MACRO INTERNATIONAL, INC.

FOOD AND DRUG ADMINISTRATION

HEALTH AND NUTRITION: METHYL MERCURY

Tuesday, November 14, 2000

6:00 p.m.

Moderator: Lynn Halverson

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MODERATOR: Wow, and you guys all know what's going on, huh?

CHORUS: Yeah.

MODERATOR: Okay. What we're going to be talking about today is, basically, how consumers should be informed about health risks. I'm sure that as you are going through pregnancy your doctor has given you all kinds of information about health risks and potential health risks. What kinds of information do they give you in terms of what you should do, not do, eat, and not eat, those kinds of things?

PARTICIPANT: No smoking.

MODERATOR: No smoking. Okay.

PARTICIPANT: Not too much caffeine.

MODERATOR: Okay. That's why you guys left all the diet coke for me.

PARTICIPANT: Just about all of it.

MODERATOR: Oh.

PARTICIPANT: Take your vitamins and all.
MODERATOR: Okay.

PARTICIPANT: What cheeses you can't eat.

MODERATOR: Hmm. Why is that?

PARTICIPANT: I'm not sure why, but you can't have certain types of cheese, like, I think it's a Brie cheese that you can't eat. You can't have Caesar salad dressing.

MODERATOR: Because?

PARTICIPANT: It's got raw egg in it.

Can't have any raw eggs.

PARTICIPANT: Really?

PARTICIPANT: Yeah. Well, that's what mine says

MODERATOR: All right. What other advice do you get?

PARTICIPANT: My doctor's all quick.

Any advice I get, I read on my own. But I'll think on it while they're answering.

PARTICIPANT: I read -- I was telling 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
bacteria could form in there.

MODERATOR: Oh.

PARTICIPANT: So, it's best not to
drink tea from an unknown source, basically,
unless you make it yourself.

PARTICIPANT: Water is always best.

MODERATOR: Okay.

PARTICIPANT: No MSG.

MODERATOR: No MSG? Okay.

PARTICIPANT: He's been talking to me a
lot about water and cranberry juice and stuff
like that.

MODERATOR: Okay. What kinds of foods
do they tell you you should be eating? Do they
say anything?

PARTICIPANT: Fruits and vegetables.

MODERATOR: Fruits and vegetables.

PARTICIPANT: No empty calories.

MODERATOR: Okay.
PARTICIPANT: It's just a balance.

MODERATOR: Okay.

PARTICIPANT: Balanced, you know, pyramid. You should follow the pyramid.

MODERATOR: All right.

PARTICIPANT: So many of your wheats and cereals and grains.

MODERATOR: Um-hmm. Shawna, you mentioned protein I think?

PARTICIPANT: Yeah, because we take vitamins. So, I guess, from the iron. We need more iron.

MODERATOR: Okay. How about things like meats and fishes, do you tend to eat -- what kinds of things do you tend to eat there?

PARTICIPANT: Lots of chicken.

MODERATOR: Chicken.

PARTICIPANT: Yeah. Lots of chicken.

MODERATOR: Why is that?

PARTICIPANT: Because it's good. Like, I don't eat meat or fish. I only eat poultry, but I know you know you need so much iron and
because I don't eat red meat, I like -- I try to
compensate with broccoli and other things that
are iron fortified.

PARTICIPANT: I hear fish is good.
MODERATOR: Okay. Why would you eat
fish?

PARTICIPANT: I forget why it is.

PARTICIPANT: Brain food.

PARTICIPANT: Huh?

PARTICIPANT: Brain food.

(Laughter.)

PARTICIPANT: You'll make a three in
it.

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 --?

PARTICIPANT: Probably about the same.

MODERATOR: Okay. Anyone else?

Monica?

PARTICIPANT: I --

MODERATOR: So, red meat, white meat,
poultry, fish.

PARTICIPANT: As long as it's cooked and not raw.

MODERATOR: Okay. And, Edy, you don't eat --

PARTICIPANT: I don't eat fish or beef.

MODERATOR: Why is that?

PARTICIPANT: Just have no taste for them.

MODERATOR: Rose, how about you?

PARTICIPANT: Mostly, the red meats. As for the fish, he had mentioned to me not to eat anything like swordfish or anything from that group.

MODERATOR: Why was that?

PARTICIPANT: He said there's a higher chance of bacteria in it, even if it's cooked fully.

MODERATOR: Hmm, okay. Kathy?

PARTICIPANT: Kathy just eats.

(Laughter.)

PARTICIPANT: I do. When I'm not
pregnant I eat really good, but I don’t eat red meat when I’m not pregnant. But for the protein and all of that, I don’t have -- there’s no reason like because I don’t want you to kill an animal that I won’t eat it. I’ll eat it while I’m pregnant.

MODERATOR: Poultry you eat, fish?

PARTICIPANT: Um-hmm. Baked, yeah.

Oh, yeah. I love fish. I eat a lot of fish. I like that.

MODERATOR: About how much fish do you eat, then?

PARTICIPANT: I don’t know, once -- at least once or twice a month.

MODERATOR: Okay. Shawna?

PARTICIPANT: I eat. The only thing I will not eat is liver.

(Laughter.)

PARTICIPANT: Anything else, I will eat it.

MODERATOR: Okay. So, you like red meat, white meat, fish?
PARTICIPANT: Yeah, pork.

MODERATOR: Okay. All right. How about other kinds of environmental contaminants that could get into the air that you breathe or water you drink?

PARTICIPANT: Lead.

MODERATOR: Okay.

PARTICIPANT: To make sure your paint is okay, your house isn't too old, and if it is, get it fixed.

MODERATOR: Okay. Are there any environmental contaminants in air, water or food that you've been particularly warned about or that you're --

CHORUS: Secondhand smoke.

MODERATOR: Secondhand smoke, okay.

PARTICIPANT: Just being around it.

MODERATOR: All right. How about things like pesticides? Have you heard anything about -- concerns about pesticides?

PARTICIPANT: Well, we had -- when our dogs had fleas, we had to have the Terminex come.
That was a pain because I had to clear it with the doctor to make sure I could be around whatever they were using, and then I had to wait on the Terminex man to clear it with them and make sure they knew I was pregnant. So, you should take care of that, because anything you touch, that stuff can get -- I guess it would get in your pores or -- you know, you don't want to touch that and go to wipe your child's nose or 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 you ever heard of that as a contaminant?

PARTICIPANT: No.

PARTICIPANT: I think that's one of the things that they talk about in fish, they could -- some fish have the mercury.

MODERATOR: Okay. Any other places you would hear mercury?
PARTICIPANT: I thought you would find it in water.

MODERATOR: In water? All right. What kinds of precautions do you think that the government or industry should be taking to prevent people, in general, or pregnant woman in particular, from these sorts of environmental contaminants?

PARTICIPANT: Much of it, you can get out of the magazines that -- I don't know about everybody, but even though this is my second 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. Nobody's going to sit down and just give you every bit of information that you need. You're going to have to look some. So, I -- personally, I think it's sufficient. It's out there in pamphlets. They print it out in the magazines and stuff. That's what your doctor's for.

MODERATOR: Okay. Edy, you were --
PARTICIPANT: Yeah, I agree. You know, it's in all the books, and in the parenting books and magazines and so forth. Even U.S. News and World Report, there's always something in there. You just have to read what's out there. And I agree no doctor is going to sit and tell you. It's up to you to, you know, inform yourself.

MODERATOR: So, what kind of information do you get from your doctor, then?

PARTICIPANT: Basically, on your vitamins, what to eat, what to cut out, your salts, what you -- that you get enough rest. The things that you need to do to allow your body to go through the changes it needs and to properly pass on that nutrition that you get.

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 more from other sources than your doctor?

PARTICIPANT: Yeah.
PARTICIPANT: Well, if it's something that makes you feel -- sorry. If it's something, like if I go and I complain that I'm tired, he'll run down quickly, what are you doing and try to tell me to eat more of the raw vegetables, or more of the red meats for iron or something like that. He'll help me to adjust that way, but he'll quickly tell me that -- he was quick to tell me to cut out -- I was allowed one soda every day. But, I guess it depends on how open you are how comfortable you are with your doctor.

MODERATOR: How about the rest of you, where do you get information?

PARTICIPANT: Well, I think some comes from the doctor, but only if it strikes a concern. Like, not -- I went to the doctor this past Monday, but four weeks before that when I had gone, I had lost weight. He was quick to jump at -- what are you eating, what's -- you know, and everything. To, you know, to jump into the food issue and stuff. But, like this past time, I had gained a couple of pounds and there
was no mention of any kind of food. I think it depends, also, if it's your first pregnancy, your 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 since then.

PARTICIPANT: Usually when you're pregnant, people will -- and when people find out that you're pregnant, they give you information.

(Laughter.)

PARTICIPANT: Oh, do this and do that, from the waitress at the restaurants. You weigh it, you know, see which one you think is whatever. But, take your doctor's information and like she says, stuff in the magazines and on television. If you've had a baby before, then you kind of know, you know.

MODERATOR: Okay.

PARTICIPANT: I get a lot of information from What to Expect When You're Expecting, that book.

MODERATOR: Okay.
1 PARTICIPANT: It's helpful.
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
13 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

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harm to your baby and still enjoy the important health benefits of eating seafood.

In our earlier discussion I think Rose and Edy had mentioned that their doctors or someone had said something about concerns about eating seafood at some point or another. For the rest of you, is this new information?

PARTICIPANT: This is new to me, because in the beginning of my pregnancy it was still summer and we live at the beach, and my husband was fishing every night so we were having fresh fish every night for dinner. You know, for a good month during the first part of my pregnancy, you know, we've had, you know, as a side dish we'd have fish or as a main course we would have fish because there was tons of fish. I didn't know about this.

MODERATOR: How about anymore?

PARTICIPANT: I wasn't aware of this either?

MODERATOR: Rose, you said your doctor mentioned something about swordfish?
PARTICIPANT: Swordfish was the only one I recalled him saying. He mentioned others, but that's the only one I can recall.

MODERATOR: Okay. But you said it had something to do with bacteria?

PARTICIPANT: Bacteria, I think.

PARTICIPANT: I just remember reading an article about mercury in certain fish.

MODERATOR: All right. So, here you are six intelligent, pregnant, women. You're reading these first couple of paragraphs. What kinds of things are you thinking reading that?

PARTICIPANT: Oh, my God. I hope I didn't eat this.

PARTICIPANT: I know, that's what I'm thinking. I'm my thinking, oh, my goodness. Did I do something wrong and how come I, you know -- I mean, I read a lot. My doctor has even told me, and when he tells me something new, you know I don't jump right on him. I go home. I find out everything. I do my research and everything. You know, and then I come back with my questions.
I have not -- you know.

PARTICIPANT: I read it and I say, boy, I'm glad I'm eating seafood. And then, as far -- in the positive side with the Omega III, gee, I maybe really maybe should try to eat some seafood. So, it's both negative and positive for me.

MODERATOR: Any other reactions to those first couple paragraphs? Kathy?

PARTICIPANT: Just that -- I know about the Omega III fatty acid helping with the nervous system. I didn't know about the immune system part, but I knew about the nervous system. That's why I tried to eat more, but now I look at it and say, oh God, I hope that, you know, I haven't eaten the wrong fish or anything.

PARTICIPANT: Well, there's good and bad in everything.

PARTICIPANT: Right.

PARTICIPANT: It seems like, you know, you want to be knowledgeable and read about everything and then I've heard on the flip side,
don’t read anything because you’re going to worry yourself to death. There are people from way back when have had babies, healthy babies, and they didn’t have any information. So, it just makes you wonder.

MODERATOR: Okay. Let’s go onto the next 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 as 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.

All right. So, you’ve read that information. What does that say to you?
PARTICIPANT: I'm thinking the environment and power plants and why are they dumping all these wastes in our oceans. That's where I am.

MODERATOR: Okay.

PARTICIPANT: I'm just thinking -- I'm hoping there's a list, you know, down here that will tell me that the fish that I'm eating (indiscernible). I mean, because, you know, it's saying -- I'm trying not to, you know, really look forward, because I know you're wanting, you know, prime information here. I'm thinking, you know, I'm getting -- I'm nervous. Thinking, you know -- and why isn't this information provided and where would you find this information?

PARTICIPANT: How come this isn't in the magazines or in the doctors' offices.

PARTICIPANT: How do we know that they just didn't make this up for us to read, also? For tonight, to get our reaction to the new information that's put out, too. So, don't worry yet.
MODERATOR: That's my job, scare pregnant women.

PARTICIPANT: I don't think they're going to stick six pregnant women in a room and do that.

MODERATOR: Okay. Any other reactions to what we've read so far there?

PARTICIPANT: Just makes you want to get more information on it, like she said, what fish, in particular.

MODERATOR: Okay. Let's read the very next section then. What are the risks for methyl mercury to my baby? Methyl mercury can be dangerous to the fetus because it effects the body's developing nervous system, which can result in learning disabilities later in life. It takes about six months for methyl mercury to be eliminated from the body. That's why safe seafood eating is especially important immediately before becoming pregnant, as well as
during pregnancy. The first trimester of pregnancy is a particularly critical period in a baby's development.

PARTICIPANT: My goodness. I know.

MODERATOR: What do you say?

PARTICIPANT: What do you say?

MODERATOR: Um-hmm. You've read this now.

PARTICIPANT: I'm still just really nervous, you know.

MODERATOR: Okay.

PARTICIPANT: With my last pregnancy, I craved shrimp. So, I started on my research, you know, to find out how harmful this is, because, you know, I thought -- it was three years ago. It's when all the dead fish were popping up on the Potomac, you know. I wanted to know what was happening then and if that could effect these shrimp that I was eating and stuff. Like I said, I did my research and everything seemed to be fine. Okay. It's fine. Go ahead and eat your shrimp. So, this wasn't available -- if shrimp's
effected by this, I wonder why it wasn't effected
all those years ago to me.

MODERATOR: Okay. What else? What are
the other reactions to this section?

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
is safe seafood eating? I'm curious to know what
they're --

PARTICIPANT: No seafood eating.

PARTICIPANT: What is -- yeah, because
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,
you know, now I'm trying to think, what have I
eaten, or you know, or what do I need to at.
Where am I going to find the information on fish?
I mean, because other stuff you can look on
your -- but you can't --

(Indiscernible, multiple speakers.)

PARTICIPANT: If you're eating fresh
seafood or fresh food, and it's good for you
and --

PARTICIPANT: Right. I thought I was
eating real healthy the other night, eating
salmon. I had some Friday night, a big piece
too.

PARTICIPANT: My mother-in-law made it
for dinner tonight. I didn’t eat it. She made
me some chicken. But, now, I read this and, you
know, I felt safe that I haven’t eaten any of
this, particularly because it takes so long to be
eliminated from the body. You know, like she was
talking about, I didn’t know I was pregnant and
in the summer we had a really bad time for
allergies, and all of a sudden I developed
allergies over the summer because of this
terrible weather we had. If it’s raining and I
would get these horrible headaches, and I was
taking allergy medicine and Tylenol 3 with
codeine like several times a week. It was when I
was pregnant and didn’t know it, but I mean,
that’s really short-term effects, not long term
PARTICIPANT: Yeah. You couldn’t --
you could have not even been planning to have
your baby and had the fish, and then it’s still
in your body three months later after you’re
pregnant.

MODERATOR: Okay. What do you think
about this first sentence where they say, methyl
mercury can be dangerous to the fetus because it
effects the baby’s developing nervous system
which can result in learning disabilities later
in life?

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
fish six months before she conceived the child?
I mean, how is that possible to determine that?

PARTICIPANT: Or that you ate it, not
knowing that you were pregnant, you ate the fish
that your husband just caught and it’s in your
system for six months while this fetus is
developing, and that's the most critical time is right there for the first trimester?

PARTICIPANT: I don't want to be paranoid about this thing.

PARTICIPANT: Like your controlling something, and like you said, back in the day they didn't have all this junk floating back out into our water everything was very natural. When they said fresh fish, it was fresh. You know, it wasn't a coal plant -- wasn't even a coal plant there that was putting a return flow back out into our water.

MODERATOR: Okay. Let's move onto to 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 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.

So, when you read that paragraph --
PARTICIPANT: It makes you want to see
the list at the bottom of the page.

MODERATOR: Okay. (Laughter.) The
what where? We haven't gotten there yet.

PARTICIPANT: Well, when she mentioned
it. No, I haven't read the last page; you can
see columns down it.

MODERATOR: You want to read -- you
want to see what --

PARTICIPANT: You want to find out more
information, what fish contain it, what has low
levels and none in them.

MODERATOR: Okay.

PARTICIPANT: Right now, it's like,
where are you going to find that? You know.
other than going home and pulling up the
Internet.

PARTICIPANT: How do you know -- I
mean, not know -- but how come certain fish would
have lower levels than other fish? I mean, if
one fish has a high level, why wouldn't they all?
Especially if they're all in the same, you know,
pond of water or body of water.

PARTICIPANT: Supposedly, it was talking about larger fish and eating a type of fish.

PARTICIPANT: A longer life fish.

PARTICIPANT: Right.

PARTICIPANT: So, they're eating fish that have already contained the mercury maybe.

PARTICIPANT: Also, it could -- how do you know where they all come from? Like this batch of fish comes out of this body of water.

This batch comes out of this body of water. If there's no coal plant or anything returning junk into this water, then these fish probably --

PARTICIPANT: Yeah, but I can't catch the fish for myself. I go to Giant and get them.

PARTICIPANT: But that's what I'm saying, for somebody that doesn't, you know -- I go to Giant and get mine or Costco and get the big thing of salmon.

PARTICIPANT: It seems like smaller 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
than the bigger.

MODERATOR: Monica?

PARTICIPANT: I mean, I'm listening to
everything you're saying, but the only thing
that's concentrating in my mind, or thinking
about, is, you know, when I'm going to the next
doctor visit to ask him, you know, is there a way
to check the level in your body or even see if
there is a way to speed the process of getting it
out.

PARTICIPANT: I wouldn't want to try
to --

PARTICIPANT: I'm not going to --

PARTICIPANT: I wouldn't want to know
at this --

PARTICIPANT: I'm not even going to,
not now.

(Indiscernible, multiple speakers.)

MODERATOR: One at a time. One at a
time. I'm sorry, Kathy and then Laura and
PARTICIPANT: I'll watch it from here on out, but I can't turn back time. I mean, it -- especially if it's something that's going to cause learning disabilities later, six years from now. I mean, it's not going to show up now, so --

PARTICIPANT: And you can do other things to help your child before then.

PARTICIPANT: Yeah. Just start paying attention.

PARTICIPANT: Breastfeeding alone helps that. But, I was going to say, anything in moderation, too. But, Ms. Monica -- seemed a daily bite of the day.

PARTICIPANT: Just saying, the blood test, you know.

PARTICIPANT: Don't worry about it.

PARTICIPANT: I wouldn't want to know at this point, because if my child didn't crawl at six months I'd panic. Oh, my goodness, it's the mercury; it's the fish.
PARTICIPANT: It's the fish.

PARTICIPANT: You're going to panic now, anyway.

PARTICIPANT: This child's doomed.

PARTICIPANT: I have to agree there. I don't want to know at this point because I can't turn around. It's already in there. So, I hope she liked it as much as I did when I ate it, but I mean there's nothing I can do.

PARTICIPANT: It's too late at this point, you know. It's like, I'm old, and they want me to have amniocentesis. I'm not going to do it.

PARTICIPANT: Right. That's what I was going to say. It's the same type of thing.

PARTICIPANT: It's the same thing. You know, I turned it down. The only factor is, I'm old. So, it's just not worth it to risk -- isn't worth it to me. You know, I'll just live with the way things are and hope for the best. So, you just can't -- you can't focus on it. You just can't.
PARTICIPANT: I agree with you.

MODERATOR: Okay. Let's move on then and we'll go to the section that says, 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 mackerel, 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.

Basically, we were talking before the group -- the heading, what fish have higher levels of mercury and shouldn't be eaten, should just be over the king mackerel, shark and swordfish. Then tuna steaks have moderate levels, so it's slightly less. And then tuna fish in a can is in a different category itself.
So, when you read all of this -- Monica?

PARTICIPANT: I'm thinking, you can't

catch these fish in the Bay. I am home free.

(Laughter.)

PARTICIPANT: I don't even know what

some of these are.

PARTICIPANT: I'm -- you know. I'm

just glad that these are fish that I don't eat,
you know.

MODERATOR: Okay.

PARTICIPANT: It's like, schew.

PARTICIPANT: Like, tuna fish still,

that canned tuna, yeah. I don't like that

statement that it has some in it, because you

think you're eating tuna fish, you think I'm

having a healthy lunch today.

PARTICIPANT: But it says --

PARTICIPANT: I know. You can have it

once a week with no problem.

PARTICIPANT: I'm sure that you don't

eat one and half six-ounce cans by yourself.

PARTICIPANT: Right. Right.
PARTICIPANT: You know, you can make a can --

PARTICIPANT: But see, when I had my first son I had gestational diabetes and I was put on a very strict diet. One of the things that I could eat was a can of tuna, and I think two tablespoons of mayonnaise, was my lunch every day for I think -- well, while I was -- five days a week. Okay, so every day, five days a week for lunch for, I think, when do you have the test?

At twenty-eight weeks you have the test, you know. So, for seven weeks of my pregnancy, because I delivered him early. You know, so for seven weeks I'm eating more than they recommend, right there.

PARTICIPANT: Well, can I ask you --

PARTICIPANT: He's dead.

PARTICIPANT: No, he's not.

PARTICIPANT: Oh, yes he is.

PARTICIPANT: Is he really?

PARTICIPANT: Yeah. He died, but I
can’t blame that on mercury. I mean, but yeah.

He died of SIDS.

PARTICIPANT: Aww.

PARTICIPANT: That’s what they’re saying. But, you know, they don’t know what causes that, which it could be, mercury, you know? It could have been high levels of that in his system. I mean, if you think about that.

But, for seven weeks I had a can a day. So --

PARTICIPANT: But I don’t know if they’ve had any research on mercury, have they?

I mean, about fish or anything?

PARTICIPANT: Right. So, I mean, you don’t know.

PARTICIPANT: Does it make you wonder now?

PARTICIPANT: I’m starting to, yeah. I probably will -- I will probably mention it to one of the ladies at the Falfidation (ph.) about that.

PARTICIPANT: Right.

PARTICIPANT: You know?
MODERATOR: What do the rest of you think? Rose?

PARTICIPANT: I didn't think about tuna fish. I mean, I thought it was something that was very healthy and something that should be eaten at least once a week for the protein and other sources. But reading this now, even though it says one can a week is fine, it still -- I thought of, what's going to happen? What are the possibilities? See, my son takes Ritalin, and it 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 seven years ago. So, to think about with this one, I mean, my pregnancy's been very hard. So, you know, it makes you wonder, what are you doing wrong or what can you do at this point to correct any mistakes that you've made.

PARTICIPANT: Then, with her tuna fish diet I wonder, because with my last one I was borderline gestational diabetes, and so they didn't put me on the diet. I was just humongous.
but my blood pressure was fine. But if there
were to put me on tuna fish, I don't even eat the
stuff, so I would hope they would come up with an
alternative for me.

PARTICIPANT: Did they give you other
choices besides tuna fish and you just chose to
eat that?

PARTICIPANT: I chose, yeah. It was
different. It was a menu of different items, and
it's like, you know, for me it was what was most
convenient. What was most convenient was taking
a can of tuna fish, my two things of mayonnaise
and my half an apple to work every day for lunch.
That was what was convenient for me. So -- and,
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
high quantities, you know. So, if that's what
it's doing, why aren't our doctors, you know,
especially here where you're saying that the Food
and Drug Administration, I mean, they're aware of
this. Why haven't all doctors, OB's --

PARTICIPANT: Like, why does he know

something --

PARTICIPANT: Why don't they tell us?

PARTICIPANT: Yeah. Because my first

son, you know, he would have been nine years

old -- wait a minute, yeah, nine years old this

past July. He would have been nine years old.

You know, now here's -- you know, this is my

fifth pregnancy and I haven't heard -- never,

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

have low levels of mercury or no mercury in them

and it lists a bunch of fish here. When you read

all of this information together about the

different fish and what has it and what doesn't,

what kinds of decisions do you, as an expectant

mother, then make? I mean, how do you use that
PARTICIPANT: Most of the fish I eat are in this category. I'm grateful that I don't eat mackerel, shark or swordfish, but I think I'm going to keep this fish on a low level. I'm not going to eat as much fish while I'm pregnant. But, then I'm thinking, then it'll be something else. You know, it's --

PARTICIPANT: I told you in the beginning, I heard good things about eating fish. That's what the books that I've read recently --

PARTICIPANT: Like the Omega III's.

PARTICIPANT: Huh?

PARTICIPANT: Like the Omega III acids that you get from them.

PARTICIPANT: Oh, yeah. Right. I hear it's good to eat fish. So, I started to think when I read this the other day that I'm going to start eating some fish, then you hear this today. So, like I said, you're going to hear good and bad in everything.

PARTICIPANT: It's always something.
PARTICIPANT: There's always something.

When my oldest son, he's seventeen, when he was a baby it was put them on their stomachs. If you put them on their back, they'll choke to death and they'll die. So, everyone put them on their stomach. Well, guess what? Now that my other son was born, put them on the back. He would not sleep on his back. So, I'm like wait a minute. This is ridiculous. I put him on his stomach, he went to sleep. I was like, you know what, my other one was fine. Next thing they'll do is tell us to stand them on their heads. So, you know, it's always something. They -- it just makes a cycle, I think.

PARTICIPANT: But me, reading this, even though these have low levels and no mercury in them at all, knowing that, you know, if you can eat enough of the low to make it medium or high. I probably won't eat any type of seafood for the rest of my pregnancy. You know, maybe a shrimp here or there because it's kind of hard to go -- to turn down.
PARTICIPANT: But that’s in moderation.

PARTICIPANT: Yeah. You know, I mean, I probably will just avoid it, you know, and I will be an advocate out there telling all pregnant women, stay away from fish.

PARTICIPANT: Let’s just hope no one starts to crave for fish.

PARTICIPANT: I will probably stay within -- they’re saying the amount that I eat now, but I ate during the summer a lot more tuna because I would just throw it on some lettuce and call it a salad. It was light. It was quick for work. It was done. So, now that I think about that, I did eat probably more than a can and a half in one week during the summer.

MODERATOR: Don’t be nervous.

PARTICIPANT: But, I mean, no, because I have -- like I said, I had my daughter four years ago and I don’t believe my eating habits changed much. I’m more lax this time, whereas I didn’t do sodas or anything with her. Now, this time I’ll drink sodas. So, you know, next thing
I know I turn the page and it's going to be something about the read meat that I've eaten and --

PARTICIPANT: Yeah. I'm wondering about the asterisk here.

PARTICIPANT: Yeah, what's that?

PARTICIPANT: I don't see any asterisk down there.

MODERATOR: The asterisk is the next page. It says, breaded fish sticks, fish sandwiches and imitation crabmeat are generally made from these fish and have low levels of mercury. It wasn't a trick there.

PARTICIPANT: No, no. I know. I was wondering for the next page.

MODERATOR: All right. So, some of you are saying -- I heard Monica say, I'm not eating fish. Shawna, where are you?

PARTICIPANT: It says, you know, I'm glad that I didn't eat mackerel or shark or swordfish, but I'm going to stay away from fish.

MODERATOR: Even the ones that have low
levels or no mercury in them?

PARTICIPANT: Yeah. Just because I
don’t, you know -- I’m not a big craver for fish
anyway. So, it’s not like I have to have to have
it. So, I’ll just wait until I’m --

PARTICIPANT: I have a question. What
about the fish that are not even listed on here,
because see, I was eating bluefish. They’re not
even on here.

PARTICIPANT: I have a question. What would you
assume about fish that aren’t on this list?

PARTICIPANT: They don’t have any.

PARTICIPANT: They’re not a problem.

PARTICIPANT: I’m assuming.

PARTICIPANT: Or they would’ve
mentioned it if it was really high.

PARTICIPANT: Or they would’ve
mentioned it.

PARTICIPANT: Right.

PARTICIPANT: It was just, maybe just a
trace and not important enough to actually list.

MODERATOR: Well, how about the
difference between fish that aren't mentioned at all and the ones that are listed as -- have low or no mercury in them. Is there any difference between them?

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 and it's not on here, I would look that up just to satisfy my own curiosity, because you can't change what you did in the summertime. It's not going to go away, but I guess just to satisfy the -- just to know.

PARTICIPANT: Some of the fish are listed that I had this summer, you know, but bluefish were one of the fish and it's not listed.

PARTICIPANT: I'd like to no which ones have no mercury out of these.

PARTICIPANT: Yeah, because then it would make you -- then you could get your good stuff with knowing that it's good.

PARTICIPANT: I'm glad we're talking
about this now. So, now that we know about it
we can be more aware of it.

PARTICIPANT: Now we can become one of
those women when somebody tells you that they're
pregnant, well, let me tell you what not to do.

(Laughter.)

PARTICIPANT: Watch the fish.

PARTICIPANT: This isn’t posted
anywhere. Stay away from mackerels.

MODERATOR: You’ve asked, how about the
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?

PARTICIPANT: Because we want to stay
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,
right?

PARTICIPANT: Um-umm.

PARTICIPANT: I mean, I don’t remember
reading anything about that.

MODERATOR: About mercury being good
for you?

PARTICIPANT: Right.

MODERATOR: Okay.

PARTICIPANT: The fish is good for you, or some seafood. So, why would we want even a low level? What if we eat like a lot of it, how --

MODERATOR: Is there a problem, do you think, eating fish with low levels of mercury?

PARTICIPANT: Yeah.

PARTICIPANT: Is it just the methyl mercury? Because it says it's a form of mercury called methyl mercury. So, these fish that have mercury, does that necessarily mean that it's the methyl mercury or is it just mercury? Does it make a difference?

MODERATOR: Okay. That's a good question. So, on the line where it says, what fish have low levels of mercury or no mercury in them, you would like to know is it a specific --

PARTICIPANT: Is it this bad mercury. Is it the one that can harm the fetus of the
pregnant woman? Is it all the same? Is it just
mercury? And, if it's just mercury, why did they
pull out methyl mercury?

MODERATOR: Okay.

PARTICIPANT: My reasoning for wanting
to know which have low and which have none would
be the fact that tuna, they're saying, you know,
tuna has a smaller amount of mercury in it than
in the other three that were listed. They
recommend that you only eat one and a half six
ounce cans a week. So, if it has a low level
and, okay, a portion is like this big
(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
eating the piece of the shark or the swordfish or
the mackerel? You know, so that to me would be
why I would want to know which ones have a low
level so that I could just eliminate them from my
diet and not eat a big enough portion to be
adequate to one of the others.

PARTICIPANT: Right. That's why I
said; I just wouldn't eat any fish at all, period. You never know how much of the low that you eat could be high.

PARTICIPANT: Does two lows make a high?

PARTICIPANT: Yeah, right. See what I'm saying.

PARTICIPANT: Exactly.

MODERATOR: Okay. Let's go onto the next page. We've already read that part about the breaded fish sticks; fish sandwiches and imitation crab meat are generally made from these fish and have low levels of mercury. How would you respond to them? Like that imitation crab meat?

PARTICIPANT: That stuff tastes pretty good. doesn't it guys? What do you think?

PARTICIPANT: I eat a lot of fish sticks. I like them.

MODERATOR: You do eat a lot of fish sticks?

PARTICIPANT: Um-hmm.
MODERATOR: Okay. So, how would you respond to that then, Shawna?

PARTICIPANT: I would respond by not buying any more fish sticks and substituting fish sticks for something else on the menu.

PARTICIPANT: Another question I have also, when I see this breaded fish sticks, you know, I'll sometimes buy breaded fish sticks to have on a weekend or a non-school day, you know, 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 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 what age is it then safe to give to your child?

PARTICIPANT: Right.

PARTICIPANT: Right, and for yourself.

PARTICIPANT: In the beginning, you mentioned nursing mothers. Well, I nurse my children. So, then should I stay away from these
fish, you know, the entire time that I'm nursing
my child? Does it pass through mother's milk?
 PARTICIPANT: See, that opens a whole
new door.
 PARTICIPANT: Yeah.
 PARTICIPANT: Do the children at home
stop eating -- like she said -- do the children
at home stop eating it?
 PARTICIPANT: Why do they serve it in
school?
 PARTICIPANT: Does it mess up their
development?
 PARTICIPANT: They get them fish
thingy?
 (Laughter.)
 PARTICIPANT: I mean, because our
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
develop their brain. You know, that's what
they're -- you know, and so they're still
developing. So, is this stuff getting into their
nervous system while it's still developing, because those things develop -- you know, for -- it's concerning to me.

MODERATOR: Let's read the next section, which says, if methyl mercury can be harmful to my baby, why isn't it harmful for me or the rest of my family?

PARTICIPANT: Oh.

MODERATOR: If you and the other adult 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 perfectly safe, fish with high levels of mercury should be eaten only once a month.

Does that section answer your questions?

PARTICIPANT: No. I want to know what it will do to me --

PARTICIPANT: Or to them.

PARTICIPANT: -- or what it's doing to my body, you know. What it's doing to my
children's body if they go over the recommended amount, you know? My husband, you know, he went through a time where, I don’t know, sometimes I think he’s pregnant because he’ll go through a time when he takes that premixed salad stuff and he’ll throw it in a bowl and he puts his tuna on top of it, and he seals it up and he takes it to work. Then he dumps his salad dressing on it and he eats it. He’ll do that everyday. But he 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 of times a week.

PARTICIPANT: I was doing it before I got pregnant because I was planning to get pregnant. As part of doing the Adkins Diet, you can have stuff like that with fish or your chicken, as much of that as you want to consume. So, I ate a lot of that bag of salad, can of tuna, hard-boiled egg, that was my lunch, or salmon or whatever, but at the same time I would make tuna fish salad and I was feeding it to him.
So, does it have anything to do with him by his eating so much? He's a big man. He'll eat two to three tuna sandwiches, which is well over a can and a half in one serving. In one serving, you know. Does that have anything to do with -- if that stays in my system for six months, does it stay in his system? Does it effect the conception time? Does -- what does it do?

MODERATOR: What does it do?

PARTICIPANT: I don't know. And we have little ones at home and it's easy to throw fish sticks and macaroni and cheese. You're tired. You're pregnant, you're tired, you want to go home and lay down. You don't -- we're not going home and making like a baked chicken and roast potatoes. But now you've got to wonder if you're damaging -- if your baby's going to have to take Ritalin or something else could happen.

If you're wondering why your daughter's bouncing off the walls, does it have something to do with that? Does that have anything to do with how they get sick a lot? Their immune system doesn't
get to be strong enough? There's more information on this mercury out there.

MODERATOR: Any other comments on that section?

PARTICIPANT: It's all been said.

(Laughter.)

MODERATOR: Okay. 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. Check with your state or 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 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. For further information contact EPA or the Food and Drug Administration.

PARTICIPANT: And it doesn't mean that
all fish are going to contain this mercury. You
know, someone, even one of those high -- one of
those mackerels or --

PARTICIPANT: King fish.

PARTICIPANT: Yeah. Or shark, I mean,
it doesn’t necessarily mean that they’re going to
have the mercury in them.

PARTICIPANT: Because it has to do with
where it came from, right?

PARTICIPANT: Right.

PARTICIPANT: So, that has a lot to do
with it too. So like, me -- I go to Giant or
Costco and get mine. There’s not going to be a
sign there that says this fish was caught in the
waters that contained mercury. So, I guess --


PARTICIPANT: Maybe if they put that on
there.

PARTICIPANT: I'm sure that -- right.

I'm sure now that maybe this will get noticed,
because they're obviously doing studies on it,
which is good because, being that I've been
pregnant before and I've eaten the tuna before
and, you know, things are just going to happen.
You can't hide from everything, you can't just
live off of water, which better come out of a
bottle, but you don't even know who put in the
bottle.

PARTICIPANT: Right.

PARTICIPANT: You'd make yourself
insane.

PARTICIPANT: We were drinking the
bottled water from Price Club, and it has arsenic
in it. So -- Crystal Geyser Water, they have --
sell --

PARTICIPANT: I mean, it's everything.
You think you're drinking bottled water. I
really don't know what's in this water that I'm
drinking. I mean, they haven't put this in that
study. It's not going to say arsenic on here.

PARTICIPANT: On one hand it's good to
know. I'll stay away from, and I'm glad that I
don't eat and haven't eaten the three, but I'm
not going to quit eating fish. I enjoy it and I
don't eat it everyday like I was, now. I, personally, will probably still.

MODERATOR: Okay. So, if you were developing a basic rule of thumb for pregnant woman in terms of using this information to give advice, what would that be?

PARTICIPANT: I would tell my friend; my doctors said don't eat swordfish, shark and mackerel.

PARTICIPANT: And why?

MODERATOR: And you would tell them why?

PARTICIPANT: Yes.

PARTICIPANT: I would too.

PARTICIPANT: I wouldn't go into the low levels; I would just state the facts.

MODERATOR: Okay.

PARTICIPANT: I would have liked to have this, which says exactly that, but it lists what you're safe with and what has little or no mercury in it, which would ease the mind of a lot of people. I think somebody -- I think it was
you, said everything in moderation would be safe, but it's nice to know that if king mackerel was your favorite fish, that's one thing you should eliminate for the time being, or until you know that you're not going to be pregnant, enjoy it at that time. Other than that, I have to agree with everything in moderation.

PARTICIPANT: For a pregnant woman.

PARTICIPANT: I think your doctor will even tell you that.

PARTICIPANT: A pregnant woman, when you crave something, you're not going to eat it in moderation.

(Laughter.)

PARTICIPANT: I know.

PARTICIPANT: But when I say moderation, I just mean that choices three times a week don't eat king mackerel. You have to -- go do something -- that's just like somebody who smokes. You might crave that cigarette the whole 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 for it.

You know, that’s -- well, that would be me and that would be what I would say to somebody.

MODERATOR: How about the rest of you? What would your advice be?

PARTICIPANT: My advice would be not to eat the mackerel, the shark and the swordfish. But, I would also put in a note; you should limit your intake of the tuna and then, you know, eat the rest of the fish in moderation. Don’t consume large quantities of fish. Don’t assume that you can.

PARTICIPANT: And if you want more information, check out these websites.

MODERATOR: Okay.

PARTICIPANT: I mean, but I would put wording on the whole entire line, you know. Eat the rest of it in moderation. This is your possibility. Then leave it up to each individual
person. But I'm not one to withhold information, you know.

PARTICIPANT: Put it out there, you have to make up your own mind as to what you're going to do, but it should be out there. And this was -- to my knowledge; this was not out there.

PARTICIPANT: This was not out there. Like I said, I mean, this -- pregnancy is not new to me. I got pregnant with my first one in 1990. That was ten years ago, you know, and I have never heard anything like this before. Fish was good for you.

PARTICIPANT: Right. That's what I'd always heard.

PARTICIPANT: I just read that too.

So --

PARTICIPANT: They're not saying that fish isn't good for you. It depends on what kind and how much.

PARTICIPANT: They're saying the methyl mercury is bad for you.
PARTICIPANT: But fish. They didn’t say. That’s what I’m saying. Get the warning, but this is not good, you know.

MODERATOR: Willis (ph.) what would you say? How would you summarize this information?

PARTICIPANT: I know looking at the list and everything in it; you’ve got to weigh the bad to the good. Because the Omega fatty is very important, then as a pregnant person or even non-pregnant person, you need to research that a little bit further and make sure that you’re eating what’s correct and try to avoid those that 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 also find out which foods or which fish are low moderate versus the no mercury.

PARTICIPANT: I don’t believe that fish -- that all the research should be left up to me though. Because if I have to -- okay, I’m going to have fish. Well, let me research this.

Well, you know, I also eat peanut butter and
jelly, so let me research peanut butter, and
jelly and there's bread there that I've got to
research. Okay, well, there's a glass of milk.
Let me research this milk. For dinner we're
going to have beef, so let me research beef. You
know, there's some vegetables thrown in here, so
I've got to research -- I could be spending my
entire pregnancy researching the foods that I'm
doing. I think when there's a problem with a
food, it should be made known to all OBs so that
it can be given out to the patients, so that I
don't have to spend my entire pregnancy
researching --

PARTICIPANT: And not just OBs. Making
it known -- everyone should know, because
(indiscernible).

PARTICIPANT: And especially if it's
affecting our young children, which on this last
page, you know, it leads me to believe that it is
affecting them. I mean, it says, you know, right
there. You know, the roads to the family and
that they should consume it in average amounts.
What is it doing if they're consuming it in more than an average amount? I mean, I come from a family where a lot of people eat a lot of crabs during the summer, you know what I mean?

MODERATOR: Edy, did you have something?

PARTICIPANT: What's it doing to us, I'm wondering.

PARTICIPANT: My question is, does the 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 done research on.

MODERATOR: How do you think this information should be gotten out to people?

PARTICIPANT: I think it should be out in pamphlets in doctors' offices, OB/GYNs.

MODERATOR: Okay.

PARTICIPANT: I don't think it's necessary to broadcast it on national television, but leaflets to pediatricians and OBs should be started first.
PARTICIPANT: Right, and then the magazines.

PARTICIPANT: And magazines and stuff.

PARTICIPANT: Word of mouth from doctors.

PARTICIPANT: I don't see that it shouldn't be in the papers or on the news. Why not?

PARTICIPANT: I mean, they put everything else on there. I mean, you hear about 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 concerns and everything else? Where does this balance out for you?

PARTICIPANT: It's the same as I just found out over the summer that Off is -- you shouldn't use on kids under three because it gives them brain damage. I didn't know that. I never used it, I used Skin So Soft. I mean, I
didn't use it for myself. I would offer that to someone else who might have been over, which I found out was safe. Other -- I found out just by word of mouth when I was looking for some Skin So Soft in the store.

That's just like anything else. It's just as important.

PARTICIPANT: I'm sure that a lot of people, you know, still don't reach things. I was talking to my sister and she was -- she feeds her son hotdogs all the time. It just really irritates me because my husband read where, you know, more than twelve hotdogs a month can cause cancer, you know.

PARTICIPANT: He did?

PARTICIPANT: Yes.

PARTICIPANT: Oh, great, because I just started liking hotdogs. It's one of my favorites.

PARTICIPANT: It's like -- it's that kind of thing too. So, not everyone has read that or heard that.
PARTICIPANT: I've heard other things about hotdogs and --
PARTICIPANT: High triglycerides or whatever in the salads.
PARTICIPANT: -- sun block and bug repellent on children under three. That stuff I did, but I researched that. I mean, I did. I took that on my own, because reading the back of it, you have a hard time when you're child is under two and you're trying to put bug repellent on her and you have to go somewhere or ask your doctor, which is pretty much what I did. I just threw the book away and said whatever. I asked a pediatrician, because if anybody's going to know, you put everything that you have -- you put your child in their hands and depend on them to know the answers.
MODERATOR: Okay. Let's said that you read an article that contained this kind of information in it in Redbook Magazine or Ladies Home Journal, or something like that. How do you think the general public would respond to that
kind of information?

PARTICIPANT: It depends on how it was worded.

MODERATOR: Okay.

PARTICIPANT: A lot of calls, I think. A lot of (indiscernible).

MODERATOR: By how it was worded, what do you mean by that, Monica?

PARTICIPANT: Well, I don’t think this has enough information. It doesn’t answer my questions.

MODERATOR: What are those questions that aren’t answered yet?

PARTICIPANT: My questions are, if it can cause learning disability due to the nervous system and all this kind of thing, in a developing child, what is it doing -- you know, okay -- this here, pregnancy here, was a complete surprise to me. So, will probably most definitely, God willing be my last pregnancy. Okay? So, that’s fine. So, then am I going to be safe eating fish in my house? Do I not have...
to worry about this article ever again?

So, my question would be, do I never
eat fish again because I'm left not knowing how
harmful it is to me, my family, my children, my
husband. I want to know what it is doing after
the fact. After this child is born, how will it
affect this child if it decides to eat fish at
the age of eighteen months or two years?

PARTICIPANT: And did we touch on
nursing mothers inside of that?

PARTICIPANT: No, we were going to.
MODERATOR: Okay. Did you see anything
about nursing mothers in here?

CHORUS: No.

MODERATOR: Okay.

PARTICIPANT: I'm curious because I'm
just now weaning my child.

MODERATOR: Okay. Any other unanswered
questions from the information that's been
provided here?

PARTICIPANT: I wouldn't say
unanswered, but I will go and look and read some
more. I think it gave me enough to know what I
should and shouldn't eat.

MODERATOR: This is an excellent time.

This is Dr. Alan Levy with the Food and Drug
Administration, the Center for Food Safety and
Nutrition and we asked him --

(Indiscernible, multiple speakers.)

MODERATOR: He's been back there

listening to your discussion. He has a few

things he'd like to add.

DR. LEVY: Well, first, I'd like to

answer any questions that people have. I'll tell

you a little bit about this and how we think --

let me give you some of the background, the

context here.

Mercury is for, a long time, is known
to be an environmental poison. It is not
terribly common in the environment. It's a
well-known environmental toxin. Both EPA and FDA
have essentially on the books that they're doing
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
regulated. That's actually the major source of
mercury into the environment is these smoke stack
emissions. EPA has been setting standards on how
much is allowed to be.

The way that mercury gets into people
is primarily through fish. FDA has action levels
of allowable levels of mercury that can -- that
are allowed to be in the fish. What has happened
in the past few years is that for the first time
people have done some large studies that have
looked specifically at the effects of mercury on
unborn babies and sort of the cognitive
developmental effects of mercury. These are very
difficult studies to do because you have to do --
you have to have large populations that consume a
lot of fish. They're not done, actually, in this
country. The two primary studies, one is done in
the --

(Whereupon Tape Side A ended. Begin
Side B.)
DR. LEVY: -- which is in the Indian Ocean, another one has been done in the Faroe Island which is off of Iceland. Anyway, these studies have shown that the effects of mercury are particularly important for the developing fetus. So, both FDA and EPA are taking this into account and we are essentially lowering the action levels in the smoke stack emission mercury.

MODERATOR: Does that make sense, the term lowering the action levels? Basically, the amount allowed?

PARTICIPANT: Um-hmm.

DR. LEVY: And FDA is considering some kind of public education activity to make people aware of this hazard and encourage people to avoid the kinds of fish that have more mercury in them.

Now, our dilemma, and the reason we're doing these groups, is we're interested in getting people to avoid the risk, but we would just assume not totally kill their fish.
consumption. There's lots of fish, which can be
eaten, with essentially no risk.

One of the things to reassure people
that it's pretty unlikely that you've done damage
here. These levels that we're talking about here
are already based on ten-fold safety factors.
So -- and they're also assuming chronic dietary
levels of consumption at that level. Really not
talking about, you know, where you have a week
where you ate two cans of tuna fish, that that in
itself is a risky thing.

MODERATOR: Or the summer when she's
eating the fish from the Bay and --

DR. LEVY: It is prudent, particularly
for pregnant women to avoid these high mercury
fish and moderate their tuna fish consumption,
but it's really not -- we're really talking about
chronic eating patterns here. We're not talking
about regulating if they eat on occasion, and
that's actually one of the things that we're
struggling with is how to communicate that idea
that what we're talking about is a sort of
chronic dietary pattern. You want people to be aware of that and to make changes in their dietary pattern if, in fact, they're at risk.

But, we're not really saying that if you happen to eat a piece of fish that that's a big deal in one-way or another.

MODERATOR: Go ahead.

(Laughter.)

PARTICIPANT: Well, what other side effects are there, besides the learning disabilities that you found in the studies that you've done so far?

DR. LEVY: Well, mercury passes the blood brain barrier and it has effects on the nervous system at really high levels. There have been some -- we have observed high level of mercury contamination happen only under industrial accidents, and there's been a few cases where mercury has gotten into the food supply through pesticides and things that are no longer allowed. We've seen really high levels of mercury poisoning. It has effects on the nervous...
system. You know, it causes paralysis, causes blindness, things of that order. But those are levels that are much, much higher than anything that people are likely to get unless they happen to be exposed to a really high level of mercury, which does not occur naturally.

PARTICIPANT: What's interesting is, you said the studies were done in these areas that are mostly Atlantic type people and their 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 factors as you would in densely populated areas.

DR. LEVY: See, the problem of mercury in fish, there's really two separate kinds of problems, one is commercial, meaning ocean fish, commercial is old fish that is caught in the ocean. The ocean has mercury in it in fairly low levels. Larger fish that live a long time and eat other fish, top of the food chain fish, concentrate mercury. That's why shark and
swordfish and king mackerel are really the very problematic species because those are at the top of the food chain. They’re big. With any fish caught in the ocean, it’s going to have trace amounts of mercury, but it’s going to be dependent on how old it is and how big it is. And it’s almost -- there aren’t like pockets of mercury contamination.

Freshwater fish is different. Freshwater fish is very dependent waters. There you do have particular waters where there can be, because of contamination and pollution issues, higher levels of mercury. That’s why most states will issue consumer advisories about mercury levels in their waters and advise recreational fisherman who are the primary people at risk there -- (tape trouble) -- and there are some populations which are subsistence fisherman that eat a lot of fish and those are populations that we actually worry about in respect to that. They eat a lot of fish. So, freshwater fish, it depends on where you catch it. You need to be
aware of what the status is of the waters.

Ocean fish are mainly a matter of size and type of fish. Most commercial fish is ocean fish. Farm raised fish because the water quality is controlled is almost never going to be a problem for mercury. Shellfish is not going to be a problem for mercury. It's the freshwater fish that are caught in high mercury waters, and it's the ocean fish which are large and live a long time. They concentrate the mercury. Those are the real two problems.

PARTICIPANT: My question is, okay, what type of damage -- you're saying here, you know, okay, the mercury is effecting the nervous system of the unborn child and then there's disability in the child. How positive -- I mean, how can you be assured that it's intrauterine that these children are being effected by the mercury and not at the age when they start eating the food at one and a half and two and three while they're still developing to get to this level? What is it doing to the child after
they're being born?

PARTICIPANT: And nursing too.

PARTICIPANT: Yeah, and during nursing, does it pass through mother's milk? I mean, how sure are you that it's happening intrauterine once the child's been born?

DR. LEVY: We're not necessarily sure about it. I mean, we assume that it is a problem for nursing women. Nursing women also have to -- are included here as people who should worry about it. It honestly does pass through the breast milk to the baby.

PARTICIPANT: So, it's still continuing --

DR. LEVY: The risk to the baby is a function of the developmental phase that he's going through or that she's going through, and brain development occurs a lot while still in the womb, but it occurs up to a couple of years. So, that's a particularly important time to limit exposure to mercury.

PARTICIPANT: So, through those years I
shouldn't feed my child these high levels --

DR. LEVY: You certainly -- yes.

PARTICIPANT: Now, what as an adult, you know, what can it do to -- well, okay, my daughter, you know, she's eight, okay?

DR. LEVY: Um-hmm.

PARTICIPANT: Is it affecting her? How is it affecting her? My husband, is it affecting him? How is it affecting him? Is that the reason why he can't remember I told him something?

(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 age of thirty-seven, the fact that he eats fish, because he is a game fisherman and a sports fisherman and he eats his catch, and so does his family?

DR. LEVY: Low levels of mercury are not much of a problem for adults or children above whatever age the brain stops developing.
PARTICIPANT: Around two.

DR. LEVY: Well, two is the main --

exactly where the cutoff is. Low levels of

mercury of the kind people are getting through

their diet are not associated with any known

effects in adults. It's very hard to identify

these effects. The way it was done in these

special studies, which are very difficult to do,
is that you actually look at and monitor the fish

consumption of the woman during the pregnancy and

you follow the child over a number of years and

six, seven years later you give them a battery of
tests and you correlate how well they do on the
test with how much fish their mother's ate when

they were pregnant. That's the effect that was

identified.

PARTICIPANT: You know that these women

you're doing the studies on are actually having

their fish with the higher concentration of the

methyl mercury.

DR. LEVY: Right. You basically

monitor how much mercury they were getting
exposed to and you see whether or not that
predicts how well the kids do on these tests at
six, seven years old.

PARTICIPANT: The areas that you did
the studies in, was it all of these children, or
was it a percentage -- was it a low percentage of
the children living in this area? Could they
have just been children who were going to have
learning disabilities to begin with? What was
the percentage?

DR. LEVY: The way these are -- these
are typical controlled scientific studies, so
it's not like we're talking about the effect
occurs one hundred percent of the time. What
we're really talking about is comparing the
conditions, and holding everything else constant,
is there a significant difference? A significant
difference is not necessarily a big amount, it's
enough that it's statistically unlikely to occur
by chance. It's based on that that you infer
that there's an effect. That's what we're able
to do, because we know that there's an effect.
It's really hard for us to, in any given case, identify whether a learning disability was due to. That's virtually impossible.

You have to do this kind of study where you have several hundred women, in one group that doesn't eat a lot of group, several hundred in the other group, and then you measure on average how well did the children do on the test. That's what it takes to be able to make this inference 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. But that's why we're quite prudent.

There are large safety levels -- safety factors built into these recommendations.

PARTICIPANT: I don't know. I guess now I'm more concerned about how the study was conducted to begin with, because now I'm thinking, what is the education level of these -- of the mothers and the fathers in these areas? Could they be the reason their children aren't as
smart as my child, because they didn’t teach them, their kids didn’t go to the right schools. I mean, it wasn’t like this study was done all in Annapolis, you know, where all the schooling’s the same, you’ve got primarily the same educated parents, and then you say, like you said, these couple of hundred with have the fish, this couple of hundred won’t and we’ll see the outcome in the study.

DR. LEVY: And we try to control.

These studies take into account, as much as they can, these obvious other factors that are going to contribute there. So, they try to control for the education and for a lot of things that they try to control for. These particular studies, you know, have been judged to be decent studies. It’s on that basis -- actually, these studies have been reviewed by the National Academies of Sciences. It’s based on their recommendation that we’re doing this and lowering the action levels in the smoke stack emissions and considering the public education, because the
people have evaluated these studies say that
these are reliable studies that we need to pay
attention to. So, we're relatively satisfied
with that.

It's true. It's always very
treacherous, very difficult to make some of
these -- these are a chronic effect that occurs
during a long period of time. There are many,
many other factors that are contributing to the
cognitive effects in children. To the best of
our ability we are trying to control it and make
some kind of inference here.

PARTICIPANT: And you're with the FDA?

DR. LEVY: Um-hmm.

PARTICIPANT: Why haven't -- what is
the FDAs plan as to getting this information out
to the general public and why has -- you know,
what's been taken so far, and why haven't any of
us, who obviously -- six of us here. All of us
probably have different OBs and pediatricians,
why don't any of us know about this study?

DR. LEVY: The real answer is that this
data has just recently been generated, and we’re responding to it. This data raised issues that we didn’t think it was as serious of a problem as it turns out to be. Previously we hadn’t thought it was necessary to alert the public to this particular risk. And we still don’t think it’s a particular risk for most people, except for pregnant women and their babies. The evidence is that it’s a particular risk for them. It’s not so much of a risk for other groups.

PARTICIPANT: Did you say, do you plan to notify OBs and pediatricians? I mean, because I am a nursing mother. My OB doesn’t notify me, but it would be really nice if when I went in to take my baby in for it’s two week appointment my pediatrician says, oh, by the way -- or some kind of literature.

Your first OB appointment, you go in and the doctor hands you all this literature, and even in the new literature I’ve gotten I never 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 possible risks. I mean, they have a full plate in many ways.

PARTICIPANT: A lot of things to warn you about?

DR. LEVY: They have a lot of things to warn you about, and there's competition to get on 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, it's hard because you have to compete with a lot of other risks to get on their agenda.

MODERATOR: I think it's important to point out here though that the reason you folks are here is so that they can find out what kind of information makes sense to you, what is clear and what isn't. So, they are developing information.

PARTICIPANT: Right.
DR. LEVY: This is the developmental stage to get something out, and hopefully this is going to be effective and useful.

PARTICIPANT: I just wanted to say, I don’t mean to change the subject but since you are here now, what about this hot dog thing? Because I’ve been getting -- I was never a big hot dog person, but just recently I get -- I mean, I go to the Amish market a lot and get fresh veggies and stuff, and they have these all beef hotdogs and my eighteen month old likes them, and I’m just wondering -- I just started to give her those. What’s the deal with cancer?

(Laughter.)

DR. LEVY: Hotdogs have nitrates in them, it’s a preservative.

PARTICIPANT: Even the ones that the Amish do?

DR. LEVY: I’m not -- I don’t know in your particular case, but many hotdogs use as a preservative nitrates. When you eat them they form nitrosamines. Nitrosamines are carcinogens,
but the levels of nitrates in hotdogs are controlled so that it's generally not considered to be a significant risk to eat.

PARTICIPANT: It's like the mercury thing, sort of?

DR. LEVY: In moderation to some extent. So, I mean -- there's lots of things in the foods we eat that are potentially toxic. You need to control -- I don't know what level of hotdogs would be the right amount, but hotdogs, because they have these preservatives. You probably wouldn't have a diet solely of hotdogs.

PARTICIPANT: My husband's one of eight and there's a million -- I have at least three or four birthday parties a month, and they always seem to have hotdogs for the kids. I just -- 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.

MODERATOR: Our time is almost up, so --
PARTICIPANT: I just have one thing.

Back to the fish thing here and a recommendation. When I go to my pediatrician’s office, if there’s a recall on an item they have it printed on a Xerox piece of paper and they hang it in a couple of different places in the office on the wall, just so people who really want to know what’s going on in the world can look at it and read it. What if you did the same with your warnings? You know, stick them on your OB -- you know, more doctors would probably be, okay, I’ll stick it up here and then if a patient reads it and asks a question then I can talk about it. You know, send it out like that kind of thing for ones who want to know and the see it on the wall, and then they can read it. I mean, I look at everything. I see something hanging --

PARTICIPANT: A brochure on the table.

PARTICIPANT: If there’s something hanging, I read it. Because obviously it’s there for a reason, they just don’t decorate the walls with these pieces of paper.
DR. LEVY: And you think that would help people change their diet?

PARTICIPANT: If I read that this and this and this have high levels of mercury, you know, may cause this and this, you know, this is not true for all fish when eaten in moderation, I would look at it and go, okay, I'm not going to eat these, but I know that I can eat these as long as I eat them in moderation.

PARTICIPANT: Right.

DR. LEVY: Well, good. This is the kind of information that we need to have to help us communicate effectively here. One of the questions that we have is when we tell you moderation, what do people think we mean when we say moderation? So, does that mean you should eat less than you're eating now, or -- what is moderation?

PARTICIPANT: Well, here you have specifically stated for the tuna fish; I would specifically state that because obviously you've done your research, you know what the moderate...
amount is on that. The others --

PARTICIPANT: I'd like to know which ones don't have any on it too instead of mixed in. That's another -- you know, it's important.

PARTICIPANT: You mentioned shellfish didn't seem to have as much, so there we would know that our crabs and our shrimp and, you know, things like that are going to be pretty much safe to eat and the others we should consume once every other week or so.

PARTICIPANT: I think a brochure made available to doctors, you know, because when they give you all this literature, you know, doctors generally aren't going to have time to sit down and discuss all this with you. If it's given as part of -- there's tons of other pamphlets available and if they put that in with it, they don't have to sit and discuss it with you. Just make it available for you and say, okay, and that flags you to know.

PARTICIPANT: Then the choice is yours.

PARTICIPANT: Right. You can decide.
PARTICIPANT: If it's out there, most women that are expecting are interested and will read. Especially if it has to do with something they eat a lot, that they are used to eating. You'd say, okay, this is a message on fish. Well, if you never eat fish, who cares? But if you eat fish, you're going to read this to see what it contains.

PARTICIPANT: And I wouldn't have consumed as much. You're saying freshwater, you know, like croaker and herring and blue fish were the fish that I consumed. Blue fish aren't even listed here. The others were in moderate. So, it's that kind of thing. I know to just avoid 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, you know.

MODERATOR: Okay.

DR. LEVY: Well, great.

MODERATOR: Well, thank you so much.

You've all been very informative. I really have
appreciated this. I would ask that you leave the
information sheets because we're still revising
them. Once you see information in magazines or
your doctor's office about methyl mercury and
fish, you can say, you know, I helped them design
this.

Kind of exciting actually when people
see that. So, if you want to check out at the
front desk with Julian and Crystal. And thank
you so much for coming.

PARTICIPANT: Thank you.

DR. LEVY: Thank you. This was really
very helpful.

MODERATOR: You can keep your name tags
if you'd like as a souvenir.

PARTICIPANT: Actually, I will take
mine home.

MODERATOR: Thank you and good luck
with all your babies.

(Whereupon the proceeding was
concluded.)

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