Preventing Ergonomic Injuries in Central Service

LEARNING OBJECTIVES
1. Discuss potential ergonomic injury risks in Central Service
2. List strategies to prevent acute injuries
3. List strategies to prevent chronic injuries
4. Identify solutions to prevent ergonomic injuries

ERGONOMICS IS THE SCIENCE OF WORKPLACE DESIGN. THE BASIC premise of this science is to create a fit between the worker and the job that reduces the risk of injury. This is most often accomplished by designing a work environment that reduces physical stresses. Virtually every job has some risk of physical injury.

Ergonomic injury can happen to anyone in Central Service (CS). Employers are required to provide a safe workplace and employees are required to follow safety guidelines and report potential hazards. Preventing ergonomic injuries is in the best interest of the healthcare facility and also in the best interest of every employee. Implementing a thoughtful ergonomic program can be an effective way to reduce injuries.

OBJECTIVE 1: DISCUSS THE POTENTIAL ERGONOMIC INJURY RISK IN CENTRAL SERVICE
Routine duties performed by CS professionals often have the potential to cause physical injury. Lifting, carrying, stretching, bending and other activities can cause injury if not performed correctly. Examples of some risks include:
- Repetitive twisting movements with poor body positioning, such as improperly handling trays or loading sterilizer and washer racks
- Excessive standing with poor posture
- Handling overweight objects
- Repetitive motions or tasks
- Eye strain
- Slips or falls from wet or uneven floors, or clustered work areas or passageways

These injuries can be as simple as minor aches and pains, or complicated enough to require physician management, such as physical therapy, surgery or work restrictions. To reduce the risk of injury, every CS department should include ergonomic safety as a part of the department's safety program.

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Employees’ attitude toward ergonomics safety can play a big part in reducing injury. Departments that place an emphasis on safety increase employee awareness of ergonomics hazards, reduce injuries and increase efficiencies.

Ergonomic requirements may not be the same for all employees in a work area (e.g., Differences in height will require different work surface or sink heights). A comprehensive ergonomic program addresses these different needs.

Some employees may bring poor or inadequate habits (poor posture, incorrect lifting mechanics, etc.) to the job. Poor habits and the attitude “It won’t happen to me” can increase the risk of injury.

Poorly functioning equipment can also increase the risk of ergonomic injuries. Heavy carts with wheels that do not roll freely, for example, can increase the amount of effort needed to move items, which can possibly cause injury.

Even activities such as sitting and standing can cause injury. Prolonged sitting (for a total of eight to nice hours a day) can cause back, neck and shoulder pain in the short term and contribute to obesity, metabolic syndrome and chronic diseases, such as cardiovascular disease, over a longer term. Employees who sit the majority of their shift should ensure that their work area is set up for their specific needs (e.g., A chair that allows feet to be flat on the floor, computer monitor at the correct eye level, etc.) and frequently stand or walk to avoid long periods of inactivity.

Prolonged standing (for more than four hours without a break) can also cause injury. Leg cramps, back pain, cardiovascular disease and circulatory problems can result from long periods of standing. Employees who stand the majority of their shift should incorporate movement and change their position throughout the work shift.

**OBJECTIVE 2: LIST STRATEGIES TO PREVENT ACUTE INJURIES**

Acute injuries can occur instantly and without warning. A pulled muscle from lifting, or a strained back from pushing a heavy cart are examples of acute injuries. A specific incident typically causes the injury.

Acute injuries often happen when someone attempts to perform a job that requires two people. These injuries can also happen when an employee doesn’t comply with safety procedures or established work policies. Some strategies to reduce the risk of acute ergonomic injuries include:

• Ensuring that proper equipment is readily available to assist employees with their tasks. Quick access to step stools, for example, can reduce the temptation to over stretch or climb to reach items.

• Encouraging physical preparation for work. Warm-up exercises specifically designed for the work area can reduce fatigue and muscle tension. Body stretches, side bends and upper body twists can help employees prepare for handling instrument trays and carts.

• Using transfer carts to move loads, whenever possible.

**OBJECTIVE 3: LIST STRATEGIES TO PREVENT CHRONIC INJURIES**

Chronic injuries occur over time. They are often the result of poor body mechanics or a poorly-designed system. Chronic injuries cannot be traced to a specific incident; they evolve over time and may result in injuries such as tendonitis, carpal tunnel or other musculoskeletal disorders (MDSs).

The prevention of chronic injuries requires a robust education system. Some individuals have difficulty understanding
that an action that may cause no pain or injury now may cause pain or injury later. Initial training upon employment, and routine training thereafter, can keep awareness at a higher level.

Some suggestions to reduce the risk of chronic ergonomic injuries include:

- Encouraging physical preparation for work. Warm-up exercises specifically designed for the work area can reduce fatigue and muscle tension. Body stretches, side bends and upper body twists can help employees prepare for handling instrument trays and carts. Finger stretches and hand/wrist exercises can reduce muscle tension.
- Taking measures to avoid excessive repetitive motions. Try to break up work tasks. (e.g., Mix tray assembly tasks with packaging instead of letting trays pile up and then wrapping).
- Avoiding eye strain by ensuring proper lighting, using magnifiers, when necessary, and ensuring that detailed work is performed in the normal line of sight (plus or minus a 150 radius).

### OBJECTIVE 4: IDENTIFY SOLUTIONS TO PREVENT ERGONOMIC INJURIES

The point of hire is an ideal place to start when preventing ergonomic injuries. Applicants should be informed of the physical requirements of the job and an assessment may be required to determine if the applicant is a suitable match to the job requirements.

Every ergonomic injury has a root cause. Anytime an injury occurs, it should be documented and action should be taken to prevent a similar injury from recurring. The Occupational Safety and Health Administration (OSHA) issued a revised recordkeeping rule in 2014 to improve workplace tracking of injuries. For information regarding this revised document, visit: https://www.osha.gov/recordkeeping2014/. Information gathered in this process should be used to identify possible preventive measures.

Some departments conduct an assessment of each work area to determine if the area places employees at risk of ergonomic injury. Some questions to ask include:

- Are storage systems that hold heavy items located in a position that is between the technician’s shoulder and knee level?
- Are frequently-used supplies within arm’s reach?
- Are movable carts in good working order (smooth wheel action)?
- Are there any heavy items that pose a lifting challenge? (e.g., Gomez or Bookwalter retractors)

Preventive measures may include education, engineering changes or both.

### EDUCATION

Educated employees are at a lower risk of injury. There are several resources available to help design an ergonomic-focused education program. Resources for identifying issues and developing training include:

- Requesting an environmental assessment by Occupational Therapy to identify lifting issues, the amount of force necessary to move heavy carts and equipment, and special needs for correct body mechanics. That assessment can establish job description requirements and provide the basis for training.
- Regulatory compliance training. OSHA provides information on ergonomics safety (www.osha.gov).
- Reviewing past incidents and injuries to identify staff education needs.

Other suggestions to keep ergonomics safety at the forefront of staff education may include sharing information from current articles and websites, asking for a presentation from a representative of the Occupational Therapy or Employee Health departments, and incorporating good ergonomics work practice tips into training documents.

### ENGINEERING

Engineering controls are physical devices and systems that are employed to reduce the risk of injury. Developing engineering controls in the CS department should begin with workstation design. Workstations should be designed to reduce the risk of injury by meeting the individual employee’s physical needs. Adjustable height workstations and decontamination sinks, for example, can reduce back fatigue. Figure 2 shows the adjustable legs of an ergonomic assembly table.

Lifting injuries can be reduced by...
ensuring that loading carts and racks and storage shelving are designed to minimize injuries. Lifting heavy loads or working in awkward positions increases force on the spine, which can lead to injury because muscles must handle the body’s weight, plus the weight of the object being moved. When the body is in an awkward position, muscles cannot perform as efficiently. Holding an awkward position for an extended period of time may cause muscle and tendon fatigue, and joint soreness.

Whenever a new work activity is introduced, ergonomic factors should be considered. Planners should ask the following questions:

- Are there any ergonomic hazards associated with this task?
- Are there any engineering controls that can reduce the physical stress of this task?
- How can we include ergonomic safety training into this task?

Identifying potential hazards and eliminating or reducing those hazards is an important part of ergonomic safety.

THE IMPORTANCE OF WORK BREAKS

Work breaks play an important role in ergonomic safety. Breaks allow workers to change position and reduce physical stress. Employees who stand in their work area should sit and those who sit at a desk should stand and/or move around to help maintain flexibility, reduce soreness and maintain circulation. Breaks also provide a mental reset that enables workers to refocus and adjust to the task at hand.

IN VolvEMENT IS CRITICAL

Worker involvement is a critical component of any ergonomics program. Workers can provide information about the issues that they face and be an active part of solution development. Management must also be involved. Support is critical to help facilitate the acquisition of equipment, maintain an open dialogue with staff and ensure compliance.

IN CONCLUSION

The field of Central Service has many physical tasks. Some of those tasks pose a risk of injury. Ergonomics injuries are a concern for every CS department. Taking some time to address issues will result in a healthier and better performing team.

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OBJECTIVE 1
1. An example of an ergonomic risk in Central Service is:
   a. Eye strain
   b. Slips and falls
   c. Handling overweight items
   d. All the above

2. Loading sterilizer and washer racks without positioning the body correctly is a cause of ergonomic injuries.
   a. True
   b. False

3. Employees who sit for prolonged periods should:
   a. Keep their feet flat on the floor while sitting
   b. Stand or walk frequently
   c. Ensure the computer screen is at the correct height
   d. All the above

4. Employees who stand for four hours or more should:
   a. Take an additional break to relieve the stress on the leg muscles
   b. Sit periodically for at least five minutes
   c. Change positions throughout the shift
   d. All the above

5. Poor posture can increase an employee's risk for injury.
   a. True
   b. False

OBJECTIVE 2
6. Acute injuries:
   a. Can occur instantly and without warning
   b. Can be caused by pushing a heavy cart
   c. Can happen when employees don't comply with safety procedures
   d. All the above

7. A pulled muscle from lifting is a form of:
   a. Chronic injury
   b. Muscle fatigue
   c. Acute injury
   d. All the above

8. Proper warm-up exercises can reduce fatigue.
   a. True
   b. False

OBJECTIVE 3
9. Chronic injuries:
   a. Occur right away
   b. Occur over time
   c. Can be traced to a specific incidence
   d. All the above

10. Ways to reduce chronic injuries include:
    a. Avoiding eye strain and excessive repetitive motion
    b. Ensuring all work surfaces are at the same height for all employees
    c. Using transfer carts
    d. All the above

OBJECTIVE 4
11. The Occupational Safety and Health Administration requires accidents to be documented and tracked.
    a. True
    b. False

12. Adjustable work tables are a form of:
    a. Physical controls
    b. Engineering controls
    c. Environmental assessment
    d. All the above

13. Identifying potential hazards is an important part of ergonomic safety.
    a. True
    b. False

14. Work breaks:
    a. Are required by the Occupational Safety and Health Administration
    b. Are a form of engineering controls
    c. Provide a mental reset so workers can refocus
    d. All the above

15. Both employee and management involvement is critical for:
    a. Gaining input about issues
    b. Acquiring needed equipment
    c. Solution development
    d. All the above