

## **NASSIG ERGONOMIC INTERVENTIONS DELIVER FLEET MAIL CENTER FROM WORK-RELATED DISABILITIES**

Not even the threat of a lava flow from nearby Mount Etna would stop the delivery of mail to and from Naval Air Station, Sigonella, Italy



**Customer picks up mail at NASSIG Fleet Mail Center**

(NASSIG) Fleet Mail Center. The U. S. Postal Service (USPS) does not staff overseas post offices. NASSIG, like other American overseas military bases, embassies, and consulates, operates its own mail handling and distribution center in accordance with USPS regulations and guidelines. Every year, the NASSIG Fleet Mail Center processes over five million pounds of mail delivered from and to the USPS for U.S. Navy's ships at sea as well as for all the U. S. military and American civilians stationed at NASSIG.

Processing large volumes of mail puts NASSIG mail handlers at risk for work-related musculoskeletal disorders (WMSDs). A WMSD is a type of disability that usually involves weakness and discomfort in groups of muscles and tendons that are used for long periods during each day's work shift. WMSDs commonly involve the wrists, arms, shoulders, neck, legs, or back.

Mail handlers routinely lift and carry large bundles of letters and packages. They often stand for long periods of time to sort the mail. Long periods spent standing and prolonged repetitive motions tend to overburden and fatigue the muscles that keep the body standing upright and the muscles involved in repetitive motions, which increases the risk of WMSDs. The discomfort often improves after discontinuing activities that weaken the affected muscles and getting medical treatment for the WMSD.



**Standing for long periods to process mail puts mail handlers at risk for WMSDs**

NAS Sigonella was selected to be a model site during the Chief of Naval Operations Corporate Ergonomics Program evaluation. 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 and workstations.

Ergonomic redesign introduces work procedures and tools that minimize the risk of work-related injuries and WMSDs by helping workers to avoid excessive repetitive motions, awkward positions, and unnatural work postures.



**Inclined ramp allows mail trucks to line up evenly with loading dock**

To assess ergonomic risk factors, NASSIG Fleet Mail Center employees completed a discomfort survey. The survey identified ergonomic problem areas associated with tasks, work stations and levels of physical discomfort for Mail Center workers. Subsequent ergonomic interventions minimized the risk of WMSDs among these workers.

Prior to ergonomic redesign, when mail delivery trucks backed their vehicles into the loading dock at NASSIG Fleet Mail Center, the back of the truck was not even with the loading dock and mail had to be unloaded manually and lifted from the truck onto the loading dock or carried up a flight of stairs. At the request of mail facility workers, engineers redesigned the loading dock ramp with an incline so that mail truck floors now line up evenly with the dock, allowing mail handlers to roll mail carts into and out of the trucks instead of hand carrying heavy mailbags and packages.



**Mail handlers roll mail carts in and out of trucks aligned with new loading ramp**

Mailroom workers use a sorting table at the far end of the loading dock for sorting and tagging each incoming and outgoing mailbag with its destination. The table is a height that the USPS has determined to be

comfortable for over 90% of its mailroom workers. This height also accommodates most NASSIG mail handlers; those who are too short or too tall are assigned to other mail handling work tasks. The table's slanted top prevents awkward bending back of the wrist while writing. The table has an easily accessible drawer for tags and labels. Workers also developed a separate tag holder that is attached to one of the table's legs at a level to minimize unnecessary bending or reaching.



**Mail is sorted and tagged at table that accommodates height of most mail room workers**

There is enough legroom under the table for mail handlers to sit on stools with foot rings that rest the back, legs, and feet. Workers alternate between standing and sitting to avoid staying in one position for long periods of time. According to ergonomics experts, standing or sitting in one location for an extended period puts a person in a *static posture*. *Static postures* often contribute to fatigue and back and leg pain and may increase the risk of WMSDs.

Once incoming mailbags have been off-loaded from trucks and tagged at the sorting table, mail handlers open the mailbags and sort the mail at workstations that also meet the USPS design criteria to ensure that



**Equipment is lined up at each workstation to minimize stretching to reach items**

about 90% of workers can be expected to handle the assigned work tasks. Mail handlers use mailbag stands that allow them to put in and take out letters, magazines, and other items from the mailbags without bending, twisting, or assuming awkward body positions. Portable weighing scales and mail labeling, stamping, and tagging equipment are lined up at each workstation to maximize efficiency and minimize stretching to reach items. Most Mail Center workstations also have anti-

fatigue mats to cushion the feet, legs, and back while standing to process mail.

Depending on the size and amount of mail to be processed, mail handlers place sorted items in mailbags, tubs, carts, or on shelves. Using shelves eliminates putting large or heavy items on the floor, then having to lift them, risking back injuries. Plastic tubs are used for carrying lightweight items such as letters, magazines, and small packages, to workstations where they are sorted for delivery to mailboxes. Canvas carts with rolling casters also improve movement of mail within the Center and further reduce the risk of back strain.



**Using shelves to sort mail helps minimize risk of back injuries from repeated bending and lifting**

Mail addressed to sailors and marines who are on board Navy ships in the Mediterranean Sea is placed on shipping pallets. Palletizing decreases



**Transporting mail in canvas carts with rolling casters reduces back strain**

the risk of WMSDs by

eliminating manually carrying mailbags and large boxes. Forklifts then move the pallets to military aircraft for transporting the mail to ships. Using forklifts avoids manual pushing or pulling of the heavy pallets.

Over five million pounds of mail move through the NASSIG Fleet Mail Center every year. Ergonomic interventions, management commitment to worker safety and health, and the right equipment for the Fleet Mail Center's work tasks prevents WMSDs among its mail handlers while keeping the U. S. mail flowing between NASSIG and the sailors and marines on the Navy's ships at sea.

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