

CHRONIC WASTING DISEASE URINE RISK ASSESSMENT

FACT:

CWD in urine can not be detected without amplification. Urine from even clinically sick deer must be highly concentrated in order to produce enough prions to test. The popularly referenced study for CWD in deer required a dosage of urine concentrated **TEN TIMES GREATER** than normal and had to be injected **DIRECTLY INTO THE BRAIN**.

FACT:

Even under experimental conditions that were extremely unnatural, **ONLY 1 IN 10** subjects proved infected.

Haley NJ, Seelig DM, Zabel MD, Telling GC, Hoover EA (2009) Detection of CWD Prions in Urine and Saliva of Deer by Transgenic Mouse Bioassay. *PLoS ONE* 4(3): e4848. doi:10.1371/journal.pone.0004848

RANKING THE RISK

CWD prions have been detected in whitetail deer urine, but only under unnatural conditions when concentrated well beyond what occurs naturally. This misleadingly points to urine as a transmission point.

Research shows that urine is the **least** likely carrier of CWD prions.

The experts believe deboned meat and tissue of the digestive system (stomach, intestines) contain up to 100,000 times more CWD prions than found in urine. The brain, carcass (particularly if the carcass contains a brain), and lymphoid tissue contain an exponentially higher number of CWD prions, believed to be 1 million times more.

Blood, saliva and feces are regarded as having low levels of prions.

FACT:

The experts, with **over 50 years** of collective research knowledge in whitetail health, consider **urine the lowest risk** for transmitting CWD.

BRAIN

CARCASS

LYMPHOID TISSUE

DEBONED MEAT

DIGESTIVE TISSUE

BLOOD

SALIVA

FECES

URINE

LOWEST INFECTIVITY



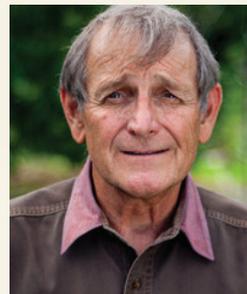
Occurrence of CWD prions is 1 million times higher than in urine.

Up to 100,000 times more CWD prions than in urine.

1 gram of brain is equal to **33,000 gallons** of CWD positive urine

THE EXPERTS

WHEN STATES HAVE QUESTIONS, THESE ARE THE RESEARCHERS THEY CALL



HARRY JACOBSON, PHD

Professor Emeritus
Department of Wildlife,
Fisheries and Aquaculture
Mississippi State University
**40+ years researching
captive and free-range deer**



DAVIN M. HENDERSON, PHD

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**Research scientist at the
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NICHOLAS HALEY DVM, PHD

Department of microbiology
and immunology
Midwest university -
Glendale campus
**10+ years experience working
with CWD in deer and elk**