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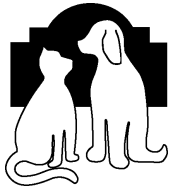
Mad Cow Revisited

Mad Cow Disease is in the news again, this time in the US. The USDA reported a case in December, a dairy cow from Washington State. We last discussed the disease during the outbreak in England a few years ago. Mad Cow Disease is also known as Spongiform Encephalopathy (BSE). You can throw that name around at a cocktail party. It causes a disease of the brain in cattle, which can cause nervousness, aggression, incoordination, and eventually death. One of the symptoms is when a cow can no longer walk (called a "downer cow". Its special importance is that it is believed (but not proven) to be associated with variant Creutzfeldt Jakob Disease (vCJD), a disease of people which causes dementia, seizures, and eventually death in people. This disease occurs in 1-2 of every million people all over the world including the US. We do not know all of the factors are involved. The disease is a low risk, even with eating tainted meat. In 1997, with 80,000 infected cows found, only 150 cases of vCJD were reported out of a population of 60 million in the United Kingdom.

Mad Cow disease is caused by an infectious protein called a prion. It was first discovered in 1986. Since then, over 3.7 million cattle were slaughtered in Great Britain due to suspicion on the prion being in the feed. The cause of the spread of the disease is thought to be the practice of feeding cattle rendered protein from carcasses of sheep infected with a similar disease called scrapie. The disease was historically not a problem in the US because by law, cattle are not to be fed meat and bone meal from other mammals (such as sheep). The last outbreak of scrapie in the Los Angeles area was in 1990. The prion is very tough, and resists pasteurization and cooking. The USDA has rules to examine every downer cow at the slaughterhouse, which is how the affected cow was discovered. There is no import of live ruminants (cattle, sheep, and goats) from infected countries or any by-products like meat and bone meal. Unfortunately, it takes several years from the time of exposure of the prion in the feed until the cow shows symptoms. This makes identifying the source of the exposure very difficult. For example, this cow was imported from Canada and the infection could have occurred here or there.

Are our pets at risk? There is no evidence at this time that dogs, birds, fish, or reptiles can get this disease. In the United Kingdom, in the late 1980's and early 1990's, cats were discovered to have a similar disease to mad cow disease. This was linked to feeding undercooked beef or pet food containing cattle brain/spinal cord matter. Once this practice stopped, the cases disappeared. It is believed that to contract the disease from pet food would require high levels of the prion for a long time. Unless there is widespread disease, the risks are very low. Certainly it would be a good idea to lobby the pet food industry into voluntarily stopping the practice of allowing brain, spinal cord, and parts of the intestine in pet foods (beef-by products). Unfortunately, while it is illegal to use these foods for human use or into feed used for an animal for human use, pet foods are exempt from this law. Europe and Canada have now abolished this practice and refuse to import US based pet foods because of this practice.

Is Mad Cow disease a human health risk? Yes. Is it an epidemic? Not at this time. Is it okay to eat beef and drink milk? If it is USDA certified, the risk is minimal. If it is not, there could be a risk of future problems, although so far only the one cow was found. But of great concern is our economy if wholesale slaughter of cattle were to occur due to contamination. Because of potential of vCJD, entire herds may require slaughtering if even one tests positive. The only way to prevent this catastrophe is to not feed cattle any food with animal parts in it. Unfortunately, feeding cattle (which are strict herbivores-vegetables only) food with



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animal parts accelerates their growth and enhances productivity. Without strict enforcement, some ranchers may opt to illegally continue this practice to help their bottom line, and then scream for a government bailout at taxpayer expense when whole herds go to the slaughter. The USDA does the inspections (which are voluntary to get the USDA stamp) but does not have any enforcement powers. The FDA has the enforcement powers, but does not inspect. Only through the intervention of Congress can we give our food safety organizations the muscle to make sure our beef and dairy supplies stay free of BSE. You certainly may want to contact your congressperson and senator to try to solve this dilemma. Right now, there is an attempt to ban the slaughter of downer cows, which is a step in the right direction, but is not enough to protect against the disease. To get more information on Mad Cow disease, go to www.cdc.gov/ncidod/diseases/cjd/cjd.htm.