

**Q:** Why do you use MCHA [microcrystalline hydroxyapatite] in your **Calcium-Magnesium Plus** product? Doesn't that come from cow bones? Aren't you afraid of mad cow disease?

**A:** We understand your concern, and want to reassure you that there are absolutely no reasonable grounds on which to fear contracting mad cow disease from the MCHA in **Calcium-Magnesium Plus**.

We chose MCHA as the calcium source for **Calcium-Magnesium Plus** because of the clinical evidence that it is superior to other forms of calcium for helping women maintain bone health. Controlled trials comparing MCHA to either organic calcium products or calcium carbonate have repeatedly found that MCHA does a better job at supporting healthy bone maintenance than other calcium products. Even calcium citrate (or citrate-malate), which appears to be the next best form of calcium for bone health, has not been found to give results as impressive as those reported for MCHA.

Mad cow disease (technically known as **Bovine Spongiform Encephalopathy [BSE]**) is now believed to be caused by a dangerous, poorly-understood protein pathogen called a **prion**. Although they don't contain DNA and are not actually "organisms," prions do act a lot like conventional viruses, entering into an animal's nervous system and using the host's proteins to make new copies of itself. In the process, it destroys the host's nervous system, leading to dementia, loss of muscular control, and death.

The reason why there are no reasonable grounds to fear mad cow disease infection from **Calcium-Magnesium Plus** is that, like any pathogen, prions must be "caught" from another organism. This means that for a cow to be infected with BSE, it must have "caught" the pathogen from another animal. While the BSE prion can be passed on from an infected mother to its calf, the most common reason for infection is that

the infected animal has been fed nervous tissue from another animal which was itself prion-infected. The use of ground-up ("rendered") animal byproduct from slaughterhouses, including spinal tissue, as a raw material for animal feed in Great Britain led to the massive outbreaks in their herds, as one generation fed on the previous one in a repeating cycle. Because of the long "incubating period" for such diseases, untold numbers of British persons, and persons eating British beef, may have been infected and still not know it.



This also means, however, that cattle that are *not* born of, or fed infected tissue from, infected animals are not at risk for contracting BSE. The MCHA in **Calcium-Magnesium Plus** is derived from free-range fed livestock from Australia. The suppliers have large enough tracts of land – an average of a half acre of grazing land per animal – and are located in a mild enough climate (Northern Australia), that the animals are left to graze freely year-round. *These cattle have never been fed rendered material from other animals.*

On top of this, however, the simple fact is that, even amongst conventionally-fed agrobusiness cattle, *not a single case of BSE has ever been reported in native Australian stock.* In fact, not a single case of **scrapie**, the related prion disease in sheep (which is believed to be transmissible to cattle if infected tissue is eaten), has ever been reported in Australian sheep herds – unlike in the United States and Canada, which appear to be free of BSE, but which have both reported some scrapie-infected herds.

Unlike the United States and Canada, where active monitoring for prion diseases only began in earnest a decade ago, Australian animal health laboratories have been conducting detailed microscopic examinations of the central nervous systems of their livestock since 1952, taking samples from across the country. In the last twenty years alone, over 20 million individual animal examinations and tests were conducted, as well as histological examination of 3319 cow brains in the five years 1990-1995. All animal herds are also inspected before slaughter in Australia: 7.2 million adult cattle and 1.1 million calves in 1995 alone. One can confidently assert that there is no BSE in Australia.

Finally: even if our MCHA *were* derived from a more suspect source, such as cattle from the United States and Canada, the simple fact is that the risk of exposure from a diet centered on meat from these countries is vastly greater than that which would be derived from taking MCHA from such cattle. The total amount of animal-derived material in 1000 mg of elemental calcium from MCHA is four grams – about 3.5% of the amount of animal material in a quarter-pound of hamburger. And MCHA comes from bone tissue, not an innervated tissue such as meat.

Women can take **Calcium Magnesium Plus** for their bone health, confident that the best calcium source is also BSE-free.

**We want to hear from you!**  
Send all questions to:

"I want to know" column  
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Don't forget to include your name and location.