

Mad cow college essay



**ASSIGN
BUSTER**

Mad Cow disease has been heavily spoken about on the international news. Our hopes are that the disease will not spread into the United States, even though several people have died from the disease.

Our initial purpose of researching this topic has been inspired by the growing concern for the outbreak of Mad Cow Disease and its various forms. We believe that it is imperative that we take our research and implement it to others along with facts in order to generate concern for other countries regulations, United States regulations, health concerns and economical awareness.

Our research is based on much information accessed by the Internet, news journals, books, television broadcasting and 86 general public polls taken by our group.

Imagine yourself sitting down at your local McDonalds biting into that delicious Big Mac. The same as you always order when you come to McDonalds, but this time is different, this time the meat that you ingest is infected with a deadly prion that is still in the meat, even after cooking it. This deadly prion comes from a cow that has had Mad Cow Disease. The cow was butchered and sold before dying of the disease, and before showing any real symptoms. Now your probably thinking if I do not eat cow meat then I am safe from this disease. Well imagine putting on your lipstick or several other types of facile creams and other common products that you use every day only to find that you could still be infected with the CJD disease. CJD is caused by ingesting or using a product that has been infected with Mad Cow. It is very possible to be infected by any products that are used from cows, if

the United States is lenient on their regulations and laws related to this issue. Mad Cow Disease is the disease that infects cows, but it could easily affect every single one of us too, even if you do not ingest the meat. Mad Cow Disease should be taken very seriously because it can affect the whole world, even if your country is unaffected by the disease. Mad Cow is not a new disease, for it has been around for a few decades. Precautions and regulations should have been set for European countries and the United States a long time ago. Luckily the United States has been blessed with the geographical difference from the rest of the commotion going on in the European nations. This paper discusses the history and the time of infection for most of the counties in the infected areas; furthermore, the economic agriculture affected in countries, and the economic effect on the United States; and what exactly the government and other countries are doing to protect themselves and other nation from the spread and incubation of this disease.

What is Mad Cow Disease? Mad Cow Disease “ is a normally extremely rare neurological disorder that affects the central nervous system of an animal and a human. The disease infested brain of the animal or human is slowly, progressively, and severely damaged. It has been categorized as a disease, which falls into the category of a disease known as Spongiform Encephalopathy. Having Bovine Spongiform Encephalopathy is an over-dramatized way of specifying that one has diseased brain tissue which is; spongy, porous, and no longer in tact”(Brown 1).

Cattle that are affected by this deadly disease will obviously have some clinical signs. They will show signs of aggression, atypical posture, difficulty

in rising, decrease in milk production, and eventually the affected cattle will die (Clinical Signs BSE).

The disease, discovered in Europe, has spread its degeneration and has culminated since 1980 and continues to spread its degeneration from across the seas to our melting pot. In the week of January 28th - February 2, 2001 Lexis Nexis reports 719 press releases expressing the severities of Mad Cow Disease, in which half of the stories originated from England (McArthur 1).

How does this dreadful disease that affects humans and animals occur? First discovered in slaughtered sheep and unmanageable cattle, which were killed due to difficulties in monitoring their behaviors and actions by their owners.

After the sheep and cattle were slaughtered, autopsies were conducted, in which the Encephalopathic brain consistency was found, which can be

described as a brain that becomes porous in physical actuality and

appearance. It has been noted that cattle harvests are fed sheep bone meal as a supplement to their normal diets. Some sheep that are made into bone

meal carry a disease called Scrapie, which causes Mad Cow Disease in other animals that feed off this bone meal. One conclusion to the development and

spread of Mad Cow Disease could be made that a cow digested some Scrapie (a infested sheep) bone meal, thus causing the cattle to develop the

infections through spreading agent known as Prion, which is an acronym for proteinaceous particle. Prions are small, fast moving and destructive

particles that humans and animals can cultivate. Prions are dominant and being so, allows them to be unconquerable so that they can " pass

through a filter that stops most viruses, survive thermal, radiation and

chemical treatments and contains no DNA and RNA (University of Wisconsin 1-4).

The growing concern for the existence of this disease has been brought about

due to several cases of illness, which are imminent to death and have been brought to the public's attention; just due to each individual consuming eighty or more meals of beef that were contaminated with Mad Cow Disease. It has also been noted that in the last ten years, there have been 1.5 million BSE infected animals, which can be easily detected through autopsy (Martin 1-3). All of the people who have been diagnosed with the disease have undergone a hefty battery of tests, which included a CT scan, ECG, bone marrow, lumbar puncture, chest X-rays, an endoscopy and blood tests; even though the disease was present, it did not show up in any of the pre-mentioned tests. "The disease is a transmissible infection however, not communicable, which in order to contract, requires intimate contact with the affected material, usually through eating" (Martin 1-3). There are several forms of this disease, which will be discussed furthermore; they include vCJD (Creutzfeldt-Jakob Dementia), which affects humans, and DCS (Downer Cow Syndrome), which affects the 100,000 cattle which die per year from the disease (Klepper 1).

Even though the disease is difficult to detect with medical tests, there are symptoms of the disease. Physical symptoms include sore joints and muscles. Psychiatric problems include personality changes, depression, difficulty sleeping,

withdrawal, fearfulness, paranoia and possible Alzheimer's disease (Lawrence 6). When a cow's immune system is contaminated with the Mad Cow disease; the side effects include drooling, wobbling (such as a drunken state), holes that form in the brain, and then, just falling over dead. The incubation period of this disease can be as long as ten years (8). It can be something to think about since this disease was discovered in U. S. in 1985, yet more research at this current time.

For preventative measures, Public Health control includes the culling of sick animals or banning specified risk materials (SRM's), or a combination of these, have been instituted in Europe to prevent potentially BSE infected tissues from entering the human food chain. People can minimize or alleviate their intake of beef or reduce there

intake and consume solid pieces of muscle meat which does not contain any spinal cord and brain matter versus hamburger meat, which may have contaminated tissues that carry the BSE prion. This is due to the fact that hamburger meat derives from muscle taken from the cow's spinal cord. The spinal cord is linked to the cow's brain, thus causing fragments of brain tissue, which can possibly have the disease. Our research indicates that it is not likely that a human will get BSE from milk and other dairy products. Even though the disease is not likely transmitted through dairy products, countries such as Germany and France have strict search regulations pertaining to food, even down to a slice of lunch meat has been inspected, so they claim (McArthur 1). It can be concluded that blood transfusions may pass on the disease. In Europe, predominantly the United Kingdom, blood transfusions were restricted due to the large possibility of BSE being transmitted. English

hospitals are reporting that vCJD can be transmitted through the use of unclean surgical instruments. British Ministers are also requiring the use of disposable instruments to be used in tonsillitis surgeries in order to prevent spreading of the disease, a new decontamination process with current state-of

-the art procedures for multi use surgical equipment and task committees to address Mad Cow Disease issues (Times News Paper 1). The British believe that this scare will bring Europe closer in their fight to stop the spreading of the disease and also devise a system that will prevent the disease in its entirety.

Classical Creutzfeldt-Jakob Disease (CJD)

This disease is the human form of BSE, which targets the central nervous system and starts to disintegrate the human brain (About Classical CJD). This disease is one of few that has actually been reported in the United States. It has also been reported in Australia and New Zealand, which is hard to believe since scrapie or BSE has not affected either country (Classical CJD in the U. S. A.).

Variant Creutzfeldt-Jakob Disease (vCJD)

The Spongiform Encephalopathy Advisory Committee (SEAC) announced the disease, which has affected ten patients in 1994 or 1995. There are several differences from classical CJD and variant CJD.

The patients were much younger compared to the individuals infected with the classical form of CJD. The average for CJD is sixty-three while vCJD is twenty-eight.

The course duration of vCJD is around thirteen months, but CJD is only six months.

Electroencephalographic (EEG), which is electrical activity in the brain, was reported with vCJD, but not with CJD.

Through studies SEAC have found that vCJD has the same signature as BSE, which suspects that BSE and vCJD are in some way associated. The study was with four panels of mice, one with crossbred mice and the other three with inbred mice. The mice that were infected with BSE showed the same signs of illness as the vCJD infected mice. Mice with just classical CJD did not show these signs (BSE and CJD - Human).

History From 1985 - Current Time

For the last several years the Mad Cow Disease has infected thousands uponpawm millions of European livestock. The first sign of the disease began in the UK in 1985 when 133 cows died after suffering brain damage, weight loss, and addition abnormalities. Following after the first known case was the final recognition of the disease in 1986. In 1990 the United Kingdom formulated the National CJD Surveillance Unit to investigate cases, and try to find a correlation between the disease (Associated Press 2). When the United Kingdom began the surveillance unit, fear arose an overwhelming concern throughout Europe. BSE reached its worst form in 1992 - 1993, with 100, 000

confirmed cows infected with Mad Cow Disease. The first known human victim died two years later in 1995. This was the first case documented of vCJD. Followed by three more people dying in the UK in that same year. After the first known human deaths from the disease, many people started asking questions that scientist and doctors did not have the answer for. Still the Mad Cow Disease was supposedly not related to vCJD at that time. After March of 1996 United Kingdom Health Secretary, Stephen Dorrel announced there was a correlation between the Mad Cow and vCJD, followed by a ban of export on British beef, and a slaughter of all cattle over the age of 30 months. This was a result of the expensive test that had to be conducted on the cattle, and they could not afford to do it on every single one.

By the year 2000, France banned beef from restaurants and school canteens, then Italy bans adult cows and beef from France. Then the first case of Mad Cow Disease is detected in Spain and Germany. Both countries ordered for testing on all cattle to help relieve public fears. By the end of the year 2000, the entire country of France had also come down with the disease. In fact, it was worst than expected, with one in every five hundredth cow infected.

Then, in the beginning 2001, Belgium and Italy had been hit with this horrible disease.

The only good notion that has come out of this event is that the United States has barely noticed an outbreak, just from a few possible areas like Texas. None of the areas in the United States have been confirmed with the possible outbreak. This could be due to the fact that the United States does not import any beef from Europe. Furthermore, the United States is not supposed to feed their livestock ground up bone from animals like the

European states do. These are some of the possible reason why the outbreak hasn't reached the United States.

Mad Cow Disease fits the profile that might cause hysteria, because it has traumatic results and affects the brain consistency and intelligence content of it's victim. The media has the burden of a field-day frenzy, with the people infected and dying from this disease.... imagine if the outbreak did spread into every fourth person. Of course, the media would show the scenes of what people look like after being infected, and cause society emotions to uprise due to the possible loss of control, motors skills, hand, arm, and leg movements. This media exploitation would be an end result that would make people scared and worried about eating meat. At this point, you could observe a dramatic decline in consumption of meat, especially in the infected areas noted. Even in America you will see a decline of meat consumption, even if the country is still clear of the disease. Further proof could be the observance of the German Replic, which after the awareness of the disease, their mead consumption decreased by fifty percent. It has been said that Mad Cow Disease could be the start of an epidemic that could wipe out the population of life on this planet. Could you imagine the environmental effects if Mad Cow Disease spread to the wilderness or rain forests, the same places scientist locate herbaceous cures, in which would be contaminated. What type of action would have to be taken to stop the spread of the disease in an environment you have very little control over. Imagine what typse of costs would be incurred if United States mandated Mad Cow testing for every living animal in America or vice versa for other countries.

Agricultural Scenario and Mad Cow Disease

Farmers all over France are suffering from the disease. Usually by lunchtime the slaughterhouse crew would be getting ready for the afternoon shift, but lately there has been no work. Orders for beef have declined by thirty percent and on some days even fifty percent. Emotions and thoughts started to stir up when a farmer was arrested for trying to sell a diseased cow to a community slaughterhouse. The police managed to stop the slaughter of that cow, but still more than a thousand pounds of beef from the same herd have already been put out in the market (Daley). French farmers aren't the only ones breaking the law. Five Britons were found guilty selling tons of chicken that were deemed unhealthy for human consumption. This obviously was one of the contributions to the huge number of cases in Britain, since this was a multi-million dollar operation (Five Britons).

In the United States, the billion dollar per year cattle industry is itself, infected with agribusiness greed, preventing any possibility of truthful or timely disclosure of Mad Cow Disease. Although American beef consumption has been nearly cut in half since 1980, the beef industry has never been as lucrative. With eight five percent of cattle farmers reporting profitability up from only 15% in 1996. Ironically Europe's crisis has been a huge boom to the BSE free meat exports, which has shot up thirty four percent last year. Russian's imports from American have more than twenty fold since last year. Mad cow has clearly been great for business, although McDonald's has suffered large European losses in the aftermath of the wide spread disease. American Farmers and agriculture businesses are at a boom, due to the fact that all of the countries infected want the uninfected beef for their own

consumption on a higher safety level. With this unexpected cash flow, many doubt that the USDA will reveal that any BSE infected cows have been discovered in the United States. Alas, this would lead to public panic and an agricultural market collapse.

It existed in Britain in undetectable levels and when the industry or environment started changing rapidly the result was the increase in the incidence of BSE.

BSE spread unhampered by the industry and environment after the initial appearance of BSE as an impulsive event in cattle.

A very practical reason for the spread of Mad Cow Disease is in Britain during the 1980's started by cannibalistic practices of feeding cows ground up protein of dead cows, sheep, and other types of animals. The actual disease BSE appears very rare in natural cases. The disease was jumping in reported cases after this type of recycling of animals was occurring. The worst action the British government could have done was lie about that the fact that BSE would never endanger any human life. Britains went crazy after death notices reported from a related disease vCJD. After the slaughter of millions of cows the number of BSE dropped from tens of thousands of cases two about one thousand. Apparently a lesson was not learned or even grasped from past occurrences because England did not stop the pre-mentioned cannibalistic activities during the 1990's. Now at this time, numbers of deaths are rising in a great deal of speed. Most of the European nations have only found a few hundred actual confirmed cases; the nation of Great Britain has a confirmed number of at least 200, 000 cases of BSE. (Pattison 2)

The US has failed to close gaping loopholes in the firewall against Mad Cow Disease, and the feeding of potentially infectious cow parts back to other cattle continues to be largely unmonitored. On Jan 10th, 2001, the FDA charged livestock-feed producers and rendering plants, which powder slaughterhouse waste for use as a cheap feed supplement. With widespread noncompliance with feed labeling and mixing regulations over 180 large cattle rendering companies were found to have the wrong labels on the wrong bags. Harvesting a common ground for bacteria and the Cvjd disease. Furthermore, Bovine by products are still being Imported under loopholes in the Federal regulation. Permitted beef products include milk, blood, fat, gelatin, tallow, bone mineral extracts, collagen, and semen. Why should there be a ban on byproducts like milk? Although it is rarely mentioned, infectious prions can be contained in milk, although it remains a rare chance. For instance in a 1992 Japanese study published in the New England Journal of Medicine showed the human breast milk is capable of transmitting prions, which could be a mad cow prion, and it has also been demonstrated in sheep. The negligence that is installed by our government is bound to come around and hit the US when unexpected. Especially since the US is one of the highest consumption of beef in the world.

As you are probably aware of at this time, Mad Cow Disease emerged in 1986. In 1989 the U. S. Department of Agriculture banned the import of cattle and other beef products from infected countries. In 1990's the United States had prohibited the entry of live sheep and cattle, and rendered animals protein, from Britain. This occurred to prevent the actual spread from animal to animal. At this time in history, it was thought that this regulation

could stop the spread of the newly discovered disease. In the late 1990's, scientists discovered the fact that the disease could be spread through ruminants, grass eating animals, and offal. In the year of 1997, the FDA banned the feeding of ruminant alpha to any members of the ruminant family. Most recently on May 26, 2001 President Bush signed the Animal Disease Risk Assessment, Prevention and Control Act of 2001. This act helps put together a team of agriculture, health and safety officials to ensure that the government is doing everything in their power to prevent the entrance of Mad Cow Disease and other foreign diseases to enter in the United States.

How Are Countries Dealing with Mad Cow Disease?

Mad Cow disease has effected everyone worldwide in some small or big way. Europe most of all has been drastically affected by this traumatizing disease, which has changed the way many Europeans eat or practice business. Countries like Germany, Italy, France, and Britain have all been exposed to this disease, which all of them are trying to contain and control it before things get out of hand.

In Germany, the first case of Bovine Spongiform Encephalopathy (BSE) or Mad Cow Disease was reported in November of 2000. Before that, German Agricultural Minister Karl-Heinz Funke was criticized for not taking the matter more seriously and was even accused of down playing the fact that BSE was even a threat to Germany. Since then, two more cases have been reported in Germany. Germany has also been suspected of a human equivalent disease known as Creutzfeldt-Jakob disease (CJD) (German Greens call...). With all this discussion about Mad Cow Disease, butchers in Germany have reported

sales in beef has dropped 90%, although poultry and horse meat prices have now sky rocketed (Germany cabinet to study...).

Italy has only reported two occurrences of the diseases, and both were imported from other countries. Italy for the most part isn't too concerned with the matter as long as all the meat eaten by the citizens is from the country itself and not imported. Tumor specialist, Veronesi, states " the only action that Italy needs to make is to ban animal meal in feed for other animals. The country doesn't want to run the risk of having a similar disease in other animals." He also mentions that " the country is now testing every bovine animal at the age of two or older before the animal is slaughtered and put for consumer use (Italy's health minister...)."

France has reported a total of one hundred seventy-six cases. Ninety-six and 96 of those were just in the recent year (BSE and nvCJD cases...)! One of the measures France is partaking in is the banning of T-bone steaks. Prime Minister Lionel Jospin is also trying to stop the use of animal-based feeds, but for the process to fully be put in action across the country it will take 3-4 months. This is to purge the possibility of cross-contamination of feeds for cows from feeds for chickens, pork and fish (Georges-Picot).

Britain has reported around 177, 416 cases of the disease. Just by looking at the size of that number, you can suspect that things are obviously much worse in Britain than most countries. Even though most of those cases were the late 1980's and early 1990's, there were still around 3, 000 cases reported in that last two years (BSE and nvCJD cases...). With the panic in Britain, the government has also decided that it would be wise to have an

embargo on beef coming in from France. This was due to the fact that the French said that their controls over BSE were insufficient (Woodcock).

One of the reasons why BSE has been found in the UK and not in the US is, because of the low ratio of sheep to cattle in the US. In Great Britain there is around forty million sheep and only twelve million cattle. Now in the US there is around ten million sheep opposed to a hundred million cattle. So that makes a ratio of three to one in the UK and a ratio of one to ten in the US, which as a result reduces the chances of Scrapie being transmitted from sheep to cattle (Transmission of BSE). The only Transmissible Spongiform Encephalopathies (TSE's) that have been reported in the US are Scrapie, Transmissible Mink Encephalopathy, and Chronic Wasting Disease of deer and elk.

As for the time being the US is free of Mad Cow and vCJD disease. Many believe it is due to the fact that the United States has almost its own supply of meat, and the fact that we only import the types of meat that are not popular to the United States such as baby back ribs from Denmark. One more issue that is under direct controversy is the fact that we had, until recently, banned all European meats to enter into our country. In May 2001, the Bush administration eased up on the ban letting some uninfected countries trade beef and other by products. Even though those countries have not yet been infected by the times, some of the meat was tested, there would all ready be shipment to the United States and into your freezer, waiting for you to cook your evening family dinner. Another possible solution would be to not only inspect the meats that are coming in for the disease, but to start tightening up the restriction and fines for feed mills and

rendering plants. Make sure that no animal is fed the ground up bones of another. This would prevent the disease from a self-infestation of our own country.

Bibliography:

Bibography

Associated Press. " Study Backs Humans ILLs, Mad Cow Link" Chicago Tribune 21 Dec. 1999: 1-4

Burros, Marian. " Irradiation of beef remains a tough sell to consumer." Chicago Tribune 9 May. 2001: 1-4.

Carreyrou, John. " It's all in the Muscle." Wall Street Journal 5 Jan. 2001: 1-3.

Hill, Zedler. " Diagonosis of new variant CJD by tonsil biopsy." Lancet 1997: 99-100.

Pattison, John. " The Emergence of Bovine Spongiform Encephalopathy and Related Diseases." Emerging Infectious Disease 1 July. 1998: 1+.

Stekel, Nowak. " Prediction of future BSE Spread." Southwood Nature 1996: 119.

" The Hidden Fallout of Mad Cow Disease." Earth Island Journal 16 (2001): 1-8.

" Questions and Answers Regarding Bovine Spongiform Encephalopathy (BSE) and Creutzfeldt-Jakob Disease." Bovine Spongifomr Encephalopath and Cretzfeldt Jakob Disese 4 Jan. 2001: 1+.

<https://assignbuster.com/mad-cow-4360-words-college-essay/>