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BOB EDWARDS: "There's new evidence that toxic chemicals in food may harm babies while they're still in the womb. This has proven to be the case in animals. When you feed toxic chemicals to a female rat, for instance, the chemicals build up in the animal's fat and when it gets pregnant the chemicals enter the placenta and injure the fetus. Now, a new study, funded by the Environmental Protection Agency, suggests that human babies are developing subtle learning problems caused by low levels of toxic chemicals in their mother's diet. NPR's Daniels Wordling has more."

DANIELS WORDLING: "The chemical culprits, in this case, appear to be the widespread industrial toxins called PCBs and the food that appears to be hurting the babies in their mother's wombs is fish. Lake Michigan fish, to be specific.

"Now, PCBs as you may know, have been used for years in industries from paper mills to electric power plants. The chemicals have leaked into the food chain all across the United States, Great Lakes fish are especially affected and public health officials have been worrying about this for some years now because studies show that PCBs affect the central nervous systems in laboratory animals.

"Now, comes the human evidence. For several years, researchers from four universities have been following more than 100 women who eat Lake Michigan fish. They've been also testing the women's babies and researcher Joseph Jacobson, of Wayne State University, says the babies whose mothers ate the most PCBs before they were born, the babies who were exposed to the most PCBs during their prenatal lives, as scientists call it, those babies are developing subtle symptoms of brain damage."

JOSEPH JACOBSON: "The prenatal exposure seems to influence the infant's ability to process information. It suggests that even though we don't see massive brain damage or massive mental retardation, that there may be less dramatic effects on the ability to learn and acquire information."

DANIELS WORDLING: "Jacobson and his colleagues, including the University of Maryland's Greta (Fine), first started testing the women when they arrived at various Michigan hospitals to deliver their babies. The researchers ranked the women according to how much Lake Michigan fish they eat, at least four and half pounds per year, not so much, and according to how much PCBs they actually measured in the women's blood and in the baby's umbilical cords.

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"When the babies were just a few days old, the researchers discovered that the kids who had been exposed to the most PCBs in the room consistently weighed less than normal babies do. In addition, the babies didn't respond as well as most infants to certain reaction tests. That hinted that the PCBs might be causing health problems but the researchers couldn't really be sure because babies often outgrow minor abnormalities as they get a few months older.

"So, the researchers went back and tested the very same babies when they were seven months old. They gave them another standard development test which goes like this. The mother holds her baby up to a special box and the researcher, who is hiding behind the peep hole, shows the baby a picture in the box for 20 seconds. Then, the researcher takes the picture away, waits for about a minute and this time, shows the baby the old picture once again, plus right alongside it, a new picture that the baby has never seen before.

"Now, normally, babies usually will look at the old picture first, but just for a few moments and then they'll immediately shift their eyes to the new picture and stare at that one for a while. Psychologist Jacobson..."

JOSEPH JOCOBSON: "The fact that they spend more time looking at the new one tells you that they remember the one they saw a minute ago, that they are able to retrieve it from memory and that they are able to discriminate it, discriminate between the one they saw before and the one they're seeing now."

DANIELS WORDLING: "But the babies who'd been exposed to the most PCBs in the room did not respond in the normal way. They stared at the old picture just as long as at the new one. Why?

"The researchers don't really know why. It could be because the babies don't remember the old picture, or, maybe they can't tell the difference between one picture and another. But, in any case, the researchers do know this, other research shows that children who respond to the test like this, do not develop as well."

JOSEPH JACOBSON: "In previous studies, when seven months old performed this way, later, when they got IQ tests, that verbal IQ tests at age five and seven, they did more poorly. In other words, it's a test that predicts poor cognitive performance later on."

DANIELS WORDLING: "Jacobson stresses that the seven month old babies were not retarded. They didn't have severe learning problems but he says, something in the brain is clearly going wrong, so, he and his colleagues are testing the babies again now that they are four years old.

"If you're wondering, by the way, if you eat a lot of PCB contaminated fish, chances are, no, not unless you live in the Great Lakes region and catch a lot of your own fish because Great Lakes fish aren't that widely sold around the country. But, the study still has national implications. There is a slew of toxic chemicals in the national diet including pesticides and other poisons that cause central nervous sys-

tem damage in laborstory animals just as PCBs do. The new study raises the possibility that some of these poisons are also affecting the nation's children but reseerchers simply haven't looked for the right symptons until now.

"I'm Daniels Wordling in Washington."