

## Electrical Safety

### 1. Electrical Equipment Usage

- Laboratory instruments and appliances must be properly grounded and checked for current leakage before initial use, after repair or modification, and/or when a problem is suspected. This does not apply to devices protected by an approved system of double insulation or its equivalent.
- All equipment is grounded by the use of a three-prong plug.
- Check inspection due date prior to use to ensure that equipment has been inspected within the recommended time interval.
- Ensure that the work area and equipment is completely dry prior to completing all electrical connections and turning the main power switch on.
- Exercise caution when working with liquids around electrical equipment and **do not** place containers of liquids on top of electrical equipment.
- Employees are expected to notify their supervisor if any frayed wires or other electrical problems are encountered.
- Electrical cords are unplugged by holding the plug cap and **not** by pulling on the cord.
- The following are strictly **prohibited** for use on electrical equipment:
  - Three-to-two plug conversion adapters or one that interrupts the continuity of the grounding that bypass grounding configurations are **prohibited**.
  - Extension cords are **prohibited**.

### 2. Equipment Electrical Checks

- Electrical equipment should be checked **annually** for grounding and current leakage.
- Equipment operating at 240v must be checked only for ground integrity.
- Power cords of portable electrical equipment must be visually inspected for external defect whenever relocated.
- All electrical outlets are checked annually for proper grounding by Biomedical Engineering.
- Ground-fault interrupter circuits are used around wet areas.
- Employees know the location of emergency power sources which are indicated by red electrical outlet covers.

### 3. Malfunctioning Electrical Equipment

- The procedure for securing malfunctioning clinical equipment and restoring the equipment to proper functioning is as follows:
  1. Equipment is to be taken out of service immediately and reported to supervision.
  2. Designate equipment that is inoperable. Place date, time, problem, and contact person on the equipment.
  3. Call Maintenance to report malfunctioning equipment.
  4. Do not use the equipment until it has been reevaluated.
  5. Equipment must be decontaminated before releasing it for repair.
  6. Test the equipment prior to using to ensure that it is in proper working order. If questionable as to whether it is working properly, call Maintenance for verification.
  7. Check inspection due date prior to use to ensure that equipment has been inspected within the recommended time interval.

### 4. Electrical Equipment Emergencies

- If an **electrical fire** occurs, do the following:
  1. Disconnect the source of electricity if possible.
  2. Dial 911 to report the exact location and alert occupants.
  3. Pull the fire alarm box.
  4. Use the ABC (dry chemical), BC (carbon dioxide), or AC (water mist-distilled) fire extinguisher present in the area (electrical fires are Class C fires). Do not use a type A (liquid fire) extinguisher on an electrical fire.
- If **shock injury** occurs, do the following:
  1. Do not touch the person until the source of electricity is disconnected, or use a non-conductive material to free the victim (such as plastic or wood).
  2. Call 911 immediately.
  3. Cover the victim with a blanket and lower the victim's head. If trained, use cardiopulmonary resuscitation (CPR) as needed until the physician arrives.
- If an **electrical burn** occurs, do the following:
  1. Disconnect the source of electricity.
  2. Refer the victim to the Emergency Department (6-6666) immediately. All injuries and incidents should be documented for further review and investigation.

- In the event of an injury due to electrical equipment, supervision should refer employee to Employee Health Service and/or the Emergency Room. Additionally, Supervision is responsible for adhering to [UMHHC Policy 05-01-005 Accident Investigation and Reporting](#).

#### 5. Institutional Policy

- For further information on electrical safety, refer to [UMHHC Electrical Safety](#).
- For further information on equipment electrical checks, refer to [UMHCC Policy 05-01-001 The Environment of Care at UMHCC, Exhibit F, Equipment Management Plan](#).
- For further information on fire safety, refer to [UMHHC Fire Safety](#).
- For further information on malfunctioning equipment that may impact patient care or cause employee/patient harm, refer to [UMHCC Policy 05-02-006 Safe Medical Device Act Policy](#).

Approved by: \_\_\_\_\_



Craig Newman, MS, MBA, MT(ASCP)  
Administrative Coordinator

Date: January 1, 2008

Reviewed by: \_\_\_\_\_



Brenda Schroeder, BS, MT, CHSP  
Administrative Coordinator

Date: July 16, 2008