

NH Q&A

What is Neuropathic Hydrocephalus (NH)?

Also known as “water head”, this is a genetic abnormality where calves are born dead with a severely large head.

What is NHF or NH Free?

Neuropathic Hydrocephalus Free—an animal with the NHF designation has been DNA tested free, does not carry the mutation, nor under any circumstances can the animal pass on the mutation.

What is NHC or NH Carrier?

Neuropathic Hydrocephalus Carrier—an animal that has been DNA tested and is a carrier of the mutation. Carriers are heterozygous for the mutation—they contain one normal allele and one mutant allele. Carriers will pass on the mutation to approximately 50% of their progeny. This does not mean that 50% of their calves will be born dead—ONLY when mated to another carrier do they have the opportunity to produce a calf affected by the disorder.

What type of parents must be present to have an affected (NH) calf born?

Since NH is a simple recessive, BOTH parents MUST be carriers of the mutant allele in order to have a calf affected by this disorder. When two carriers are mated together, 25% of their offspring will have two “normal” alleles and be non-carriers, 50% of their offspring will be normal appearing but carry the mutant allele, and 25% of their offspring will have two mutant alleles and be born dead with the disorder.

Can an animal carry mutation allele and still look “normal”?

Yes. Carriers of the NH allele show no abnormalities.

I may unknowingly have carrier females in my herd. What should I do?

ALWAYS breed these potential carrier females to a CLEAN (NHF) bull, and you will NEVER have a calf born with the deformity. Period.

Is the Neuropathic Hydrocephalus test accurate?

The test is scientifically accurate to 1 in 10,000.

The best way to be sure I don't bring NH into my herd is to stay away from bloodlines that trace back to any carrier breeding, right?

No. The science is sound—trust it. Even if an animal traces back to a carrier, once a bull or cow is tested “clean”, his/her progeny CANNOT inherit NH genes from that parent. NH doesn't skip generations. Don't eliminate bloodlines that have tested clean even if they date back to carrier bulls. Doing that will substantially limit your gene pool from which to select profitable genetics, and in turn, limit the amount of genetic progress you can make in your population.

All animals selling in our February 2, 2010 production sale are tested free of AM and NH, or have no pedigree risk.