

Study finds "indisputable" link between BSE/"Mad Cow Disease" and CJD in humans

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A team of scientists working on the link between Bovine Spongiform Encephalopathy (BSE or "Mad Cow Disease") and the degenerative brain condition found in humans, (new) variant Creutzfeldt-Jakob disease (nvCJD or vCJD), have made a significant breakthrough. The research, which has been carried out by doctors in Scotland and the US, found that the infectious agents, or prions, that cause both BSE and vCJD produced exactly the same disease characteristics when injected into laboratory mice.

One of the researchers behind the study, Professor Stephen DeArmond from the University of California, San Francisco, said, "taken together with other evidence, the link is now indisputable".

The scientists, led by Michael Scott from the University of California and Robert Will at the British government's CJD Surveillance Unit in Edinburgh, found that when diseased human brain tissue was injected into mice, the results were identical to those produced by the injection of BSE-infected bovine material. In both instances there was no apparent sign of a "species barrier" preventing the disease passing from cattle to humans. The incubation period was the same—250 days—and the pattern of brain damage was identical.

The results, reported in the *Proceedings of the National Academy of Sciences*, suggest that BSE and vCJD are interchangeable. The scientists injected transgenic mice, whose own genetic makeup had been altered, with infectious material from cattle and humans. "That human nvCJD prions so precisely duplicate the properties of native bovine BSE prions in their behaviour on transmission into ... transgenic mice creates a compelling argument for an etiological [causal] link between BSE and nvCJD.

"Although earlier proposals of an etiological link between BSE and nvCJD were disquieting, the investigations reported here raise greater concern that a

large section of the UK population may be at considerable risk."

According to official figures, there have been 48 deaths from vCJD so far in Britain, with a further two in France and one in Ireland. But scientists point out that it is impossible to say with any certainty how many people may eventually be affected, as the incubation period for vCJD is thought to be between 15 and 20 years. The number of deaths has doubled since the opening of the BSE inquiry, set up by the Labour Government two years ago.

Dr. Richard Knight, a clinical neurologist at the Edinburgh CJD Surveillance Unit, recently confirmed that the unit is currently dealing with a further 7 to 10 suspected cases. He said, "There is a long-term rise in the number of cases but the overall numbers are still too small to tell us the eventual size of the epidemic."

The Chief Medical Officer in England, Professor Liam Donaldson, has warned that a major epidemic could not be ruled out. He told BBC Radio, "We are not going to know for several years whether the size of the epidemic will be a small one—in other words in the hundreds—or a very large one in the hundreds of thousands."

Professor Hugh Pennington, who conducted the inquiry into deaths from food infected with E.coli in Lanarkshire Scotland, said Britain must be prepared for the worst. "We've been exposed to the BSE agent in the past and so, in a sense, we have to prepare for perhaps thousands, tens of thousands, hundreds of thousands, of cases of vCJD coming down the line."

The most spine-chilling remarks came from Professor Peter Smith, who sits on the government's Spongiform Encephalopathy Advisory Committee (SEAC). Responding to recent findings indicating that some people's genetic makeup could make them more susceptible to the disease, he said, "all of the cases so far have been of a particular genetic type—unfortunately

approximately 40 percent of the population are in that category".

Even within the intentionally constricted remit of its proceedings, Lord Phillips, who heads the government's BSE inquiry, said on summing up that the present victims of vCJD might only be the "tip of the iceberg". Most in the scientific community believe that a true picture of the numbers affected will not emerge before the end of 2003. They are also calling for the "n" to be dropped from the prefix to the disease, as it is no longer new.

These comments are a world away from the reassuring messages issued by the Labour government spin doctors, who claim that British beef is the "safest in the world" and that no one should have any worries on that score. Those who know from personal experience about the devastating nature of the disease are very concerned about those who are suffering now and will undoubtedly suffer in the future.

Frances Hall, secretary of the vCJD Relatives Support Group, whose 21-year-old son Peter died from vCJD, told the *World Socialist Web Site*: "In our minds, it was apparent all along that our loved ones were dying through contact with bovine products." She is appalled by the Labour government's rush to get beef back into the national diet, and especially that of young children. "Nobody has died for lack of beef, and nobody can say that eating beef is 'without risk'."

Hall is concerned that no preparations are being made to provide help for vCJD patients and their relatives. "We went as a delegation to the House of Commons during a recent adjournment debate when an amendment was being put by a back-bench MP calling for an adequate care package to be put in place for vCJD patients. But it was voted down. They said that there was no need for it—that the present social services can provide all that's necessary. It's not true. In the main, vCJD affects young people and there is no provision for them. The effects of this disease can't be likened to anything else. No one who hasn't experienced it can have any idea what it is like, and we don't want other people to suffer as we have suffered."

Following the recent lifting of the ban on the sale of British beef "on the bone", pressure is increasing for local education authorities that no longer serve beef in school meals to put it back on the menu. This is something that the Meat and Live Stock Commission has been encouraging. Internal documents openly called for schools to be targeted as a means of "renewing confidence" in British beef.

It is more than 10 years since the then Tory government

banned the use of parts of beef cattle thought to present the greatest risks of infection. Since then, the "over 30-month scheme" has been introduced supposedly prohibiting cattle above that age from entering the human food chain as the government claims that only animals over this age present a danger of infection. However there is no experimental evidence to back up this claim, and it has been shown that the government's introduction of "cattle passports" intended to enforce the "over 30 months" scheme by providing evidence of an animal's age and history, is being regularly flouted.

British investigators have recently confirmed that they are examining more than 50 cases where farmers and cattle dealers have allegedly used bogus identity documents to conceal cows' ages in order to sell them for human consumption. Last week, the Ministry of Agriculture, Fisheries and Food admitted that 90,000 cattle have "gone missing" from its computerised tracking system. Their spokesman made light of this, blaming it on "mistakes in the paperwork" on the part of the farmers. Trading Standards Officers in several counties, including Gloucestershire, Shropshire and Somerset, are currently involved in dozens of fraud investigations.

At least 1,600 cows a year are still being diagnosed with BSE in Britain, despite the fact that the government insists that infection is no longer a problem. The obvious question is, how can this still happen, when the contaminated animal feed thought to be responsible for the original BSE outbreak was banned years ago? BSE experts like Professor Richard Lacey believe that the disease is now endemic among British cattle and can only be eliminated by slaughtering the national herd. So far, there have been more than 175,000 confirmed BSE cases and more than 1million cattle slaughtered as part of the government culling policy to eradicate the disease.



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