 4 can and a half in one serving. In one serving,
- 5 you know. Does that have anything to do with --
- if that stays in my system for six months, does
- 7 it stay in his system? Does it effect the
- 8 conception time? Does -- what does it do?
- 9 MODERATOR: What does it do?
- 10 PARTICIPANT: I don't know. And we
- ll have little ones at home and it's easy to throw
- 12 fish sticks and macaroni and cheese. You're
- 13 tired. You're pregnant, you're tired, you want
- 14 to go home and lay down. You don't -- we're not
- 15 going home and making like a baked chicken and
- 16 roast potatoes. But now you've got to wonder if
- 17 you're damaging -- if your baby's going to have
- 18 to take Ritalin or something else could happen.
- 19 If you're wondering why your daughter's bouncing
- off the walls, does it have something to do with
- 21 that? Does that have anything to do with how
- 22 they get sick a lot? Their immune system doesn't

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1 get to be strong enough? There's more
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- 2 information on this mercury out there.
- 3 MODERATOR: Any other comments on that
- 4 section?
- 5 PARTICIPANT: It's all been said.
- 6 (Laughter.)
- 7 MODERATOR: Okay. What about the fish
- 8 caught by sport fishers, are they safe to eat?
- 9 There can be a risk of contamination from methyl
- 10 mercury in fresh waters from natural and
- industrial causes. Check with your state or
- 12 local public health department for any advisory
- warning of mercury in waters in your local area.
- And then it says, remember, to protect your baby,
- avoid eating fish with high levels of mercury and
- only eat fish with the low levels of mercury or
- 17 no mercury in them. Check with your local public
- 18 health department to see if there are any
- 19 advisories on methyl mercury before you eat fish
- 20 caught in local waters. For further information
- 21 contact EPA or the Food and Drug Administration.
- 22 PARTICIPANT: And it doesn't mean that

all fish are going to contain this mercury. You

- 2 know, someone, even one of those high -- one of
- 3 those mackerels or --
- 4 PARTICIPANT: King fish.
- 5 PARTICIPANT: Yeah. Or shark, I mean,
- it doesn't necessarily mean that they're going to
- 7 have the mercury in them.
- 9 PARTICIPANT: Because it has to do with
- 9 where it came from, right?
- 10 PARTICIPANT: Right.
- 11 PARTICIPANT: So, that has a lot to do
- 12 with it too. So like, me -- I go to Giant or
- 13 Costco and get mine. There's not going to be a
- 14 sign there that says this fish was caught in the
- 15 waters that contained mercury. So, I quess --
- 16 PARTICIPANT: I guess. Yeah, I guess.
- 17 PARTICIPANT: Maybe if they put that on
- 18 there.
- 19 PARTICIPANT: I'm sure that -- right.
- 20 I'm sure now that maybe this will get noticed,
- 21 because they're obviously doing studies on it,
- which is good because, being that I've been

- 1 pregnant before and I've eaten the tuna before
- and, you know, things are just going to happen.
- 3 You can't hide from everything, you can't just
- 4 live off of water, which better come out of a
- 5 bottle, but you don't even know who put in the
- 6 bottle.
- 7 PARTICIPANT: Right.
- PARTICIPANT: You'd make yourself
- 9 insane.
- 10 PARTICIPANT: We were drinking the
- ll bottled water from Price Club, and it has arsenic
- 12 in it. So -- Crystal Geyser Water, they have --
- 13 sell --
- 14 PARTICIPANT: I mean, it's everything.
- 15 You think you're drinking bottled water. I
- 16 really don't know what's in this water that I'm
- 17 drinking. I mean, they haven't put this in that
- 18 study. It's not going to say arsenic on here.
- 19 PARTICIPANT: On one hand it's good to
- 20 know. I'll stay away from, and I'm glad that I
- 21 don't eat and haven't eaten the three, but I'm
- 22 not going to quit eating fish. I enjoy it and I

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1 don't eat it everyday like I was, now. I,
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- 2 personally, will probably still.
- MODERATOR: Okay. So, if you were
- 4 developing a basic rule of thumb for pregnant
- 5 woman in terms of using this information to give
- 6 advice, what would that be?
- 7 PARTICIPANT: I would tell my friend;
- 8 my doctors said don't eat swordfish, shark and
- 9 mackerel.
- PARTICIPANT: And why?
- MODERATOR: And you would tell them
- 12 why?
- PARTICIPANT: Yes.
- 14 PARTICIPANT: I would too.
- 15 PARTICIPANT: I wouldn't go into the
- low levels; I would just state the facts.
- MODERATOR: Okay.
- 18 PARTICIPANT: I would have liked to
- 19 have this, which says exactly that, but it lists
- what you're safe with and what has little or no
- 21 mercury in it, which would ease the mind of a lot
- of people. I think somebody -- I think it was

1 you, said everything in moderation would be safe,

- but it's nice to know that if king mackerel was
- 3 your favorite fish, that's one thing you should
- 4 eliminate for the time being, or until you know
- that you're not going to be pregnant, enjoy it at
- 6 that time. Other than that, I have to agree with
- 7 everything in moderation.
- 8 PARTICIPANT: For a pregnant woman.
- 9 PARTICIPANT: I think your doctor will
- 10 even tell you that.
- 11 PARTICIPANT: A pregnant woman, when
- 12 you crave something, you're not going to eat it
- 13 in moderation.
- 14 (Laughter.)
- 15 PARTICIPANT: I know.
- 16 PARTICIPANT: But when I say
- 17 moderation, I just mean that choices three times
- 18 a week don't eat king mackerel. You have to --
- 19 go do something -- that's just like somebody who
- 20 smokes. You might crave that cigarette the whole
- 21 time you're pregnant but know what that's going
- to do to your baby, so you're not going to touch

it. So, with the king mackerel, you'll crave it,

- but since -- salmon's on the menu, I'll settle
- 3 for it.
- 4 You know, that's -- well, that would be
- 5 me and that would be what I would say to
- 6 somebody.
- 7 MODERATOR: How about the rest of you?
- 8 What would your advice be?
- 9 PARTICIPANT: My advice would be not to
- 10 eat the mackerel, the shark and the swordfish.
- 11 But, I would also put in a note; you should limit
- 12 your intake of the tuna and then, you know, eat
- the rest of the fish in moderation. Don't
- 14 consume large quantities of fish. Don't assume
- 15 that you can.
- 16 PARTICIPANT: And if you want more
- information, check out these websites.
- MODERATOR: Okay.
- 19 PARTICIPANT: I mean, but I would put
- 20 wording on the whole entire line, you know. Eat
- 21 the rest of it in moderation. This is your
- 22 possibility. Then leave it up to each individual

- 1 person. But I'm not one to withhold information,
- 2 you know.
- 3 PARTICIPANT: Put it out there, you
- 4 have to make up your own mind as to what you're
- 5 going to do, but it should be out there. And
- 6 this was -- to my knowledge; this was not out
- 7 there.
- PARTICIPANT: This was not out there.
- 9 Like I said, I mean, this -- pregnancy is not new
- 10 to me. I got pregnant with my first one in 1990.
- 11 That was ten years ago, you know, and I have
- 12 never heard anything like this before. Fish was
- 13 good for you.
- 14 PARTICIPANT: Right. That's what I'd
- 15 always heard.
- 16 PARTICIPANT: I just read that too.
- 17 So --
- 18 PARTICIPANT: They're not saying that
- 19 fish isn't good for you. It depends on what kind
- 20 and how much.
- PARTICIPANT: They're saying the methyl
- 22 mercury is bad for you.

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1 PARTICIPANT: But fish. They didn't
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- 2 say. That's what I'm saying. Get the warning,
- 3 but this is not good, you know.
- 4 MODERATOR: Willis (ph.) what would you
- 5 say? How would you summarize this information?
- 6 PARTICIPANT: I know looking at the
- 7 list and everything in it; you've got to weigh
- 8 the bad to the good. Because the Omega fatty is
- 9 very important, then as a pregnant person or even
- 10 non-pregnant person, you need to research that a
- little bit further and make sure that you're
- 12 eating what's correct and try to avoid those that
- 13 aren't. You want to eat it like everyone else
- has said, in moderation, and I would suggest
- maybe once a month, maybe twice a month, but to
- 16 also find out which foods or which fish are low
- moderate versus the no mercury.
- 18 PARTICIPANT: I don't believe that
- 19 fish -- that all the research should be left up
- 20 to me though. Because if I have to -- okay, I'm
- 21 going to have fish. Well, let me research this.
- 22 Well, you know, I also eat peanut butter and

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jelly, so let me research peanut butter, and
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- 2 jelly and there's bread there that I've got to
- 3 research. Okay, well, there's a glass of milk.
- 4 Let me research this milk. For dinner we're
- 5 going to have beef, so let me research beef. You
- know, there's some vegetables thrown in here, so
- 7 I've got to research -- I could be spending my
- 8 entire pregnancy researching the foods that I'm
- 9 doing. I think when there's a problem with a
- 10 food, it should be made known to all OBs so that
- 11 it can be given out to the patients, so that I
- don't have to spend my entire pregnancy
- 13 researching --
- 14 PARTICIPANT: And not just OBs. Making
- it known -- everyone should know, because
- 16 (indiscernible).
- 17 PARTICIPANT: And especially if it's
- affecting our young children, which on this last
- 19 page, you know, it leads me to believe that it is
- 20 affecting them. I mean, it says, you know, right
- 21 there. You know, the roads to the family and
- that they should consume it in average amounts.

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1 What is it doing if they're consuming it in more
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- 2 than an average amount? I mean, I come from a
- 3 family where a lot of people eat a lot of crabs
- 4 during the summer, you know what I mean?
- 5 MODERATOR: Edy, did you have
- 6 something?
- 7 PARTICIPANT: What's it doing to us,
- 8 I'm wondering.
- 9 PARTICIPANT: My question is, does the
- 10 FDA plan on putting out a leaflet to pass out to
- all docs to make the public aware of this? I
- mean, it's obviously new information that they've
- 13 done research on.
- 14 MODERATOR: How do you think this
- information should be gotten out to people?
- 16 PARTICIPANT: I think it should be out
- in pamphlets in doctors' offices, OB/GYNs.
- MODERATOR: Okay.
- 19 PARTICIPANT: I don't think it's
- 20 necessary to broadcast it on national television,
- 21 but leaflets to pediatricians and OBs should be
- 22 started first.

1 PARTICIPANT: Right, and then the

- 2 magazines.
- 3 PARTICIPANT: And magazines and stuff.
- 4 PARTICIPANT: Word of mouth from
- 5 doctors.
- 6 PARTICIPANT: I don't see that it
- 7 shouldn't be in the papers or on the news. Why
- 8 not?
- 9 PARTICIPANT: I mean, they put
- 10 everything else on there. I mean, you hear about
- 11 how nail polish is bad for you.
- MODERATOR: All right. You bring up an
- interesting issue and kind of a quandary. That
- is, how do you weigh this information compared
- with all kinds of other warnings and health
- 16 concerns and everything else? Where does this
- 17 balance out for you?
- 18 PARTICIPANT: It's the same as I just
- 19 found out over the summer that Off is -- you
- 20 shouldn't use on kids under three because it
- 21 gives them brain damage. I didn't know that. I
- 22 never used it, I used Skin So Soft. I mean, I

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1 didn't use it for myself. I would offer that to
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- 2 someone else who might have been over, which I
- 3 found out was safe. Other -- I found out just by
- 4 word of mouth when I was looking for some Skin So
- 5 Soft in the store.
- That's just like anything else. It's
- 7 just as important.
- 8 PARTICIPANT: I'm sure that a lot of
- 9 people, you know, still don't reach things. I
- 10 was talking to my sister and she was -- she feeds
- 11 her son hotdogs all the time. It just really
- irritates me because my husband read where, you
- 13 know, more than twelve hotdogs a month can cause
- 14 cancer, you know.
- 15 PARTICIPANT: He did?
- 16 PARTICIPANT: Yes.
- 17 PARTICIPANT: Oh, great, because I just
- 18 started liking hotdogs. It's one of my
- 19 favorites.
- 20 PARTICIPANT: It's like -- it's that
- 21 kind of thing too. So, not everyone has read
- 22 that or heard that.

1 PARTICIPANT: I've heard other things

- 2 about hotdogs and --
- 3 PARTICIPANT: High triglycerides or
- 4 whatever in the salads.
- 5 PARTICIPANT: -- sun block and bug
- 6 repellant on children under three. That stuff I
- did, but I researched that. I mean, I did. I
- 8 took that on my own, because reading the back of
- 9 it, you have a hard time when you're child is
- 10 under two and you're trying to put bug repellant
- on her and you have to go somewhere or ask your
- 12 doctor, which is pretty much what I did. I just
- 13 threw the book away and said whatever. I asked a
- 14 pediatrician, because if anybody's going to know,
- 15 you put everything that you have -- you put your
- 16 child in their hands and depend on them to know
- 17 the answers.
- 18 MODERATOR: Okay. Let's said that you
- 19 read an article that contained this kind of
- 20 information in it in Redbook Magazine or Ladies
- 21 Home Journal, or something like that. How do you
- think the general public would respond to that

- 1 kind of information?
- 2 PARTICIPANT: It depends on how it was
- 3 worded.
- 4 MODERATOR: Okay.
- 5 PARTICIPANT: A lot of calls, I think.
- 6 A lot of (indiscernible).
- 7 MODERATOR: By how it was worded, what
- 8 do you mean by that, Monica?
- 9 PARTICIPANT: Well, I don't think this
- 10 has enough information. It doesn't answer my
- 11 questions.
- MODERATOR: What are those questions
- 13 that aren't answered yet?
- 14 PARTICIPANT: My questions are, if it
- 15 can cause learning disability due to the nervous
- 16 system and all this kind of thing, in a
- 17 developing child, what is it doing -- you know,
- 18 okay -- this here, pregnancy here, was a complete
- 19 surprise to me. So, will probably most
- 20 definitely, God willing be my last pregnancy.
- 21 Okay? So, that's fine. So, then am I going to
- 22 be safe eating fish in my house? Do I not have

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to worry about this article ever again?
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- So, my question would be, do I never
- 3 eat fish again because I'm left not knowing how
- 4 harmful it is to me, my family, my children, my
- 5 husband. I want to know what it is doing after
- the fact. After this child is born, how will it
- 7 affect this child if it decides to eat fish at
- 8 the age of eighteen months or two years?
- 9 PARTICIPANT: And did we touch on
- 10 nursing mothers inside of that?
- 11 PARTICIPANT: No, we were going to.
- MODERATOR: Okay. Did you see anything
- about nursing mothers in here?
- 14 CHORUS: No.
- 15 MODERATOR: Okay.
- PARTICIPANT: I'm curious because I'm
- just now weaning my child.
- 18 MODERATOR: Okay. Any other unanswered
- 19 questions from the information that's been
- 20 provided here?
- 21 PARTICIPANT: I wouldn't say
- 22 unanswered, but I will go and look and read some

1 more. I think it gave me enough to know what I

- 2 should and shouldn't eat.
- MODERATOR: This is an excellent time.
- 4 This is Dr. Alan Levy with the Food and Drug
- 5 Administration, the Center for Food Safety and
- 6 Nutrition and we asked him --
- 7 (Indiscernible, multiple speakers.)
- 8 MODERATOR: He's been back there
- 9 listening to your discussion. He has a few
- 10 things he'd like to add.
- 11 DR. LEVY: Well, first, I'd like to
- 12 answer any questions that people have. I'll tell
- 13 you a little bit about this and how we think --
- 14 let me give you some of the background, the
- 15 context here.
- Mercury is for, a long time, is known
- 17 to be an environmental poison. It is not
- 18 terribly common in the environment. It's a
- 19 well-known environmental toxin. Both EPA and FDA
- 20 have essentially on the books that they're doing
- 21 to minimize the exposure of humans to mercury.
- One of the things that EPA is doing,

- and has done, is they limit the emission levels
- of mercury in smoke stack emissions, that's
- 3 regulated. That's actually the major source of
- 4 mercury into the environment is these smoke stack
- 5 emissions. EPA has been setting standards on how
- 6 much is allowed to be.
- 7 The way that mercury gets into people
- 8 is primarily through fish. FDA has action levels
- 9 of allowable levels of mercury that can -- that
- 10 are allowed to be in the fish. What has happened
- 11 in the past few years is that for the first time
- 12 people have done some large studies that have
- 13 looked specifically at the effects of mercury on
- 14 unborn babies and sort of the cognitive
- 15 developmental effects of mercury. These are very
- 16 difficult studies to do because you have to do --
- 17 you have to have large populations that consume a
- 18 lot of fish. They're not done, actually, in this
- 19 country. The two primary studies, one is done in
- 20 the --
- 21 (Whereupon Tape Side A ended. Begin
- 22 Side B.)

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DR. LEVY: -- which is in the Indian
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- Ocean, another one has been done in the Faroe
- 3 Island which is off of Iceland. Anyway, these
- 4 studies have shown that the effects of mercury
- 5 are particularly important for the developing
- fetus. So, both FDA and EPA are taking this into
- 7 account and we are essentially lowering the
- 8 action levels in the smoke stack emission
- 9 mercury.
- 10 MODERATOR: Does that make sense, the
- 11 term lowering the action levels? Basically, the
- 12 amount allowed?
- PARTICIPANT: Um-hmm.
- DR. LEVY: And FDA is considering some
- 15 kind of public education activity to make people
- 16 aware of this hazard and encourage people to
- 17 avoid the kinds of fish that have more mercury in
- 18 them.
- 19 Now, our dilemma, and the reason we're
- doing these groups, is we're interested in
- 21 getting people to avoid the risk, but we would
- 22 just assume not totally kill their fish

- 1 consumption. There's lots of fish, which can be
- 2 eaten, with essentially no risk.
- 3 One of the things to reassure people
- 4 that it's pretty unlikely that you've done damage
- 5 here. These levels that we're talking about here
- 6 are already based on ten-fold safety factors.
- 7 So -- and they're also assuming chronic dietary
- 8 levels of consumption at that level. Really not
- 9 talking about, you know, where you have a week
- 10 where you ate two cans of tuna fish, that that in
- 11 itself is a risky thing.
- 12 MODERATOR: Or the summer when she's
- 13 eating the fish from the Bay and --
- DR. LEVY: It is prudent, particularly
- 15 for pregnant women to avoid these high mercury
- 16 fish and moderate their tuna fish consumption,
- 17 but it's really not -- we're really talking about
- 18 chronic eating patterns here. We're not talking
- 19 about regulating if they eat on occasion, and
- that's actually one of the things that we're
- 21 struggling with is how to communicate that idea
- that what we're talking about is a sort of

- 1 chronic dietary pattern. You want people to be
- 2 aware of that and to make changes in their
- 3 dietary pattern if, in fact, they're at risk.
- But, we're not really saying that if you happen
- 5 to eat a piece of fish that that's a big deal in
- 6 one-way or another.
- 7 MODERATOR: Go ahead.
- 8 (Laughter.)
- 9 PARTICIPANT: Well, what other side
- 10 effects are there, besides the learning
- 11 disabilities that you found in the studies that
- 12 you've done so far?
- 13 DR. LEVY: Well, mercury passes the
- 14 blood brain barrier and it has effects on the
- 15 nervous system at really high levels. There have
- 16 been some -- we have observed high level of
- 17 mercury contamination happen only under
- 18 industrial accidents, and there's been a few
- 19 cases where mercury has gotten into the food
- 20 supply through pesticides and things that are no
- 21 longer allowed. We've seen really high levels of
- 22 mercury poisoning. It has effects on the nervous

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1 system. You know, it causes paralysis, causes
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- 2 blindness, things of that order. But those are
- 3 levels that are much, much higher than anything
- 4 that people are likely to get unless they happen
- to be exposed to a really high level of mercury,
- 6 which does not occur naturally.
- 7 PARTICIPANT: What's interesting is,
- 8 you said the studies were done in these areas
- 9 that are mostly Atlantic type people and their
- 10 diet consists mainly of seafood. In the places
- that you've mentioned, it seems very remote and
- it's interesting that in such places you wouldn't
- expect that they would have the environmental
- 14 factors as you would in densely populated areas.
- DR. LEVY: See, the problem of mercury
- in fish, there's really two separate kinds of
- 17 problems, one is commercial, meaning ocean fish,
- 18 commercial is old fish that is caught in the
- 19 ocean. The ocean has mercury in it in fairly low
- 20 levels. Larger fish that live a long time and
- 21 eat other fish, top of the food chain fish,
- 22 concentrate mercury. That's why shark and

- swordfish and king mackerel are really the very
- 2 problematic species because those are at the top
- of the food chain. They're big. With any fish
- 4 caught in the ocean, it's going to have trace
- 5 amounts of mercury, but it's going to be
- 6 dependent on how old it is and how big it is.
- 7 And it's almost -- there aren't like pockets of
- 8 mercury contamination.
- 9 Freshwater fish is different.
- 10 Freshwater fish is very dependent waters. There
- 11 you do have particular waters where there can be,
- 12 because of contamination and pollution issues,
- 13 higher levels of mercury. That's why most states
- 14 will issue consumer advisories about mercury
- 15 levels in their waters and advise recreational
- 16 fisherman who are the primary people at risk
- 17 there -- (tape trouble) -- and there are some
- 18 populations which are subsistence fisherman that
- eat a lot of fish and those are populations that
- 20 we actually worry about in respect to that. They
- 21 eat a lot of fish. So, freshwater fish, it
- 22 depends on where you catch it. You need to be

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aware of what the status is of the waters.
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- Ocean fish are mainly a matter of size
- and type of fish. Most commercial fish is ocean
- 4 fish. Farm raised fish because the water quality
- 5 is controlled is almost never going to be a
- 6 problem for mercury. Shellfish is not going to
- 7 be a problem for mercury. It's the freshwater
- 8 fish that are caught in high mercury waters, and
- 9 it's the ocean fish which are large and live a
- 10 long time. They concentrate the mercury. Those
- 11 are the real two problems.
- 12 PARTICIPANT: My question is, okay,
- what type of damage -- you're saying here, you
- 14 know, okay, the mercury is effecting the nervous
- 15 system of the unborn child and then there's
- 16 disability in the child. How positive -- I mean,
- 17 how can you be assured that it's intrauterine
- 18 that these children are being effected by the
- 19 mercury and not at the age when they start eating
- the food at one and a half and two and three
- 21 while they're still developing to get to this
- level? What is it doing to the child after

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they're being born?
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- 2 PARTICIPANT: And nursing too.
- 3 PARTICIPANT: Yeah, and during nursing,
- 4 does it pass through mother's milk? I mean, how
- 5 sure are you that it's happening intrauterine
- 6 once the child's been born?
- 7 DR. LEVY: We're not necessarily sure
- 8 about it. I mean, we assume that it is a problem
- 9 for nursing women. Nursing women also have to --
- 10 are included here as people who should worry
- 11 about it. It honestly does pass through the
- 12 breast milk to the baby.
- PARTICIPANT: So, it's still
- 14 continuing --
- DR. LEVY: The risk to the baby is a
- 16 function of the developmental phase that he's
- 17 going through or that she's going through, and
- 18 brain development occurs a lot while still in the
- 19 womb, but it occurs up to a couple of years. So,
- 20 that's a particularly important time to limit
- 21 exposure to mercury.
- PARTICIPANT: So, through those years I

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shouldn't feed my child these high levels --
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- DR. LEVY: You certainly -- yes.
- PARTICIPANT: Now, what as an adult,
- 4 you know, what can it do to -- well, okay, my
- 5 daughter, you know, she's eight, okay?
- DR. LEVY: Um-hmm.
- 7 PARTICIPANT: Is it affecting her? How
- 8 is it affecting her? My husband, is it affecting
- 9 him? How is it affecting him? Is that the
- 10 reason why he can't remember I told him
- 11 something?
- 12 (Laughter.)
- PARTICIPANT: I mean, we say it's just
- the typical man-thing, but do you know what I'm
- saying? Is it effecting his brain cells at the
- 16 age of thirty-seven, the fact that he eats fish,
- 17 because he is a game fisherman and a sports
- 18 fisherman and he eats his catch, and so does his
- 19 family?
- DR. LEVY: Low levels of mercury are
- 21 not much of a problem for adults or children
- above whatever age the brain stops developing.

- 1 PARTICIPANT: Around two.
- DR. LEVY: Well, two is the main --
- 3 exactly where the cutoff is. Low levels of
- 4 mercury of the kind people are getting through
- 5 their diet are not associated with any known
- 6 effects in adults. It's very hard to identify
- 7 these effects. The way it was done in these
- 8 special studies, which are very difficult to do,
- 9 is that you actually look at and monitor the fish
- 10 consumption of the woman during the pregnancy and
- 11 you follow the child over a number of years and
- 12 six, seven years later you give them a battery of
- 13 tests and you correlate how well they do on the
- 14 test with how much fish their mother's ate when
- 15 they were pregnant. That's the effect that was
- 16 identified.
- 17 PARTICIPANT: You know that these women
- 18 you're doing the studies on are actually having
- 19 their fish with the higher concentration of the
- 20 methyl mercury.
- DR. LEVY: Right. You basically
- 22 monitor how much mercury they were getting

- 1 exposed to and you see whether or not that
- 2 predicts how well the kids do on these tests at
- 3 six, seven years old.
- 4 PARTICIPANT: The areas that you did
- 5 the studies in, was it all of these children, or
- 6 was it a percentage -- was it a low percentage of
- 7 the children living in this area? Could they
- 8 have just been children who were going to have
- 9 learning disabilities to begin with? What was
- 10 the percentage?
- DR. LEVY: The way these are -- these
- 12 are typical controlled scientific studies, so
- it's not like we're talking about the effect
- 14 occurs one hundred percent of the time. What
- 15 we're really talking about is comparing the
- 16 conditions, and holding everything else constant,
- 17 is there a significant difference? A significant
- difference is not necessarily a big amount, it's
- 19 enough that it's statistically unlikely to occur
- 20 by chance. It's based on that that you infer
- 21 that there's an effect. That's what we're able
- to do, because we know that there's an effect.

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1 It's really hard for us to, in any given case,
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- 2 identify whether a learning disability what it
- was due to. That's virtually impossible.
- 4 You have to do this kind of study where
- 5 you have several hundred women, in one group that
- 6 doesn't eat a lot of group, several hundred in
- 7 the other group, and then you measure on average
- 8 how well did the children do on the test. That's
- what it takes to be able to make this inference
- 10 that there's a difference at all. But to
- actually say how much of a difference, that's a
- much harder thing. And I don't think -- it's
- beyond our ability to know and even estimate.
- 14 But that's why we're quite prudent.
- There are large safety levels -- safety
- 16 factors built into these recommendations.
- 17 PARTICIPANT: I don't know. I quess
- 18 now I'm more concerned about how the study was
- 19 conducted to begin with, because now I'm
- 20 thinking, what is the education level of these --
- of the mothers and the fathers in these areas?
- 22 Could they be the reason their children aren't as

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1 smart as my child, because they didn't teach
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- them, their kids didn't go to the right schools.
- 3 I mean, it wasn't like this study was done all in
- 4 Annapolis, you know, where all the schooling's
- 5 the same, you've got primarily the same educated
- 6 parents, and then you say, like you said, these
- 7 couple of hundred with have the fish, this couple
- 8 of hundred won't and we'll see the outcome in the
- 9 study.
- DR. LEVY: And we try to control.
- 11 These studies take into account, as much as they
- 12 can, these obvious other factors that are going
- to contribute there. So, they try to control for
- 14 the education and for a lot of things that they
- 15 try to control for. These particular studies,
- 16 you know, have been judged to be decent studies.
- 17 It's on that basis -- actually, these studies
- have been reviewed by the National Academies of
- 19 Sciences. It's based on their recommendation
- 20 that we're doing this and lowering the action
- 21 levels in the smoke stack emissions and
- 22 considering the public education, because the

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1 people have evaluated these studies say that
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- these are reliable studies that we need to pay
- 3 attention to. So, we're relatively satisfied
- 4 with that.
- 5 It's true. It's always very
- 6 treacherous, very difficult to make some of
- 7 these -- these are a chronic effect that occurs
- 8 during a long period of time. There are many,
- 9 many other factors that are contributing to the
- 10 cognitive effects in children. To the best of
- our ability we are trying to control it and make
- 12 some kind of inference here.
- PARTICIPANT: And you're with the FDA?
- DR. LEVY: Um-hmm.
- 15 PARTICIPANT: Why haven't -- what is
- 16 the FDAs plan as to getting this information out
- 17 to the general public and why has -- you know,
- 18 what's been taken so far, and why haven't any of
- 19 us, who obviously -- six of us here. All of us
- 20 probably have different OBs and pediatricians,
- 21 why don't any of us know about this study?
- DR. LEVY: The real answer is that this

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data has just recently been generated, and we're
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- 2 responding to it. This data raised issues that
- 3 we didn't think it was as serious of a problem as
- 4 it turns out to be. Previously we hadn't thought
- 5 it was necessary to alert the public to this
- 6 particular risk. And we still don't think it's a
- 7 particular risk for most people, except for
- 8 pregnant women and their babies. The evidence is
- 9 that it's a particular risk for them. It's not
- 10 so much of a risk for other groups.
- 11 PARTICIPANT: Did you say, do you plan
- to notify OBs and pediatricians? I mean, because
- 13 I am a nursing mother. My OB doesn't notify me,
- 14 but it would be really nice if when I went in to
- take my baby in for it's two week appointment my
- 16 pediatrician says, oh, by the way -- or some kind
- of literature.
- 18 Your first OB appointment, you go in
- 19 and the doctor hands you all this literature, and
- 20 even in the new literature I've gotten I never
- 21 heard anything about it. What are your stops?
- DR. LEVY: Yeah. That's an obvious

thing for us to do and we're trying to do that.

- One of the important realities here is that
- doctors are not eager to talk about all the
- 4 possible risks. I mean, they have a full plate
- 5 in many ways.
- 6 PARTICIPANT: A lot of things to warn
- 7 you about?
- BR. LEVY: They have a lot of things to
- 9 warn you about, and there's competition to get on
- 10 their agenda. This particular threat is not high
- on their agenda. They quite reasonably argue
- that there's lots of other things that they need
- to talk about in terms of more importance. So,
- 14 it's hard because you have to compete with a lot
- of other risks to get on their agenda.
- 16 MODERATOR: I think it's important to
- 17 point out here though that the reason you folks
- 18 are here is so that they can find out what kind
- of information makes sense to you, what is clear
- 20 and what isn't. So, they are developing
- 21 information.
- 22 PARTICIPANT: Right.

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DR. LEVY: This is the developmental
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- 2 stage to get something out, and hopefully this is
- 3 going to be effective and useful.
- 4 PARTICIPANT: I just wanted to say, I
- 5 don't mean to change the subject but since you
- 6 are here now, what about this hot dog thing?
- 7 Because I've been getting -- I was never a big
- 8 hot dog person, but just recently I get -- I
- 9 mean, I go to the Amish market a lot and get
- 10 fresh veggies and stuff, and they have these all
- ll beef hotdogs and my eighteen month old likes
- 12 them, and I'm just wondering -- I just started to
- 13 give her those. What's the deal with cancer?
- 14 (Laughter.)
- DR. LEVY: Hotdogs have nitrates in
- 16 them, it's a preservative.
- 17 PARTICIPANT: Even the ones that the
- 18 Amish do?
- DR. LEVY: I'm not -- I don't know in
- 20 your particular case, but many hotdogs use as a
- 21 preservative nitrates. When you eat them they
- 22 form nitrosamines. Nitrosamines are carcinogens,

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but the levels of nitrates in hotdogs are
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- 2 controlled so that it's generally not considered
- 3 to be a significant risk to eat.
- 4 PARTICIPANT: It's like the mercury
- 5 thing, sort of?
- 6 DR. LEVY: In moderation to some
- 7 extent. So, I mean -- there's lots of things in
- 8 the foods we eat that are potentially toxic. You
- 9 need to control -- I don't know what level of
- 10 hotdogs would be the right amount, but hotdogs,
- 11 because they have these preservatives. You
- probably wouldn't have a diet solely of hotdogs.
- 13 PARTICIPANT: My husband's one of eight
- 14 and there's a million -- I have at least three or
- four birthday parties a month, and they always
- 16 seem to have hotdogs for the kids. I just --
- 17 just for that.
- DR. LEVY: There is no consumer
- advisory for hotdogs. We don't tell people that
- they have to limit their intake of hotdogs.
- 21 MODERATOR: Our time is almost up,
- 22 so --

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1 PARTICIPANT: I just have one thing.
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- 2 Back to the fish thing here and a recommendation.
- 3 When I go to my pediatrician's office, if there's
- 4 a recall on an item they have it printed on a
- 5 Xerox piece of paper and they hang it in a couple
- of different places in the office on the wall,
- 7 just so people who really want to know what's
- 8 going on in the world can look at it and read it.
- 9 What if you did the same with your warnings? You
- 10 know, stick them on your OB -- you know, more
- doctors would probably be, okay, I'll stick it up
- 12 here and then if a patient reads it and asks a
- 13 question then I can talk about it. You know,
- 14 send it out like that kind of thing for ones who
- 15 want to know and the see it on the wall, and then
- 16 they can read it. I mean, I look at everything.
- 17 I see something hanging --
- 18 PARTICIPANT: A brochure on the table.
- 19 PARTICIPANT: If there's something
- 20 hanging, I read it. Because obviously it's there
- 21 for a reason, they just don't decorate the walls
- 22 with these pieces of paper.

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DR. LEVY: And you think that would
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- 2 help people change their diet?
- 3 PARTICIPANT: If I read that this and
- 4 this and this have high levels of mercury, you
- 5 know, may cause this and this, you know, this is
- 6 not true for all fish when eaten in moderation, I
- 7 would look at it and go, okay, I'm not going to
- 8 eat these, but I know that I can eat these as
- 9 long as I eat them in moderation.
- 10 PARTICIPANT: Right.
- 11 DR. LEVY: Well, good. This is the
- 12 kind of information that we need to have to help
- 13 us communicate effectively here. One of the
- 14 questions that we have is when we tell you
- moderation, what do people think we mean when we
- 16 say moderation? So, does that mean you should
- 17 eat less than you're eating now, or -- what is
- 18 moderation?
- 19 PARTICIPANT: Well, here you have
- 20 specifically stated for the tuna fish; I would
- 21 specifically state that because obviously you've
- done your research, you know what the moderate

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1 amount is on that. The others --
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- 2 PARTICIPANT: I'd like to know which
- 3 ones don't have any on it too instead of mixed
- in. That's another -- you know, it's important.
- 5 PARTICIPANT: You mentioned shellfish
- didn't seem to have as much, so there we would
- 7 know that our crabs and our shrimp and, you know,
- 8 things like that are going to be pretty much safe
- 9 to eat and the others we should consume once
- 10 every other week or so.
- 11 PARTICIPANT: I think a brochure made
- 12 available to doctors, you know, because when they
- 13 give you all this literature, you know, doctors
- 14 generally aren't going to have time to sit down
- and discuss all this with you. If it's given as
- 16 part of -- there's tons of other pamphlets
- 17 available and if they put that in with it, they
- 18 don't have to sit and discuss it with you. Just
- 19 make it available for you and say, okay, and that
- 20 flags you to know.
- 21 PARTICIPANT: Then the choice is yours.
- PARTICIPANT: Right. You can decide.

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PARTICIPANT: If it's out there, most

- 2 women that are expecting are interested and will
- 3 read. Especially if it has to do with something
- 4 they eat a lot, that they are used to eating.
- 5 You'd say, okay, this is a message on fish.
- 6 Well, if you never eat fish, who cares? But if
- you eat fish, you're going to read this to see
- 8 what it contains.
- 9 PARTICIPANT: And I wouldn't have
- 10 consumed as much. You're saying freshwater, you
- 11 know, like croaker and herring and blue fish were
- 12 the fish that I consumed. Blue fish aren't even
- listed here. The others were in moderate. So,
- 14 it's that kind of thing. I know to just avoid
- 15 certain things, and what to avoid and that I
- should reduce the amount. Okay, you guys want to
- eat with us, that's fine. I had it last week,
- 18 you know.
- MODERATOR: Okay.
- DR. LEVY: Well, great.
- MODERATOR: Well, thank you so much.
- 22 You've all been very informative. I really have

- 1 appreciated this. I would ask that you leave the
- 2 information sheets because we're still revising
- 3 them. Once you see information in magazines or
- 4 your doctor's office about methyl mercury and
- fish, you can say, you know, I helped them design
- 6 this.
- 7 Kind of exciting actually when people
- 8 see that. So, if you want to check out at the
- 9 front desk with Julian and Crystal. And thank
- 10 you so much for coming.
- 11 PARTICIPANT: Thank you.
- DR. LEVY: Thank you. This was really
- 13 very helpful.
- 14 MODERATOR: You can keep your name tags
- 15 if you'd like as a souvenir.
  - 16 PARTICIPANT: Actually, I will take
  - 17 mine home.
  - 18 MODERATOR: Thank you and good luck
  - 19 with all your babies.
  - 20 (Whereupon the proceeding was
  - 21 concluded.)

2.2

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