

## **Is Creutzfeldt-Jakob Disease Contagious?**

### **Social contact**

Current evidence doesn't suggest that you can catch CJD through normal social contact, the air, touching, drinking from the same cup, kissing or sexual contact. You don't need to wear gloves when touching a loved one with CJD or their clothes, sheets, towels, etc. As a general rule, you should always wash your hands thoroughly with soap and water after touching anyone with any illness. Spouses and other household members of sporadic CJD patients have no higher risk of contracting the disease than the general population.

### **Blood transfusions**

Whether or not you can acquire CJD from a transfusion of blood or blood products is controversial. You are highly unlikely to catch classical CJD through blood and blood products, but there have been several cases where variant CJD has been transmitted.

Because no test exists yet for CJD that could be used to screen blood donors and to protect the blood supply, most governments require blood banks to screen for risk factors and prohibit donations from high-risk individuals (those who have received human pituitary growth hormone or a dura mater (brain covering) transplant, lived in England during the BSE epidemic, a blood relative with CJD, etc.). These improvements in screening and education seem to have maintained a safe blood supply. Governments and blood banks reevaluate public health policies on CJD and blood safety as scientific discoveries are made.

### **Transplants, grafts and surgery**

Iatrogenic transmission of CJD has been reported from corneal transplants in the eye, implantation of dura mater or electrodes in the brain, and use of contaminated surgical instruments.

Current recommendations are to use as many disposable items in surgery as possible because disinfection of the abnormal prions is unusually difficult. Surgical instruments used on people with CJD or suspected CJD are destroyed after use. Organ and tissue banks also do not accept donations from people with known or suspected CJD. New cases of iatrogenic CJD from transplants, grafts, and surgery have sharply declined in recent years.

## **Human growth hormone**

Hormones derived from the pituitary glands in the brains of cadaver donors were administered between 1963 and 1985 to infertile women and children with pituitary insufficiency. Most countries abandoned human-derived pituitary hormones in 1985 once the risk of CJD was recognized and a synthetic version was developed. New cases of iatrogenic CJD from human-derived growth hormone have sharply declined in recent years.

## **Beef consumption**

People develop variant CJD from eating beef products contaminated with abnormal prions during the 1980s and 1990s. The BSE ("mad cow disease") epidemic in the UK ran from 1985-1993 and is believed to have started either spontaneously in cows or from feed contaminated with sheep parts infected with scrapie, the sheep form of prion disease. Cattle in most countries are now screened for BSE, animal-protein by-products in the feed have been banned, and BSE surveillance programs have been created. While the beef supply is generally considered safe, eating solid muscle meat from grass-fed cows (usually labeled "organic") versus beef-derived products such as burgers and sausages may increase your safety. More cases of vCJD may continue appear due to the long incubation period.

## **How can you avoid spreading CJD?**

To reduce the already low risk of CJD transmission from one person to another, you should never donate blood, tissues, or organs if you have suspected or confirmed CJD, a family history of the disease, had a dura mater graft, received human-derived pituitary hormones, or had a corneal transplant.

Normal sterilization procedures such as cooking, washing, and boiling do not destroy the abnormal

prions. Caregivers, health care workers, and undertakers should take the following precautions when they are working with a person with CJD:

- Wash hands and exposed skin before eating, drinking or smoking.
- Cover cuts and abrasions with waterproof dressings.
- Wear surgical gloves when handling a patient's tissues and fluids or dressing the patient's wounds.
- Avoid cutting or sticking themselves with instruments contaminated by the patient's blood, spinal fluid or other tissues.
- Use face protection if there is a risk of splashing contaminated material such as blood or cerebrospinal fluid (the water-like fluid that bathes the brain and spinal cord).
- Soak instruments that have come in contact with the patient in undiluted chlorine bleach for an hour or more, then use an autoclave (pressure cooker) to sterilize them in distilled water for at least one hour at 132-134 degrees Centigrade. The use of disposable neurosurgical instruments should be considered.
- Fact sheets listing additional precautions for healthcare workers and morticians are available from the NINDS and the World Health Organization.