


Name of Policy: <u>Creutzfeldt-Jakob Disease (CJD)</u> Policy Number: 3364-109-DIS-204 Department: Infection Control Hospital Administration Medical Staff Approving Officer: Chair, Infection Control Committee Chief Medical Officer Chief of Staff Responsible Agent: Infection Preventionist Scope: The University of Toledo Medical Center and its Medical Staff	 Effective Date: 12/01/2021 Initial Effective Date: 05/18/1981
<input type="checkbox"/> New policy proposal <input type="checkbox"/> Major revision of existing policy	
<input checked="" type="checkbox"/> Minor/technical revision of existing policy <input type="checkbox"/> Reaffirmation of existing policy	

(A) Policy Statement

Specific protective measures must be instituted to prevent the transmission of Creutzfeldt-Jakob Disease (CJD) from one person to another.

Note: Immediately notify Infection Prevention through the hospital operator if any patient has a suspected or confirmed diagnosis of CJD.

If the 14-3-3 protein in CSF is ordered, Infection Prevention must be notified, and Infection Prevention and the Environmental Health and Radiation Safety Department will guide the caregivers through the safest processes for clinical care.

(B) Purpose of Policy

The purpose of this policy is to rapidly identify persons suspected of having CJD and develop safe processes to protect staff and other persons from exposure to CJD during their job activities, while providing appropriate care to the patient and family.

(C) Procedure

(1) General Information:

- (a) Creutzfeldt-Jakob Disease is an infectious, progressive, degenerative neurologic disorder, with a presumably long incubation period but a rapid, fatal course. CJD is a human prion disease that is a notifiable condition to the Ohio Department of Health [3364-109-GEN-104](#). Brain tissue at autopsy resembles that seen in transmissible spongiform encephalopathies (TSE).
- (b) Potential infectious body fluids and tissue include:
 - (i) High infectivity: brain, spinal cord, and eye tissue
 - (ii) Low infectivity: Cerebral spinal fluid (CSF) lymph glands, kidney, liver, spleen, lung, and lymph node tissues
 - (iii) Noninfectious materials: blood, sweat, tears, urine, saliva and stool

(2) Transmission:

- (a) Mechanisms for transmitting the CJD include use of contaminated neurosurgical instruments, deeply implanted brain electrodes and transplantation of infected tissues, such as corneas or dura matter.
- (b) Use disposable instruments whenever possible as CJD is typically resistant to disinfection and sterilization by most physical and chemical methods commonly used for decontamination with infectious pathogens.
- (c) In order to prevent person-to-person transmission, it is essential to decontaminate equipment, instruments, and supplies during the surgery, in the pathology lab, and at autopsy. See recommendations provided by the World Health Organization in Section 6 of the document: WHO Infection Control Guidelines for Transmissible Spongiform Encephalopathies (<https://www.who.int/csr/resources/publications/bse/whocdscsgraph2003.pdf>).
- (d) Assess if non-disposable instruments can be cleaned, sterilized, packed, and labeled “Hazard” and stored in a rigid container safely in quarantine until lab results confirm CJD. This can prevent non-disposable instruments from needlessly being destroyed if the diagnosis is not CJD. If the result is not CJD, reprocess instruments again.
- (e) Standard precautions are used in the care of the infected patient with additional methods used for items contaminated with certain body fluids and tissues likely to carry the agent.
- (f) The following measures are taken in addition to standard precautions:
 - (i) Tissue Donation
 - (a) Patients with CJD should not be donors of organs, tissues or blood components or sources of tissue or biological products such as dura matter, hormones, and interferon.
 - (b) Recipients of pituitary hormones should not be donors.
 - (ii) General Precautions
 - (a) Wear disposable gloves for any contact with contaminated materials
 - 1) Thoroughly clean and keep surfaces wet with undiluted bleach for one hour, and then rinse with water. Ensure proper ventilation is maintained.
 - (b) Linen contaminated with brain tissue, corneal tissue or spinal fluid from a patient suspected/known to have CJD should be handled with extreme caution, bagged, clearly marked, and placed into a red bin, labeled with a red sticker to ensure incineration.
 - * NOTE: For questions, seek advice from the Infection Prevention and Control Dept. or Environmental Health and Radiation Safety Dept.
 - (c) Other body fluids, including blood, urine, sweat, tears, nasal mucus and feces are considered to not pose a risk of infection.
 - (d) Upon the death of a patient with confirmed or suspected CJD, the removal of the body to be performed using standard precautions.

- 1) It is recommended that the deceased patient be placed in a sealed body bag prior to moving, in line with normal procedures for bodies where there is a known infection risk.
- 2) If there is CSF leakage, and sutures do not completely control this leaking, the bag should be lined with materials to absorb any fluid.
- 3) Counsel the family about considering cremation.
- 4) Medical Schools or Anatomy Departments should not accept any bodies confirmed or suspected of having CJD or organs for research or teaching purposes unless they have special training in TSEs and specialized equipment.

(3) Procedures/Endoscopy:

- (a) Those normally carried out at the bedside (e.g., lumbar puncture, bone marrow biopsy) may be performed at the bedside.

*NOTE: Private room required.

- (b) Notify Lab that specimen is to be collected.

- (c) If lumbar puncture is to be done by Interventional Radiology, schedule at the end of the day.

- (d) Only essential personnel are to be in the room.

- (e) Use disposable equipment and disposable pads on bed.

- (f) Wear personal protective equipment (bouffant, mask, eyewear, gown, gloves, shoe covers).

- (g) Clearly mark specimen as biohazard and as being from a suspected CJD patient.

- (h) Place specimen in special container obtained from lab, then in biohazard bag.

- (i) Room decontamination will be completed following procedure. If a spill of CSF occurs, thoroughly disinfect room with full strength bleach solution for a minimum of one hour allowing it to sit, followed by a water rinse. Ensure proper ventilation is maintained.

- (j) Scopes used in Endoscopy and the OR (Use Standard Precautions)

- (i) Bronchoscopes, endoscopes, colonoscopes, sigmoidoscopes, and cystoscopes may all be cleaned post-procedure according to manufacturer's instructions for use.

- (ii) It is not necessary to separate or discard these instruments/equipment as they have no contact with CJD identified infectious body fluids and/or tissue.

(4) Prior to surgical procedures on brain or spine, notify Infection Prevention and Control Dept.

- (a) Infection Prevention and Control Dept. will notify the following:

- (i) Sterile Processing Department

- (ii) Anatomical Pathology Department

- (iii) Environmental Health and Radiation Safety Department

(iv) Environmental Services Department

(5) Operating & Autopsy Rooms

- (a) Only essential procedures should be completed and scheduled at the end of day, if possible.
- (b) Restrict traffic to required individuals only.
- (c) Remove all unnecessary equipment and supplies from the room.
- (d) Items should be disposable when possible.
- (e) Use disposable cover sheets on work surfaces.
- (f) If unable to use disposable equipment, do not use any supplies that can only be sterilized with ethylene oxide.
- (g) Wear personal protective equipment (bouffant, mask, eyewear, gown, gloves, shoe covers).
- (h) Staff scrubbed in during surgery and autopsy should wear double gloves.
- (i) Use manual saws in place of electric saws, if possible.
- (j) If electric/power equipment is used, a disposable suction canister must be used to collect debris and particles from the procedure.
- (k) Label tissue or specimens that is sent to the pathology laboratory as biohazard and clearly indicate it is coming from a patient with CJD.
 - (i) tissue should be processed fresh, not fixed in formalin
- (l) Retain all liquids for decontamination.

(6) Cleaning of Operating Rooms:

- (a) May contact Environmental Health and Radiation Safety for assistance in obtaining appropriately labeled disposal containers (red bins labeled with a red sticker).
- (b) Where possible, all cleaning tools such as brushes, toweling, and scouring pads, used should be disposable.
- (c) Wear protective clothing, gloves, mask, and visor or goggles.
- (d) For surfaces, flood with undiluted sodium hypochlorite (bleach - 8.25%) let stand 1 hour; mop up and rinse with warm water.
- (e) Upon completion of the cleaning procedure, all disposable cleaning materials should be collected and discarded. Incineration is highly recommended.

(7) Post Exposure Treatment:

- (a) Rinse skin with detergent and warm water for at least one minute, and then thoroughly rinse with water. A short rinse with a 1:10 dilution of bleach can be considered for maximum safety.
- (b) Follow UTMC policy for reporting exposures within two hours to the Emergency Department or to the Administrative coordinator on call through the hospital operator.
- (c) For exposure to blood and body fluids from patient with CJD, follow UTMC policy for exposure to blood and body fluids.

References:

Centers for Disease Control and Prevention. *Guidelines for Environmental Infection Control in Health-Care Facilities*, Recommendations of CDC and Health care Infection Control Practices Advisory Committee (HICPAC), MMWR June 6, 2003. Updated 2019 July. Retrieved on November 7, 2021 from <https://www.cdc.gov/infectioncontrol/pdf/guidelines/environmental-guidelines-P.pdf>

Kavanagh, Beth Ann, (2014) APIC Text of Infection Control and Epidemiology, 4th ed, *Creutzfeldt-Jacob Disease and Other Prion Diseases*.

Rutala, W. *Guideline for Disinfection and Sterilization of Prion-Contaminated Medical Instruments*: SHEA Guideline, Infection Control and Hospital Epidemiology. Feb 2010, Vol 31. No 2. 107-117. Retrieved on November 7, 2021 from https://cha.com/wp-content/uploads/2018/04/ICHE-Feb-2010-Rutala-guideline_for_disinfection_and_sterilization_of_prioncontaminated_medical_instruments.pdf

World Health Organization (WHO). *Infection Control Guidelines for Transmissible Spongiform Encephalopathies*; Report of a WHO Consultation, Geneva, Switzerland, 23-26 March 1999. Retrieved November 7, 2021 from <https://www.who.int/csr/resources/publications/bse/whocdscsgraph2003.pdf>

<p>Approved by:</p> <p>/s/ _____ Michael Ellis, MD Chair, Infection Control Committee</p> <p style="text-align: right;">Date _____</p> <p>/s/ _____ Andrew Casabianca, MD Chief of Staff</p> <p style="text-align: right;">Date _____</p> <p>/s/ _____ Michael Ellis, MD Chief Medical Officer</p> <p style="text-align: right;">Date _____</p> <p><i>Review/Revision Completed By: Infection Control Committee</i></p>	<p>Review/Revision Date:</p> <p>06/18/1979 05/27/2014 12/15/1980 02/24/2015 11/16/1981 11/15/2018 03/28/1983 11/19/2021 09/17/1984 10/21/1985 05/05/1987 06/20/1988 08/06/1990 09/09/1991 11/10/1993 06/02/1997 07/20/1999 08/28/2001 10/18/2004 11/26/2007 01/24/2011</p> <p>Next Review Date: 11/2024</p>
<p>Policies Superseded by This Policy: 31:DIS-204 Creutzfeld-Jakob Disease (CJD)</p>	