

# Does "Mad Deer" disease pose a public health threat?

By Steve Jones, Conservation Editor for [Outdoor Guide Magazine](#)

Mad Cow disease was discovered in 1986. Experts said it couldn't affect humans,<sup>1</sup> claiming an "interspecies barrier" blocks prion diseases from jumping one species to another.

Nine years later those experts had to eat their words while hundreds of people died, millions of cattle were destroyed, and the global beef market was rocked.

Chronic Wasting Disease (CWD), like Mad Cow, is a prion disease. These behave very differently than bacterial or viral diseases. They attack the brain, and are 100% fatal. They do their nasty work slowly.

CWD has jumped species, but so far only in the laboratory. It may never jump to other species outside of the lab, but the experts make no promises. Instead they say things like:

- "...results indicate that the CWD prion has the potential to infect human CNS and peripheral lymphoid tissues and that there might be asymptomatic human carriers of CWD infection."<sup>2</sup>
- "...there is accruing evidence for the trans-species transmission of prions, with potentially grave consequences for animals and humans."<sup>3</sup>
- "... (CWD) of deer and elk is a widespread health concern because its potential for cross-species transmission is undetermined."<sup>4</sup>
- "...years of continued follow-up are required to be able to say what the risk, if any, of CWD is to humans."<sup>5</sup>
- "...given uncertainties about the incubation period, exposure, and clinical presentation, the possibility that the CWD agent might cause human disease cannot be eliminated."<sup>6</sup>
- "...data on CWD prions and experience with other animal prion diseases suggest minimizing human exposure to these agents is prudent."<sup>7</sup>

No study says the risk is zero.

---

<sup>1</sup> [http://news.bbc.co.uk/onthisday/hi/dates/stories/may/16/newsid\\_2913000/2913807.stm](http://news.bbc.co.uk/onthisday/hi/dates/stories/may/16/newsid_2913000/2913807.stm)

<sup>2</sup> <https://prion2015.files.wordpress.com/2015/05/programguide1.pdf> page 19 (2015)

<sup>3</sup> <http://jvi.asm.org/content/87/4/1947.full> (2013)

<sup>4</sup> [http://wwwnc.cdc.gov/eid/article/13/6/07-0186\\_article](http://wwwnc.cdc.gov/eid/article/13/6/07-0186_article) (2007)

<sup>5</sup> <http://www.cdc.gov/prions/cwd/transmission.html> (2015)

<sup>6</sup> [http://wwwnc.cdc.gov/eid/article/12/10/06-0019\\_article](http://wwwnc.cdc.gov/eid/article/12/10/06-0019_article) (2006)

<sup>7</sup> Pending paper not yet online, summary quoted in [April 2016 SCWDS Briefs \(page 7\)](#) (2106)

Mad Cow cleared the "interspecies barrier" not just once—but 229 times we know of.<sup>8</sup> And that was just with humans. Each representing a lingering and gruesome death.

It also infected multiple species of zoo animals fed Mad Cow infected beef. Even domestic cats eating commercial cat food contaminated by Mad Cow caught the disease and died.<sup>9</sup>

So take claims about the strength of that "interspecies barrier" with a grain of salt.

With Mad Cow the damage is limited because it is not contagious. It is transmitted only by eating infected tissue, not by contact.

Here's the scary part: CWD is different. It's contagious by contact. Mad Cow was not.

Let that sink in.

Sure, the risk CWD will jump species seems low. It may never happen. We just do not know.

But there are some things we do know. Right now, in 21 US states (including Illinois and Missouri) and two Canadian provinces:

- Infected deer spread persistent infectious CWD prions on the soil.
- Some cattle graze CWD contaminated pastures.
- Some families eat CWD infected venison.
- Some farmers likely grow plants in CWD contaminated soil, and those plants can take up the prion.<sup>10</sup>

All while the canned hunt industry resists regulations needed to fight CWD, assisted by misguided but enthusiastic accomplices in the legislature and the courts.

These policy makers act as if CWD is guaranteed to pose zero threat to humans, cattle<sup>11</sup> or other species. They place the profits of an industry selling "no kill/no pay" opportunities to kill confined animals above the public interest in healthy wildlife. Even above public health itself.

No matter how low the risk, the stakes are enormous. Public policy should reflect that fact.

CWD is relentless. It is slow, but once established tends to grow geographically and in prevalence. Known management tools show some success at limiting and slowing growth, but only while

---

<sup>8</sup> <http://www.cjd.ed.ac.uk/documents/worldfigs.pdf> (2016)

<sup>9</sup> <http://www.ncbi.nlm.nih.gov/books/NBK221307/table/ttt00005> (2003)

<sup>10</sup> <http://www.sciencedirect.com/science/article/pii/S2211124715004374> (2015)

<sup>11</sup> <http://www.ncbi.nlm.nih.gov/pubmed/22991389> (2012)  
[http://www.ars.usda.gov/research/publications/Publications.htm?seq\\_no\\_115=149095](http://www.ars.usda.gov/research/publications/Publications.htm?seq_no_115=149095) (2003)  
"... the disease has been experimentally reproduced in cattle.." [cwd-info.org/faq/#accordion-1-t4](http://cwd-info.org/faq/#accordion-1-t4)

prevalence is low. As prevalence and range increase, management becomes less effective and more expensive. Eventually all you can do is document the spread.

Who pays the price? Both in dollars and health risk? You. And me. Taxpayers. Citizens. Hunters and non-hunters alike.

Infection rates inside some fences have hit 80%.<sup>12, 13</sup>

For wild deer, the worst is a Wyoming herd that hit a 57% prevalence in 2011.<sup>14</sup> Experts now predict that herd may go "...virtually extinct" due to CWD.<sup>15</sup>

Arkansas discovered a major outbreak last year that is already 23%.<sup>16</sup> Wild adult bucks in part of Wisconsin are infected at a rate over 40% and rising.<sup>17</sup>

At those levels management options are bleak.

Quick action by the MDC has helped hold the rate very low in Missouri. The narrow window of opportunity to control CWD here is still open.

The canned hunt industry sued for relief from MDC regulations designed to help protect wild deer from CWD, and they won. The court has essentially blocked the MDC from carrying out its constitutional mandate regarding wildlife.

The first Missouri cases of CWD appeared in two canned hunt pens. One in 2010 and another 2011. Then in wild deer within 2 miles of one of those pens in 2012.<sup>18</sup>

All this after about a decade of testing over 26,000 wild deer statewide found no CWD. Zero.

The source of a CWD outbreak can never be proven. Certainly not all of them come from the canned hunting industry. But outbreaks starting in or near a confined cervid operation is a

DEER FACILITIES WITH KNOWN ESCAPES FROM Jan2014 TO 04/19/2016					
COUNTY (Red = County CWD Positive) (Yellow = County in CWD Management Zone)	DATE	Incidents	# KNOWN ESCAPED DEER	STILL MISSING (red = >0)	DISPOSITION OF DEER
ADAIR	SPRING	1	6		2 RETURNED, 4 SHOT & KILLED
BARRY	11/5/2014	1	1		DEER SHOT BY AN ARCHER
BATES	11/?/2015	1	2		RETURNED SAME DAY
BOLLINGER	?/2014	1	1		SHOT DURING DEER SEASON
CAPE GIRARDEAU	2014	2	3	2	1 RETURNED, 2 STILL MISSING
CEDAR	10/?/2014	1	1		RETURNED FOLLOWING AM
CLARK	2014	6	42	8	42 ACCOUNTED FOR, 8 STILL MISSING
CLAY	4/14/2015	1	1	1	STILL MISSING
CRAWFORD	12/24/2015	1	2	2	2 STILL MISSING
DAVISS	2014/2015	2	2	1	1 RETURNED, 1 STILL MISSING
GASCONADE	09/?/2014	1	1		SHOT AND KILLED
HOWELL	11/1/2016	1	7		6 RETURNED SAME DAY, ONE 3 WEEKS LATER
JEFFERSON	2014	3	3	2	1 RETURNED 06/02/2014, 2 STILL MISSING
KNOX	5/19/2015	1	1	1	STILL MISSING
LACLEDE	9/24/2016	1	2	2	STILL MISSING
MACON	2014	2	3		RETURNED
MONITEAU	03/?/2014	1	2	2	STILL MISSING
MORGAN	2016	2	26	6	19 RETURNED, 1 SHOT, 6 STILL MISSING
PHELPS	11/1/2016	1	2		(Red Deer) RETURNED
POLK	11/?/2014	1	1		RETURNED 24 HOURS
RANDOLPH	11/?/2014	2	2	2	STILL MISSING
TEXAS	01/?/2016	1	9	9	STILL MISSING
<b>Totals</b>		<b>33</b>	<b>120</b>	<b>38</b>	<b>32% never recovered</b>

Data provided by Missouri Department of Conservation on 7/22/2016 in response to an open records request.

<sup>12</sup> [online.com/sports/outdoors/iowa-deer-farm-riddled-with-chronic-wasting-disease-b99364005z1-278133231.html](http://online.com/sports/outdoors/iowa-deer-farm-riddled-with-chronic-wasting-disease-b99364005z1-278133231.html) (2014)

<sup>13</sup> <http://cwd-info.org/final-buckhorn-flats-results-in-60-deer-test-positive-for-cwd> (2006)

<sup>14</sup> <http://www.wyofile.com/development-cwd-weigh-diminishing-deer/> (2014)

<sup>15</sup> <http://www.wyofile.com/study-chronic-wasting-disease-kills-19-deer-annually> (2015)

<sup>16</sup> <http://www.agfc.com/hunting/Pages/HuntingDeerCWD.aspx> (2016)

<sup>17</sup> <http://dnr.wi.gov/topic/wildlifehabitat/documents/nciowa.pdf> (2015)

<sup>18</sup> [http://huntfish.mdc.mo.gov/sites/default/files/downloads/CWD-QA\\_7.pdf](http://huntfish.mdc.mo.gov/sites/default/files/downloads/CWD-QA_7.pdf) (2016)

recurring theme. Too often to be a coincidence.

How could wild deer get contaminated by fenced deer? Many ways. Prions in contaminated soil could be flushed across watersheds and out via flowing water. And nose-to-nose contact through the fence is not uncommon.

The fences themselves are often poorly maintained junk.<sup>19</sup> In 2013 the MDC estimated 150 deer had escaped Missouri pens in the 2 or 3 preceding years, in just 2 of the 8 MDC regions.<sup>20</sup> Then 120 more from 2014 through the spring of 2016.

About a third of the escaped deer are never recovered, exposing the wild herd to whatever diseases and unnatural genetics the escapees carry.

An 8 foot fence in good repair on level ground can be an effective deer barrier, but when the fence runs on a uneven ground, or when a limb falls across the fence they can be easy to clear. Especially during the rut, or under extreme stress from being chased by dogs, etc.

It would take another article of this size to describe just the known cases of illegal smuggling of live cervids. Even Charles "Sam" James, past president of the "Missouri Whitetail Breeders and Hunting Ranch Assn." (which changed its name to Missouri Deer Assn. to improve their image) has pled guilty TWICE now to illegal deer shipping and is currently on probation for the most recent as of this writing.

He was later charged with conspiracy to forge required breeder movement certificates, a charge which was mysteriously dropped without public explanation.<sup>21</sup>

USDA CWD Herd certification is a dangerous fantasy. With the long delay before symptoms appear, and no practical and reliable live test, it is impossible to declare a herd "CWD Free". All certification says is that the herd owner claims to use approved practices to lower the risk, and that they haven't found CWD in that herd for 5 years. CWD has cropped up in certified herds before, and will again. It is impossible for commerce in live cervids to take place without that risk.

CWD is spreading farther into Missouri, found in the wild in 7 counties so far. [Our CWD zone](#)<sup>22</sup> is up to 29 counties and growing, a quarter of the Missouri landscape.

Remember, with Mad Cow disease each death required clearing the interspecies barrier. But it wasn't contagious, so every incident was isolated. No infected husbands passed it to their wives. No mothers passed it to their children. The only way to get it was to eat infected meat.

But if CWD clears that barrier just once and remains contagious in the new host species, the result could be disastrous. If it jumped to people, the potential consequences are too horrific to contemplate.

---

<sup>19</sup> <http://nomocwd.org/images/fence> (2013)  
[http://nomocwd.org/docs/CPOCAuditReport\\_Final\\_Excerpt.pdf](http://nomocwd.org/docs/CPOCAuditReport_Final_Excerpt.pdf) (page 30-35) (2005)

<sup>20</sup> <http://nomocwd.org/docs/2013escapedcervids.pdf> (2013)  
<http://NoMoCWD.org/escapemap> (2016)

<sup>21</sup> <http://NoMoCWD.org/docs/SamJames2016.06.20conspiracy.pdf> (2016)

<sup>22</sup> <http://huntfish.mdc.mo.gov/sites/default/files/images/regulations/2015-cwd-containment-zone-01-11-2016.jpg>

Some would call that scare tactics, but these facts are not in dispute:

- CWD is always fatal. You get it, you die. Any deer that gets CWD will die from it in about 18 months if nothing else kills it first.
- CWD is contagious among deer through contact with infected deer and contaminated soil.
- Infected deer shed persistent infectious prions back into the environment.
- No deer is immune to CWD.
- CWD is the only prion disease known to spread among any wild species anywhere in the world—ever.

Deer appear not to have any effective immune response to a contagious prion disease like CWD. It seems to completely sidestep the immune system. Attempts to create a CWD vaccine have failed<sup>23</sup>.

The damage Mad Cow did to humans and the global beef industry was serious—but limited by the fact it was not contagious. So it did not impact the average person much.

That is why courts and legislatures get away with being so relaxed about CWD. It's off their political radar. The "contagious" part does not scare them much.

Well it sure scares me.

I raise cattle, hay and soybeans—and hunt my farm—in one of Missouri's original 6 CWD counties. My beans could be taking up CWD prions from contaminated soil. My cattle graze pastures that might be contaminated. The venison in my freezer might be infected.

Sure, my family still eats venison. And we haven't given up on farming or the cattle business. We made the personal judgement that the individual risk is low enough to tolerate.

There is no hypocrisy in that. "Should I eat that deer sausage?" is a much different question than "Should CWD policy and regulation take public safety into account?"

The earliest known incident of CWD occurred in 1967, about 50 years ago. It was in a Colorado wildlife research facility previously used to study scrapie—a prion disease of domestic sheep and goats. Sustained contact with scrapie contaminated soil, combined with the stresses of the study might be what caused CWD but we will never know.

Regardless, that facility appears to be ground zero for CWD—and likely another example of a prion disease clearing the interspecies barrier.

---

<sup>23</sup> <http://www.wyofile.com/chronic-wasting-disease-vaccine-fails-elk-test/> (2015)

Policy makers who pretend there is no risk and interfere with CWD related regulations force the public into an involuntary game of Russian Roulette. The only option they leave us is to pray the gun is empty.

They treat this like a "property rights" issue. As if the canned hunting industry has a right to risk the destruction of a wildlife species, to contaminate soil and to risk public health.

There's big money in frankendeer. Canned hunt operators schmooze legislators and judges and hire the best lawyers and lobbyists and PR firms money can buy. They are getting their money's worth.

Unless the public wakes up to this threat there is no sign anything will change.

Except the load of CWD prions in Missouri soil—which increases as the clock goes "tick tick tick".

Or is that the "click click click" of Russian Roulette?

**-end-**