

 ROSS UNIVERSITY SCHOOL OF VETERINARY MEDICINE	Non-Structural Seismic Safety	Effective:	February 06, 2006
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1. Purpose:

To familiarize people with the effects and precautions to be taken during seismic activity.

2. Scope:

These guidelines apply to all faculty, staff and students on campus.

3. Procedure

Seismic activity or the vibration of the earth by an earthquake can produce devastating effects on buildings, roads, pipelines, etc., which in turn, impact our daily lives. The strength or magnitude of an earthquake is measured using the logarithmic Richter scale. The greater the Richter scale reading, the more powerful the earthquake.

Earthquakes with a magnitude as low as 4.0 can cause damage to non-structural furnishings if they are not properly secured. To reduce damage, injury and loss due to the non-structural effects of an earthquake, the following safety guidelines should be implemented as part of your departmental Injury and Illness Prevention Program:

- Secure freestanding bookshelves, cabinets and equipment to building walls, other immovable fixtures and/or to each other.
- Install sturdy latches on sliding or swinging cabinet doors.
- Restrain compressed gas cylinders using approved brackets with metal straps or chains that have been anchored to laboratory benches or walls. Use two chains to restrain gas cylinders as they can slip out from beneath single chains restraints. Refer to [SafetyWeb #00](#), “Compressed Gas Safety” for more information.
- Use flexible gas, water and electrical lines for connection to fume hoods and other equipment whenever possible. Ensure a readily accessible shut-off valve is installed on the utility distribution line, prior to the flexible line.
- Install shelf restraints on all shelves without doors. Restraints for bookshelves should extend at least one-half inch above the shelf. For chemicals, glassware and other laboratory areas, the restraint should extend at least two inches above the shelf.

- Store flammable materials behind latching doors, preferably in flammable storage cabinets. Select locations that are low to the floor.
- Store glassware and bottles of chemicals behind latching cabinet doors whenever possible, using shelves that are low to the floor. When doors are not available for shelves storing tall glassware (e.g., graduated cylinders), string flexible straps midway across the shelf opening and secure the straps to hooks at either end of the shelf.
- Heavy and potentially hazardous items should be stored below head height and, whenever possible, close to the floor. If storing overhead is necessary, firmly secure the item to prevent toppling.
- Establish well-defined responsibilities among laboratory personnel for ensuring that sensitive or dangerous materials are secured before evacuating the laboratory (e.g., extinguish flames, turn off gas cylinders and burners, close cabinet doors, cap chemical containers, etc.)

To reduce your risk of injury during an earthquake remember:

- Stay calm.
- Do not exit the building. Find shelter under a table or strong doorframe until shaking stops.
- Avoid glass (e.g., windows, glassware storage).
- After the earthquake, ensure the area is secured by closing and locking the door behind you, and exit the building.
- Do not use the elevators or escalators; Leave the building by the stairs.
- Proceed to the prearranged gathering place.
- Do not re-enter the building until official clearance has been given.