



NEWS RELEASE

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State Health Department Announces Preliminary Findings in Blood Lead Level Study

BISMARCK, N.D. – People who eat wild game harvested with lead bullets appear to have higher levels of lead in their blood than people who don't, according to preliminary findings in a study conducted by the North Dakota Department of Health and the U.S. Centers for Disease Control and Prevention (CDC).

The study tested blood collected from a total of 738 North Dakotans in late May and early June 2008, according to Stephen Pickard, M.D., epidemiologist with the Department of Health. In September, each participant received a letter with his or her blood lead level, as well as information to help them interpret the results and a phone number to call if they had questions.

“In the study, people who ate a lot of wild game tended to have higher lead levels than those who ate little or none,” Pickard said. “The study also showed that the more recent the consumption of wild game harvested with lead bullets, the higher the level of lead in the blood.”

The correlation is statistical and adjusts findings for other potential sources of lead exposure; consequently, some individuals with substantial wild game consumption may have lower blood lead levels than some other individuals with little or no wild game consumption.

The lead levels among study participants ranged from none detectable to 9.82 micrograms per deciliter. Wild game consumption among study participants ranged from zero to heavy consumption. Some study participants had no identifiable risk factors for lead exposure while others had more than one potential risk factor for lead exposure.

“No single study can claim to be the final answer; however, this represents the best information we have to date to guide policy recommendations,” Pickard said. “Because we know that lead exposure can cause serious health problems, especially for children and pregnant women, we are providing more definitive guidelines for hunters and others who may eat wild game shot with lead bullets.”

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Based on the results of the CDC blood lead level study and a Minnesota study looking at how different types of bullets fragment, the North Dakota Department of Health has developed the following recommendations to minimize the risk of harm to people who are most vulnerable to the effects of lead:

- Pregnant women and children younger than 6 should not eat any venison harvested with lead bullets.
- Older children and other adults should take steps to minimize their potential exposure to lead, and use their judgment about consuming game that was taken using lead-based ammunition.
- The most certain way of avoiding lead bullet fragments in wild game is to hunt with non-lead bullets.
- Hunters and processors should follow the processing recommendations developed by the North Dakota Department of Agriculture.
- If food pantries choose to accept donated venison or other wild game, they should follow these recommendations:
 - Shot with lead bullets – Accept only whole cuts rather than ground meat. (Studies indicate that whole cuts appear to contain fewer lead bullet fragments than ground venison.)
 - Shot with bows – Accept whole cuts or ground meat.

“We are providing these recommendations so that hunters and others who consume wild game can make informed decisions,” Pickard said. “Over the next year, we plan on working with the departments of Agriculture and Game and Fish to conduct further testing of venison to evaluate the cleaning and processing guidelines issued earlier.”

In late March 2008, the North Dakota departments of Health, Agriculture, and Game and Fish advised food pantries across the state not to distribute or use donated ground venison because of the discovery of contamination with lead fragments. A few weeks later, Minnesota made a similar advisory after laboratory tests discovered lead in venison that had been donated to food pantries in Minnesota. At that time, the North Dakota Department of Health asked the CDC for assistance in conducting the blood lead level study.

In October, the Minnesota Department of Natural Resources released results of a study to determine how bullets commonly used for deer hunting might fragment. The study indicated that lead particles commonly are found farther from the wound channel than previously thought and that the number of lead fragments varies widely by bullet type. In addition, the study indicated that most lead particles in venison are too small to see, feel or sense when chewing.

Pregnant women and young children are especially sensitive to the effects of exposure to lead because they absorb most of the lead they take in, and the brains of infants and young children are still developing. For children 6 and younger, any exposure to lead is considered too much. Although lead is also toxic for adults, they are less sensitive to the effects of lead and absorb less of the lead they take in. The following health effects often result from exposure to lead:

- In young children, lead exposure can cause lower IQs, learning disabilities, stunted growth, kidney damage, attention deficit disorder (ADD) and attention deficit hyperactivity disorder (ADHD).

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- In pregnant women, high lead exposure can cause low birth-weight babies, premature births, miscarriage and stillbirth.
- In adults, lead can cause high blood pressure, hearing loss and infertility.

A fact sheet and other information about the lead-in-venison issue is available on the North Dakota Department of Health's website at www.ndhealth.gov/lead/venison. Information about the Minnesota bullet study is available at www.dnr.state.mn.us/hunting/lead/index.html.

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