

# Chronic Wasting Disease is Out of Control



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**I**f you've grown up in Alberta I can guarantee you know somebody that hunts. For me, that somebody is my father. Our family has a long history of enjoying the outdoors and our history includes foraging and eating food that nature provides us with. Although I never hunted myself, I have had plenty of experience with foraging and fishing. As a kid, I cherished these trips and treated mushroom picking as an extreme game of hide and go seek. As I got older, I grew to realize that those long car trips to go fishing or foraging were just another excuse to spend a day together as a family outside. It was (and still is) humbling to go into this expansive wilderness and realize just how vulnerable and fragile you are, to realize just how easily you could get lost, or hurt, and be hundreds of miles from any sort of help. For my father, hunting is just another way to escape to the wilderness. Whenever he comes back with an animal, he carefully partitions the meat and gives it out to family and friends. I remember fondly the days when I would come home to a simmering pot of deer stew, usually made with some dried mushrooms that we had foraged the summer before. I would look forward to the fall when my father and his friends would come home from the hunt, hoping for some moose we could make jerky with. The meat was always much more flavourful and added a depth to every dish. The extra work and care it took to prepare a dish always made it taste that much better.

When I struck out to live on my own, I was shocked to learn that the majority of Albertans do not obtain their game meat by hunting. Rather, they purchased their “wild” game from a farm. To me, the practice of game farming seemed contrary to the very meaning of wildlife. Little did I know that this practice has already placed Albertans' health and lives at risk and has serious implications for the preservation of our wildlife in the future.

## The crux of the problem

Game farming is problematic for several reasons. Many aspects of it are unethical such as keeping animals which historically were dispersed over large expanses of land confined in unnatural densities. Keeping big game requires wildlife fences which blocks the movement and migratory habits of other animals. Wild animals are harder to handle and so tranquilizer use is common. The collection of body parts such as velvet antler requires tranquilizing the animals and sawing healthy live tissue off the animal. This is often done without the use of painkillers when consumers decide that drugs contaminate the final product.

However, one of the biggest concerns surrounding game farming is its threat to human health. This is because concentrating animals when they previously had been dispersed over large expanses of land drastically alters natural disease dynamics. Some 20 bacterial, viral, prion, and fungal diseases and approximately eight internal and external par-

asites are known to have affected game farmed animals; some of these are transmissible to humans. When game farming was legalized in Alberta in 1987 many of this new breed of farmers imported stock from other provinces and the United States. This importation introduced diseases into farmed populations of deer and elk. This has resulted in the spread of these diseases to wild populations of cervids (deer, elk, moose and caribou); this has the potential to spread to human populations as well. Chronic Wasting Disease (CWD) is one disease which, if spread to humans, would have devastating impacts on the general public.

## Chronic Wasting Disease

Many people remember when the first case of “mad cow disease” or Bovine Spongiform Encephalopathy (BSE) was found in Alberta cattle in 2003. It belongs to a family of diseases known as transmissible spongiform encephalopathies (TSEs). These diseases wreak havoc on the nervous system by creating small pores in brain tissue. This family of diseases is linked to prions, which are misshapen small pieces of protein. Although humans cannot directly contract BSE, eating BSE-contaminated beef and nerve tissue can lead to Creutzfeldt-Jakob disease, which is the human version of the disease. Chronic Wasting Disease (CWD) is the elk, moose, and deer version of mad cow disease. CWD is fatal in all cases and there is no treatment or vaccine.

One of the most alarming aspects of

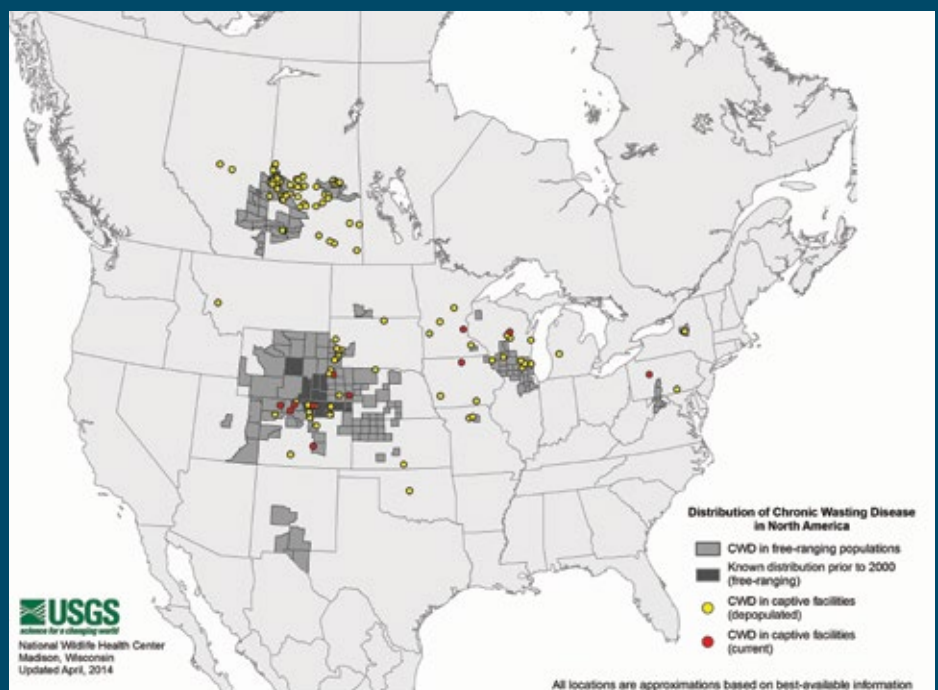
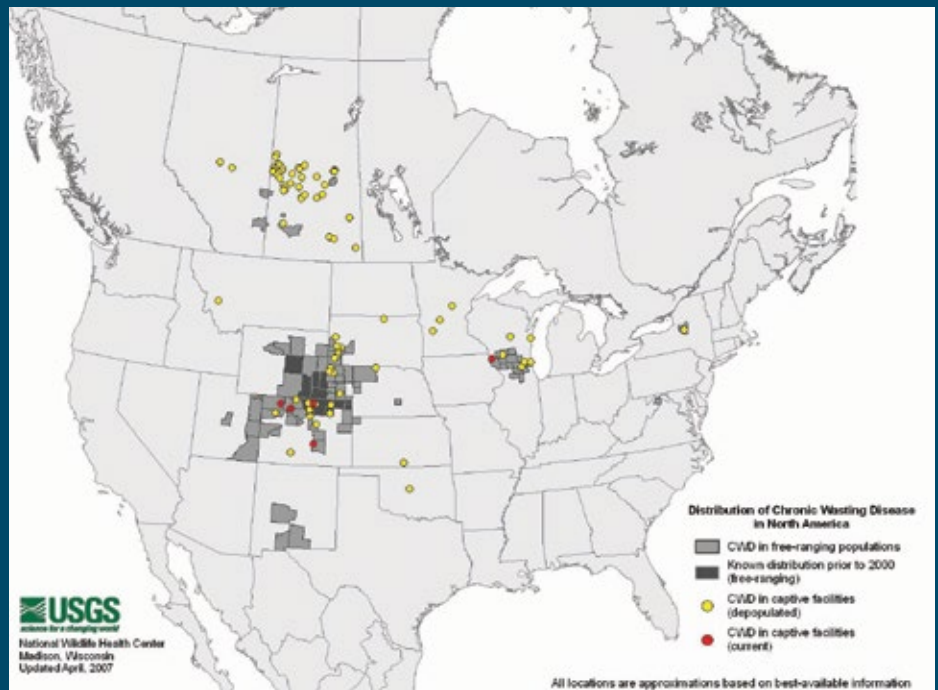
CWD is the manner in which the disease spreads. Unlike BSE, which can only be spread from the consumption of nerve tissue, both direct (animal-to-animal) and indirect environmental transmission of CWD is possible. Direct animal transmission occurs when the infectious agent is shed in faeces, urine, saliva and blood. Indirect transmission of CWD is also possible. Prions may enter the soil from dead animals or decomposing remains and can be preserved in soils. They hold onto clay particles so well that they can stay in surface soils for up to two decades and are available to re-infect deer as they graze.

There is also the concern as to what will happen when CWD jumps the species barrier again and becomes transmissible to cattle and/or humans. CWD has already jumped the species barrier to moose and has the potential to spread to other species. BSE (mad cow disease) was not known to infect humans until it jumped the species barrier some 20 years ago and killed over 200 people in Britain and Europe. If CWD is able to pass indirectly from animal to animal, what will happen when it passes onto the human population? The thought of a disease that has no cure or vaccination, can be passed on indirectly, and is fatal in all cases is frankly terrifying. The potential costs to our public health system and the burden to our society would be tremendous, perhaps insurmountable.

As of 2015, the Canadian Food Inspection Agency (CFIA) has declared the situation “out of control” in Alberta and Saskatchewan and apparently has pulled back from further attempts at eradication. This is an irresponsible decision to say the least. Professionally handled eradication that removes entire bodies and disposes entirely of any that indicate CWD must be implemented. We must also encourage culling CWD-infected animals by natural means. This requires redeveloping natural predator/prey relationships in infected areas. It would include stopping the wolf cull and rein-

## Distribution of Chronic Wasting Disease in North America, 2006 to 2014.

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These two maps prepared by the National Wildlife Health Center, an agency of the US Geological Survey, illustrate the spread of chronic wasting disease in Canada and the United States between 2006 and 2014.

roducing wolves into areas where they historically existed. This could remove infected animals at far less cost and possibly greater efficiency than through expensive culling programs. Regardless, immediate actions must be taken to pre-

vent further spread of this epidemic before the potential risk of CWD spreading to humans becomes a tragic reality. I shudder to think what may happen if we don't act now. 🐾