

FITTING CHAIRS TO WORKERS PREVENTS BACK PAIN AT NAVAL SURFACE WARFARE CENTER CRANE DIVISION

People tend to think of lifting and carrying heavy objects when they hear about work-related back pain. While workers who lift heavy or awkward loads are at high risk for back pain and injuries, work tasks that involve prolonged standing or sitting may also put workers at risk for back pain as well as neck, shoulder, arm and leg pain. This risk increases due to awkward or unsupported postures such as working with the back bent forward. Prolonged standing or sitting keeps a person in a *static posture*. *Static standing or sitting posture* is often a contributing factor to recurring back and leg pain.



Ill-fitting chairs force workers to assume awkward postures

Work tasks that require using a particular group of muscles, such as those that support a *static standing or sitting posture*, for long periods during each workday, tend to fatigue that muscle group. This overburdening may lead to a work-related musculoskeletal disorder, or WMSD. A WMSD is a disability that usually involves weakness and discomfort in the affected muscles. Discomfort often improves after discontinuing activities that weaken the affected muscle groups and getting medical treatment for the WMSD.

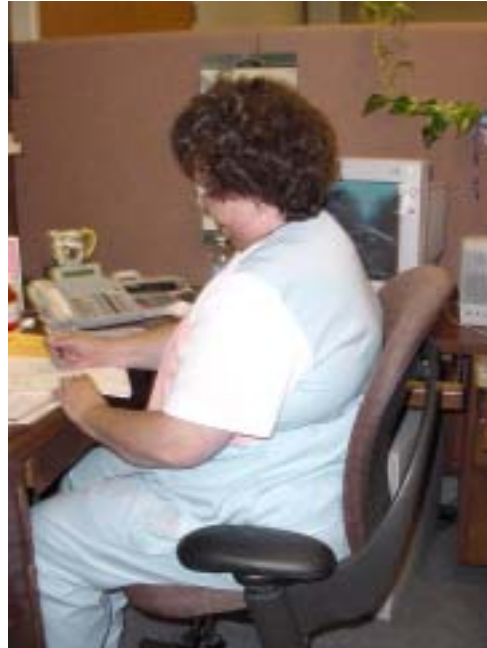
The workforce at Naval Surface Warfare Center (NSWC) Crane Division consists of several hundred employees who primarily work in administrative offices. NSWC

Crane's Occupational Safety and Health (OSH) Office saw an increase in requests for ergonomic evaluations by both supervisors and employees due to employee complaints of back pain. This prompted the office's Ergonomic Program Manager to take a closer look at NSWC's Ergonomic Program.

Ergonomics is the science of fitting the work to the worker, instead of requiring the worker to adapt to existing working conditions. The goal of an ergonomics program is to reduce the frequency and severity of WMSDs by redesigning work tasks or workstations using procedures and tools that minimize the risk of WMSDs. Work tasks, equipment, and tools that are ergonomically designed help to reduce the risk of work-

related injuries and WMSDs by making it easier for the worker to avoid repetitive motions, awkward positions, and unnatural postures.

The Ergonomic Program Manager discovered that when new office furniture was to be purchased for any of the departments of NSWCC Crane, the decision as to the style, model and size was determined only with the standardized office décor in mind. The body size and shape of the employees for which the chairs were being ordered did not come into consideration. The employees were issued the same style and dimension of chair regardless of differences in body proportions. This practice put the employees at risk for back, neck, shoulder, arm and leg pain because their bodies were not properly supported.



Employees choose chairs for comfort and avoid back pain.

After benchmarking with other companies and talking with the employees, the OSH Office and Ergonomic Program Manager decided that each user would benefit from testing a variety of sizes, styles, and models of chairs before the NSWCC Supply Department purchased a chair for that particular employee. The Ergonomic Program Manager initiated a *loaner program* with various General Services Administration contract vendors. The contract vendors agreed to lend NSWCC Crane's OSH Office several different types of chairs, which offered various adjustments to comfortably fit different body types. Most of the office chair suppliers offer multiple styles of chairs in the same fabric so that NSWCC Crane can still standardize its office furnishings while finding an appropriate chair for each employee.

The Ergonomic Program Manager loans the chairs to NSWCC administrative departments. The Safety Office recommends that each employee uses a chair at his or her workstation before the Supply Department purchases a chair for that individual. An area was set up in the NSWCC Crane Supply Center for employees to test various chair styles for comfort. The employees try the chairs out at this location and narrow the choices down to two chairs that they may use at their workstations for at least two days before making a final decision.

When NSWC Crane employees relocate to different workstations due to reassignments or program changes, they may take their chairs with them. This flexibility eliminates the need to find another suitable chair. When new construction or remodeling requires new office furniture, the buyers from the Supply Department notify the NSWC Crane Ergonomic Program Manager to ensure that employees have had an opportunity to try out the style of new chairs proposed for purchase to ensure proper fit.

The chair loan program at NSW Crane has been very well received. The NSWC Crane Supply Department no longer has to return chairs to vendors and replace them because of poor fit and discomfort. Administrative employees are happy that they have the opportunity to test chairs for ergonomic comfort and can take their comfortable chairs with them when they change offices.

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