

AIRE Bulletin

Ergonomics in Healthcare and Dental Offices



This Customer Technical Bulletin provides guidance on ergonomic best practices for healthcare environments—specifically medical and dental offices—to help reduce musculoskeletal disorders (MSDs), improve employee comfort, and support productivity and quality of care. MSDs are among the most common injury drivers in healthcare operations, yet many are preventable through thoughtful workplace design, safe work practices, and early intervention.

Why Ergonomics Matters

Healthcare employees experience elevated ergonomic risk due to patient handling, repetitive clinical tasks, awkward postures, and prolonged standing or sitting. These exposures can lead to strains, sprains, cumulative trauma disorders, lost work time, and the possibility for increased claim severity. An effective ergonomics program protects employees while supporting operational efficiency, workforce sustainability, and patient outcomes.

Common Ergonomic Risk Factors in Healthcare

Healthcare and dental environments present unique challenges, including:

- Manual patient handling and repositioning
- Repetitive reaching, bending, and twisting
- Sustained or awkward postures during clinical procedures
- Prolonged standing or seated computer work
- Inadequate workstation or equipment design

Identifying and addressing these exposures early can significantly reduce injury frequency and severity.

Elements of an Effective Ergonomics Program

A successful ergonomics program is proactive, practical, and integrated into daily operations. Key elements include:

Leadership Commitment

Visible management support is critical. Leadership should promote ergonomic safety, allocate resources, and reinforce expectations for safe work practices.

Ergonomic Risk Identification

Regular evaluations of work tasks, workstations, and patient-handling activities help identify high-risk exposures before injuries occur.

Engineering Controls

Whenever feasible, reduce risk through design solutions such as:

- Mechanical patient-lifting and transfer devices
- Adjustable beds, exam tables, stools, and workstations
- Mobile equipment and carts to reduce carrying, pushing, and pulling forces

Administrative Controls

When engineering solutions are limited, administrative strategies can help reduce exposure, including:

- Job rotation and task variation
- Adequate staffing for patient handling
- Scheduled rest breaks and stretching or mobility programs

Training and Education

Provide role-specific ergonomics training covering neutral postures, safe patient-handling techniques, equipment adjustment, and early symptom recognition.

Early Reporting and Intervention

Encourage employees to report discomfort early. Prompt evaluation and response can prevent progression to recordable injuries and reduce recovery time.

Job-Specific Ergonomic Considerations

Clinical Providers (Physicians, Nurses, Medical Assistants)

- Avoid prolonged forward flexion when charting or providing care
- Use mobile workstations or adjustable monitor arms
- Store frequently used supplies within a 12 to 18-inch reach zone

Patient Handling and Assistance

Before assisting a patient:

- Assess patient mobility and weight
- Ask for assistance when needed—do not lift alone
- Use gait belts, transfer aids, or mechanical devices when available

During transfers or repositioning:

- Keep the patient close to your body
- Bend at the knees and hips—not the waist
- Maintain a neutral spine
- Avoid twisting; pivot with your feet
- Coordinate movements with assisting staff
- Never try to catch a falling patient alone—guide safely to the floor and call for assistance

Dental Office Ergonomics

Operator Posture

- Maintain a neutral spine with relaxed shoulders
- Keep elbows close to the body (generally under 30° abduction)
- Use magnification loupes designed to reduce neck flexion
- Adjust stools to maintain a hip angle of 90–110°

Patient Positioning

- Position the patient close to minimize reaching
- Fully recline for maxillary procedures and adjust headrests as needed
- Align overhead lighting with the operator's line of sight

Instruments and Equipment

- Select lightweight, wide-diameter instruments with textured grips
- Use balanced, low-vibration handpieces
- Consider cordless devices to reduce cable drag
- Invest in adjustable operator and assistant stools with lumbar support

Four-Handed Dentistry

- Utilize assistants to reduce repetitive reaching and twisting
- Organize instrument trays to limit unnecessary movement
- Position suction devices and handpieces within neutral reach zones

Micro-Breaks

Encourage brief 20–30 second stretch or mobility breaks between patients to reduce fatigue and cumulative strain.

Office and Computer Work Ergonomics

Administrative and charting tasks also pose ergonomic risks when performed for extended periods.

Safe Workstation Setup

- Monitor at or slightly below eye level
- Keyboard and mouse at elbow height with neutral wrists
- Feet flat on the floor or supported by a footrest
- Chair providing adequate lumbar support
- Frequently used items within arm's reach

Healthy Work Habits

- Take brief stretch breaks at least once per hour
- Alternate sitting and standing when possible
- Avoid cradling phones between the shoulder and ear; use headsets when needed

Safe Lifting and Material Handling

- Test the load before lifting
- Position feet shoulder-width apart
- Bend knees and hips—not the back
- Keep loads close to the body
- Lift smoothly using leg muscles
- Avoid twisting while carrying
- Use carts, dollies, wheeled equipment, or team lifting when available
- If an item is too heavy or awkward, do not lift it alone

Management Responsibilities

Supervisors and practice leaders should:

- Provide ergonomics and lifting training
- Ensure equipment is maintained and accessible
- Encourage employees to ask for help
- Reinforce a culture of safety over speed

Benefits of a Strong Ergonomics Program

Healthcare organizations that prioritize ergonomics often experience:

- Reduced injury frequency and severity
- Lower workers' compensation costs
- Improved employee morale and retention
- Increased productivity and reduced absenteeism

How Arch Can Help

Arch Risk Control professionals can partner with healthcare organizations to:

- Identify ergonomic exposures
- Recommend practical, operation-specific risk reduction strategies
- Support training, assessments, and ergonomics program development

Safe practices protect employees, patients, and operations. When in doubt—stop and ask for help.

Arch Insurance Risk Engineers (AIRE) Bulletin

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