

# Prion Disease: Learn the Facts. Avoid Exposure.

*[Announcer] This podcast is presented by the Centers for Disease Control and Prevention. CDC – safer, healthier people.*

[Christopher Cox] Hello. I'm Christopher Cox, a health communications specialist at CDC. With me today is Joe Abrams, a scientist in the Division of High-Consequence Pathogens and Pathology. Joe studies prion diseases and is here to discuss a new study that was recently published in the Journal of the American Dietetic Association. It examines travel, hunting, and eating venison in relation to prion diseases. Welcome, Joe.

[Joe Abrams] Thanks, Chris. Glad to be here.

[Christopher Cox] Joe, tell us about your study.

[Joe Abrams] There are some activities which may put people at risk of exposure to prion diseases. Our study describes the results of a large survey that asked Americans about behaviors that could be linked to prion disease exposure.

[Christopher Cox] What are prion diseases?

[Joe Abrams] Prion diseases are a group of rare brain diseases that affect humans and animals. When a person gets a prion disease, brain function is impaired. This causes memory and personality changes, dementia, and problems with movement. All of these worsen over time. These diseases are deadly. It can take from a few months to several years, but prion diseases always lead to death.

[Christopher Cox] And what are some prion diseases people might have heard of?

[Joe Abrams] One that people might recognize is bovine spongiform encephalopathy or BSE. Many have heard this referred to as mad cow disease. It's a disease that people can get from eating beef that came from an infected animal.

[Christopher Cox] Is there another name that's used when humans are infected?

[Joe Abrams] Yes. When humans get the disease, it's known as variant Creutzfeldt-Jakob disease or vCJD. So far, most cases have originated in the United Kingdom and other European countries. These diseases have become very rare in recent years.

[Christopher Cox] That's good to hear. Tell us a little about chronic wasting disease.

[Joe Abrams] Chronic wasting disease affects wild animals such as deer, elk, and moose in certain areas of the U.S. Here's the thing about this disease. As far as we know, no humans have gotten it, but it's possible that could change.

[Christopher Cox] And, that brings us to your research, which looked at BSE, vCJD, and chronic wasting disease. Tell us about some of the activities that may put people at risk for these diseases.

[Joe Abrams] As I mentioned earlier, BSE and vCJD were first reported in the U.K. This is where most cases have occurred. We have seen cases in other European countries, but in many of these cases, the infection may have actually occurred in the U.K. So, anyone who has spent a considerable amount of time in the U.K. or lived abroad may face an increased risk for these diseases.

[Christopher Cox] Has a U.S. resident ever been infected?

[Joe Abrams] Here in the U.S., we've seen three cases of vCJD in people who previously lived abroad. Two of the people who got sick were infected in the U.K. They lived in that country between 1980 and 1996. This was a time when the risk of exposure to BSE from eating beef was at its highest. The other case was a person who emigrated to the U.S. from Saudi Arabia. It's likely this person was infected by eating beef exported from the U.K. to Saudi Arabia.

[Christopher Cox] What does that mean for U.S. residents who have spent a considerable amount of time in the U.K. or lived abroad? Could they become ill?

[Joe Abrams] As I noted earlier, there can be a long time between getting the disease and when symptoms begin. This can take anywhere from a few months to several years. So, it's conceivable that there are people who are infected and don't know it. We likely wouldn't be aware of any illness until the symptoms begin. Despite this increased risk, it's important to note that the overall risk of prion disease infection remains very small, even for those who have traveled extensively to the U.K. or lived abroad.

[Christopher Cox] What's the current situation? Should I alter my plans to be in the U.K. or Europe because of potential prion exposure?

[Joe Abrams] Extensive disease control procedures in the U.K. and other European countries have drastically reduced the number of cattle with BSE, and rigorous testing is conducted to prevent any diseased beef from entering the food supply. It's good for travelers and others to be educated, but at this time, there's no reason to alter travel plans or avoid beef consumption due to risk of prion exposure.

[Christopher Cox] Joe, I notice that the title of your article includes hunting and eating venison. Do those activities put people at risk for prion diseases?

[Joe Abrams] As I noted earlier, chronic wasting disease is found among deer and elk in certain areas of the U.S. You're probably aware that these animals are sought after by hunters. Many hunters consume the meat from these animals, which is known as venison. Often, the infectious material that causes chronic wasting disease may be present in a deer carcass, even after death. So, a hunter who eats the deer meat could be exposed to the disease.

[Christopher Cox] Is eating meat from infected animals the *only* risk of exposure hunters may face?

[Joe Abrams] No. Stripping, cleaning, and other similar activities may expose hunters to the infectious material.

[Christopher Cox] You mentioned that chronic wasting disease is found among deer and elk in certain areas of the country. What are those areas?

[Joe Abrams] The disease is most commonly found among free-ranging deer and elk in northeastern Colorado, southeastern Wyoming, and southwestern Nebraska. There have been cases outside of these areas, but for most of the country, chronic wasting disease doesn't seem to be present. We encourage hunters to check with their state wildlife agencies to identify areas where chronic wasting disease occurs. In these areas, simple precautions can help protect hunters from potential exposure.

[Christopher Cox] What types of precautions are we talking about?

[Joe Abrams] Hunters should avoid eating meat from deer or elk that appear to be sick. Before consuming the meat, consider having the animal tested. Information about testing is available from most wildlife agencies. Hunters should also avoid handling or eating brain or spinal cord tissues from any deer or elk. Finally, those involved in field dressing carcasses should wear gloves and bone-out the meat from the animal.

[Christopher Cox] That's very helpful. How common are prion diseases in humans?

[Joe Abrams] Human prion diseases are very rare. Research tells us that it's not easy for these diseases to move from an animal to a human. However, the activities which may put people at risk of exposure to prion diseases are quite common. We found that three of every 10 respondents had traveled to Europe in the past 30 years. One out of every five had ever hunted for deer or elk. Two out of every three had ever eaten venison. Given the large number of Americans who fall into these categories, continued prion disease surveillance is very important.

[Christopher Cox] Where can listeners go to get more information about prion diseases?

[Joe Abrams] Listeners can go to [www.cdc.gov](http://www.cdc.gov). In the A to Z Index at the top of the page, click on "P." The link for prion diseases can be found alphabetically on that page.

[Christopher Cox] And where can they get more information on the study itself?

[Joe Abrams] The study can be found in the June 2011 issue of the Journal of the American Dietetic Association. The abstract is available online at [ADAJournal.org](http://ADAJournal.org).

[Christopher Cox] Joe, thank you for your time today.

[Joe Abrams] My pleasure.

[Announcer] For the most accurate health information, visit [www.cdc.gov](http://www.cdc.gov) or call 1-800-CDC-INFO, 24/7.