

# Ergonomics Supporting Healthcare-Specific Technology



The healthcare industry's recent embrace of information technology echoes the computer revolution of the corporate world during the 1980s. Unfortunately, with that leap toward technological advancement has come many of the same issues that became apparent from the digital transition of the corporate office—including eyestrain, chronic back pain and other various repetitive stress injuries. However, a well-designed ergonomics program can easily address these problems while still allowing caregivers to take advantage of the technology.

## Ergonomics in Healthcare Environments: A Growing Need

Since healthcare's transition to electronic medical records and computer-oriented work shifts, work-related injuries have steadily risen among caregivers. Nurses spend 3.6 to 4.8 hours per shift either sitting or standing at a computer, and not coincidentally, recent research shows that 32% of nurses using computers have work-related musculoskeletal disorders.

With caregivers becoming increasingly at risk for such work-related injuries and discomfort, the need for ergonomic workstations in healthcare environments is more apparent than ever. In a corporate environment, ergonomic improvements can yield significant ROI. But in a healthcare setting, these improvements can also have far-reaching impacts on patient care and outcomes.

Unlike a traditional office where employees work at individual desks that can be customized for each worker, healthcare workstations require tremendous flexibility to accommodate multiple users. Nursing stations exemplify the typical challenges of a healthcare environment. With an average of five to 10 nurses working per shift, three shifts a day, a single computer workstation needs to daily accommodate 15 to 30 different users, all of whom have unique physical requirements. Add to that the need for technology in patient rooms, exam rooms and operating rooms, among others—all of which will also be used by multiple individuals every day—and it becomes even more clear why ergonomic consideration in healthcare environments is so important.

# Finding the Right Solutions: What to Look For

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The good news is that the same ergonomic principles used in corporate environments apply to healthcare environments as well—namely that a neutral posture minimizes injury risk, discomfort and error rates while maximizing productivity. Yet a proper ergonomic workstation must be carefully selected based on the users' needs. For example, as computers change how caregivers work, the implementation of technology in healthcare environments must be carefully considered with respect to ergonomics. When done correctly, ergonomic implementations will reduce caregivers' risk of developing an injury while dramatically improving their comfort and performance.

When setting up a computer station, the following four factors can help ensure neutral postures for maximum health and comfort:

- 1. Intuitive, independent keyboard and monitor adjustability**  
Ensures the users' hands and eyes are placed correctly to avoid awkward, uncomfortable postures.
- 2. Support for sitting and standing positions**  
Solutions must accommodate the various positions that caregivers find themselves in during a typical work day.
- 3. Flexibility to accommodate all users comfortably**  
Solutions should have enough range of adjustability to accommodate users' varying physical requirements.
- 4. Easy use and maneuverability in compact spaces**  
As space is often limited in healthcare environments, solutions should be easily accessed and used in tight spaces.

It is extremely important that these factors are taken into consideration as healthcare environments are planned and built. For guidance in this area, organizations should consult with certified ergonomists, who can evaluate the work being done and other job-related requirements and recommend the right ergonomic tools and programs to ensure the most positive outcomes.

## **Some examples of ergonomic work tools that support healthcare-specific technology include:**

- Adjustable sit-stand workstations-on-wheels
- Sit-stand wall-mounted workstations
- Nursing station work tools that offer easy and intuitive adjustability within safe ranges
- Ergonomic seating solutions that can be outfitted with anti-microbial fabric

Cornell University offers an extensive guide on how to select ergonomic healthcare solutions. For more information, visit <http://ergo.human.cornell.edu/cutools.html>.

By following these simple principles in implementing an ergonomics program, those responsible for the technology in healthcare environments can ensure that their caregivers are able to safely and comfortably use the technology while focusing on their top priority: delivering care to their patients.