CAPP Report
CIVILIAN ACCIDENT PREVENTION PROGRAM REPORT
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Juggling stress

Stress is essential to life. The challenge is to strike a balance between enough and too much.

Stress-related claims are on the rise in the United States as well as in other countries. Even in Australia, where it seems that a relaxed lifestyle is the norm, stress incidents have increased 20 percent per year since 1990 among public employees. Read on to learn more about Australia's approach to dealing with the stress epidemic that's rampant in the industrialized world.

Dr. Angelica Vecchio-Sadus, Site Safety Officer, Commonwealth Scientific and Industrial Research Organization (CSIRO), Port Melbourne, Australia, provides the following views on workplace stress, down-under style.

Stress in the workplace

What is stress? It's a biochemical response to performance that results from combinations of many factors, including work, knowledge, family, environment, health (physical and emotional), values and beliefs, travel, finances, and social relationships.

Stress consists of five components.

❶ Stressors (example: organizational change—humans like things to be predictable).

❷ Feelings (examples: How do I feel about myself? Am I in control?).

❸ General adaptation syndrome (examples: fear of making presentations (sweaty palms) and reaction to floods, earthquake, famine).

❹ Thoughts (examples: denial of unpleasant circumstances or tragedies, and lack of control over change).

❺ Behavior (examples: negative thoughts trigger physiological effects such as temper outbursts, either verbal or physical).

What are the symptoms of stress? Positive responses to stress include performing better, acting faster, running harder, and thinking quicker. Long-term effects of stress can result in ulcers, heart attack, nervous breakdown, weight gain or loss, and dependence on alcohol and other drugs. Varied short-term symptoms of negative stress include low morale, aggression, bad decisions, disorganization, hair loss, eye twitches, neck stiffness, sleepiness, increased tiredness, increased smoking, stomach upsets, eating disorders, and physical ailments such as headaches or high blood pressure.

Reported cases of stress-related illness have almost doubled in the Australian Public Service since 1989-90 and are growing at the rate of 20 percent per year. The average liability associated with a stress claim is more than double that involved with other forms of work-related injury.

Research by Comcare [comparable to the U.S. Office of Workers' Compensation] revealed that people with stress-related illnesses have longer periods of absence and that their rehabilitation costs about $25,000 compared to $9,000 for other illnesses. The research also indicates that the cost of stress-related absences is likely to increase, and the number of cases may double again before the year 2000.

The most common causes of stress-related absences are classified as "workplace conflict situations." The Comcare research breaks down the incidence of these situations into four areas:

- Interpersonal conflict (24%)
- Work pressures and deadlines (24%)
- Anxiety caused by

organizational change (22%)

■ Verbal or physical abuse (17%)

Add to this the pressure of family life and the usual stresses of day-to-day existence, and it's easy to see why the problem seems overwhelming.

Recent discussion suggests that stress is a global phenomenon largely affecting post-industrialized societies. However, a certain amount of stress has always been part of the human condition. In CSIRO, work-based change is the main cause of stress. Workers are feeling less comfortable with their workplace because they have lost control over events involving them.

What can we do about it? Debate continues as to whether stress should be addressed as part of a risk-management strategy, or whether it should be dealt with as an OH&S issue along with everything else. It appears easier for organizations to treat the symptoms of stress rather than the causes. There is also the attitude of: nothing visible, nothing wrong. Organizations can help to reduce perceived stresses amongst their staff in key areas such as communication, cooperation, and compromise. While finding the cause of an individual's stress and resolving it might be the ideal solution, often this is not possible. However, individuals can manage stress to some degree and improve the quality of both work and personal life with application of some time-proven techniques. And remember that stress isn't all bad. A certain amount of it in our lives is not only essential for survival but also keeps us alert, inspired, creative, and active. ☐

Dr. Angelica Vecchio-Sadus approved our use of this information from her article "Stress in the Workplace." Her mailing address is Site Safety Manager, CSIRO Minerals, P.O. Box 124, Port Melbourne, VIC 3207 AUSTRALIA; her Internet address is angelica@dmp.csiro.au. An additional stress-reduction guide is available from her organization via Internet. The CSIRO Stress Brochure - CSIRO, Australia, 14 June 1995, is available at the following site: http://www.minerals.csiro.au/safety/saferes.htm.

Keys to Reduce Organizational Stressors

Management Actions

- **Consult with employees.**
- **Match employee tasks and duties to capabilities and training.**
- **Inform employees of organizational changes, plans, and successes.**
- **Train supervisors to resolve work conflicts.**
- **Offer flexible work arrangements to fit outside commitments.**

Keys to Personal Stress Reduction

Time-Proven Techniques

- **Learn to breathe properly and do regular breathing exercises.**
- **Listen to relaxation tapes; some use exercises and others music.**
- **Take time out in your day from your work and other commitments.**
- **Learn to meditate; it's an age-old remedy that works.**
- **Eat properly; sound nutrition is essential for every aspect of good health.**
- **Get enough sleep to rejuvenate the body and mind, but remember that individual sleep needs vary widely.**
- **Do moderate exercise regularly.**
- **Remember to have a laugh now and then.**
- **Try yoga, massage, and positive thinking. Continue what works for you.**

Stress: The Army perspective

Data gathered through Army and Office of Workers' Compensation reporting systems is inadequate to measure the total impact of stress. Claims labeled "stress-related" have increased slightly, but the true debilitation on quality of life, quality of work life, productivity, and morale is incalculable. Effects of stress at work may show in a

variety of ways: aggravation of other medical conditions such as high blood pressure or digestive disorders, or degeneration of interpersonal relationships that lead to conflict, even violence. No database accumulates these kinds of losses.

We read that change and the pace of change in today's society contribute to stress. But is change really the culprit? If so, why don't we go to work everyday instead of just "work" days? Why do we "change" our habits on the weekend or days off? Isn't it more a control issue? People like change they influence, in which they participate, are considered, have some control or at least the appearance of being part of the decisions. That's why some people enjoy planning the time-off adventure as much the adventure itself—sometimes, more! Why? Because during the planning process, the planner has greater control. Once the adventure begins, factors beyond our control sometimes dictate unwanted changes, changes over which we have no control—weather, cancellations by vendors, overcrowding, or illness. So, in decision making both on and off the job, involving everyone who's affected can reduce stress levels.

Coping techniques

Time-proven coping techniques such as those recommended by Dr. Vecchio-Sadus will reduce stress levels if applied. However, individuals must take responsibility and must act to reap benefits. Sometimes that means accepting the inevitability of circumstances: for example, recognizing the virtues of gerontology as one ages! Sometimes it means taking action to make changes: for example, applying for other jobs to get out of an intensely stressful work environment. In either case, coping techniques can help.

Add these to your toolbox for stress-relief:

■ Visualization of relaxing moments. Take a 30-second vacation. Transport yourself to a calming, pleasurable moment. Research shows actual drops in blood pressure from such micro-breaks.

■ Brief vacations. A day here, a day there, work for some people; others require a week or two. Determine what works for you and use it.

■ Audiotapes and videotapes. Mood-setting tapes are on the market: flowing streams, bird calls, white noise, wind chimes, "Key West Afternoon," classical music, Gregorian Chants. Find what fits your environment, doesn't impose on your coworkers, and doesn't interfere with work, and use it to decrease your stress.

■ "Pop" psychology. Bookstores are full of it. Stroll through the aisles. Something might strike your fancy. If not, at least you've had a change of pace and a distracting stroll.

■ Urgent vs. important. Relieve yourself from the "tyranny of the urgent" described in works by Stephen Covey, Charles Hummel, and others. Do the important rather than the urgent. The feeling of control and satisfaction and the long-term benefit will be worth the investment.

■ Power napping. After lunch most days, our bodies plead, "I need a nap!" We may not be listening, but some researchers are. And so is private industry. Some businesses are encouraging power naps because they improve productivity. One company has even marketed a special alarm clock for power nappers.

■ Juggling. Is it the "clowns" you have to deal with that cause you stress? Well, better to switch than fight! Join the real clowns. Become a juggler. Learn Lessons from the Art of Juggling: How to Achieve Your Full Potential in Business, Learning, and Life by Michael Gelb and Tony Buzan (Harmony Books, New York, New York, 1994). Most of us seldom have the opportunity to employ the Charles Emerson Winchester III dictum from the TV series M.A.S.H.: "I do one thing at a time. I do it very well. Then, I move on." Juggling totally focuses the mind and body on a single activity. Refreshing, invigorating, relaxing. A local juggling club can be found by contacting the Jugglers Association at 413-367-2401.

■ Johari Windows (a little of that "pop" psychology). Is who you are the same in all environments? Would you want friends from all your spheres of influence in one place? Or would you have to keep groups apart because you portray different faces in different places? Is the overlay of who you think you are and who others think you are close or far apart? The closer the "windows" are to precise overlap, the more cohesive and mature your character, and the easier it is to relax. It's like a quilt compared to cloth. Quilts may be beautiful, but they are stitched together, not woven like cloth. Therefore, fault lines lie along the stitches, and, under stress, the quilt will come apart at the seams. The cloth is woven without seams and is strong under stress; it fails only under the greatest of stresses.

■ Quilting. Speaking of quilts, quilting is a relaxing hobby. Most

of us are familiar with those of America's backwoods, rural areas, family history, even "community" quilts that depict local historical buildings. Quilting information is even on Internet. (Yes, there is something incongruent about this intersection of Americana and the Superhighway, but it's too stressful and unsettling to think about!) But not all quilts are "happy." A stress therapy has arisen in the past few years where quilts show the "dark side." Life's tragedies such as death or divorce are depicted, sometimes as the total quilt, other times in addition to the more traditional life events. Quilting is an example of many hobbies from which you can select the most appropriate stress relief for your circumstances.

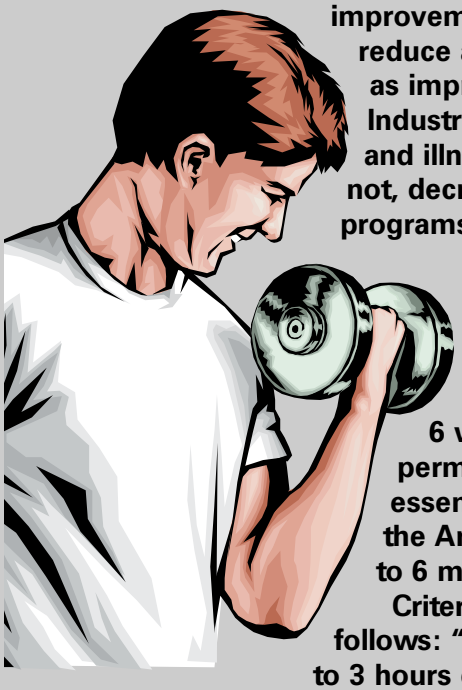
■ Conflict resolution. Whether on or off duty, conflicts of varying degrees are part of our lives. How we deal with resolving those inevitable conflicts is critical to having peace and harmony around us. Dr. Colman McCarthy (CAPP Report, V5N6) provides an easy formula for conflict resolution. Remember that the proverb "It is better to give than to receive" doesn't apply to stress. Don't be a carrier! Maybe you thrive on conflict, but do those around you? Whether you are a supervisor or a worker, you can make a difference in the tone of your work environment. It's your choice. But the best plan of attack on stress fails unless you employ Dr. McCarthy's motto: Start. ☐

—Fran Weaver, Evaluations Branch, USASC, DSN 558-3759 (334-255-3759), weaverf@rucker-safety.army.mil

Army investment in civilian wellness

The Army has taken a giant step in support of civilian-employee wellness. The health-promotion program for civilian employees has been extended from 6 weeks to 6 months and expanded from 18 hours to more than 72.

The original idea was to "encourage civilian employees to engage in regular programs of exercise and other positive heath habits." The expected return on investment was lifestyle improvements by participants that would reduce accident and sick leave as well as improve morale and health. Industry has found that both accidents and illnesses, whether job-related or not, decrease where effective wellness programs are in place.



Originally, the Army's program authorized up to 3 duty hours per week for up to 6 weeks. Further research and analysis, however, found that 6 weeks is insufficient to promote permanent lifestyle changes essential to the process. Therefore, the Army has extended the program to 6 months, once in a career.

Criteria for the program are as follows: "Commanders may approve up to 3 hours excused absence per week to allow employees to participate in command-sponsored formal physical-exercise training. This training will include participant evaluation both pre- and post-program, continuous monitoring during the program, and exercise and nutritional education. These activities must be an integral part of a total fitness program and are time-limited, that is, up to 6 months in duration...."

The Army's commitment is further confirmed by support beyond the 6-month active period. The policy continues: "Beyond these situations [the 6-month program], work schedules should be adjusted to permit training and exercise where possible and where consistent with workload and mission...."

DA Health Promotion Programs Office message, HQDA DAPE-HR-PR, 261625Z Mar 96, subject: Civilian Health Promotion Programs, makes these changes official. The message suggests methods to structure programs and provides further policy information. Point of contact is MAJ Beth Foley, DSN 227-2448 (703-697-2448) in the Office of the Deputy Chief of Staff for Personnel.

—Thanks to Cheryl Humbolt, Safety Director, Military District of Washington, for suggesting this information be published here. Thanks also to Cheryl Paul, Administrative Support/Secretary, CPO, Fort Rucker, for research and references.

CRCP: Fort Detrick stands out

Fort Detrick, MD, has worked hard to establish a strong Civilian Resource Conservation Program (CRCP), and they've succeeded. A CRCP committee formed in 1988 has continuously improved the process with positive results. Today, the committee includes people from many U.S. Army Garrison activities, including Angie Weddle, CRCP coordinator; the chief of staff as CRCP chairman; the installation safety manager, who serves as CRCP manager; another safety office representative; the director of health services; two occupational health nurses; and a counseling psychologist. The group meets weekly to discuss compensation cases, which helps to identify problem areas. The committee assists in claims investigations and has identified fraudulent claims, reducing costs to the agency.

To ensure more efficient case management, the CRCP coordinator's position is located in the installation safety office. Ms. Weddle manages all workers' compensation claims for the installation. She works closely with managers and supervisors, giving advice and assistance as they go through the claims process. "My goal is to make the process as painless as possible for both employees and their supervisors. I feel that once an injury occurs, everyone is already faced with enough pain and suffering."

Implementation of the CRCP is highly encouraged for all tenant activities, and, according to Ms. Weddle, several tenant organizations have made it a way of life.

Education is one of the keys to the success of the program. Training sessions on CRCP are given by Ms. Weddle and Sharon Mangrum, safety office representative. Originally, the training was only for supervisors, who, in turn, were to share the information with their employees. "We found that this did not happen in all instances," Weddle said. "Therefore, within the last year the training has been opened to all employees." This ensures that all parties involved are aware of where and how to report an injury. According to Weddle, early reporting of injuries and getting injured employees into this process makes all the difference in getting them back to full capacity in the work environment.

Many Army installations have contacted Ms. Weddle and Rudy Spencer, installation safety officer, to learn details about the Fort Detrick program and how it works. Ms. Weddle recently traveled to Kimbrough Army Hospital at Fort George G. Meade, MD, to assist in establishing a program and provide advice to the installation safety manager and deputy commander on ways to improve their program.

"We are always ready to provide information and assistance," Ms. Weddle said. "The bottom line is that we need to reduce fraudulent claims, which take money from other areas. But even more important, we need to protect our workforce from injury. The only way to do this is to work together as a team."

A successful CRCP is dependent upon strong command support, a concerted team effort, sustained focus and involvement, a broad-based education effort, and a proactive approach at every level. These ingredients are all present at Fort Detrick. For more information about Fort Detrick's program, contact Ms. Weddle at DSN 343-3137 (301-619-3137) or e-mail Angie_Weddle@FtDetrck-ccmail.army.mil. ☐

—POC: Ms. Eileen Mitchell, Marketing Program Manager, DSN 343-3357 (301-619-3357), Fort Detrick, MD

USAREUR SOH Interface Program

The Safety and Occupational Health Interface (SOHI) Program in USAREUR is designed to establish partnership among safety personnel, industrial hygiene (IH) personnel, and the occupational health nurse (OHN). Collocating all three offices at the Area Support Group (ASG) provides the commander comprehensive and responsive coverage of all basic safety and health issues and a single list of priorities for correction.

SOHI began as a joint project between the USAREUR Safety Division and 10th Medical Lab (now the Center for Health Promotion and Preventive Medicine-Europe (CHPPM-E)) in 1989. Approval was obtained from The Surgeon General of the Army to test the program using four USAREUR communities. When the test proved successful, the program was approved for implementation throughout the command. Now that the implementation phase is complete, USAREUR has a functioning command-wide SOHI program. As with any new program, SOHI still has growing pains, but the worst appears to be over.

In USAREUR the base operations structure is broken down into ASGs and Base Support

Battalions (BSBs). The ASGs act as coordinating headquarters with one or more BSBs responsible to it. Each ASG has a single safety manager, while each BSB has both a safety manager and a specialist. Actual day to day safety work is normally performed at the BSB level with the ASG safety manager exercising technical oversight of the program for the ASG commander. At present USAREUR has 8 ASGs and 17 BSBs. The concept works like a wagon wheel, with the ASG as the hub and the BSBs at the ends of the spokes. BSB work is comparable to that of installations in CONUS.

The SOHI Program moved IH personnel and OHNs out of regional hospitals and into ASGs, often collocating them with ASG safety managers. This places IHs and OHNs in the command they are servicing and in touch with the safety offices with which they are working.

The program functions by conducting an initial survey of work areas, to include health hazards. The data gathered during the survey is placed in a database shared with safety, IHs, and OHNs. Decisions are then made on which areas will receive IH surveys, which areas require medical evaluations, and so forth.

While safety managers work directly for ASG/BSB commanders, the IHs and OHNs work for CHPPM-E in Landstuhl. ASG and some BSB commanders provide administrative support for the IHs and OHNs and have limited input into their performance evaluations. However, none of the three partners exercise any authority over the others. This presents an organizational challenge, but all parties are learning to work together toward common goals.

Safety managers were provided a computer and software to run the Health Hazard Information Module (HHIM), which is the software program IHs use. (HHIM is part of the Occupational Health Management Information System.) They were also issued basic IH test equipment and were provided with the Basic Industrial Hygiene Course and training on operating the HHIM software program.

The program enables USAREUR to identify the hazards within its work places, assess the risks involved, identify workers at risk, and use this data to provide uniform recommendations to correct hazards as a team. This provides commanders with a single program that is free of redundancy.

Initial steps involved scheduling and conducting baseline surveys of facilities and operations based on identified risks. These surveys are still being conducted either by BSB safety professionals or the IH. Who conducts the survey depends on the resources available.

Safety professionals also conduct limited workplace testing based on the expertise acquired through their IH training. They complete an HHIM worksheet on each work center and then enter the data into the HHIM computer, providing a theater-wide database of all hazards, chemicals, and exposed workers.

Although the ultimate goal is to conduct a survey of every facility and operation in the theater and follow up with regular annual inspections, the immediate goal is to concentrate first on high-hazard facilities and then move on to lower-hazard facilities. With present manpower resources, the initial survey may take as long as 5 years to complete. However, once completed, USAREUR will have a baseline for all future inspections, surveys, and analyses.

All reviews and recommendations are done as a team. Using HHIM data, the safety/IH/OH team reviews the work and develops goals for future surveys. After determining specific surveys that must be conducted by the IH and issues involving employee exposures, they jointly recommend new goals for corrective actions to the commander. All inspection, survey, and sampling data is input into the computer as it is gathered, so the database remains dynamic and up to date.

Although a severely reduced workforce makes it impossible to provide all the traditional services, the team should be able to conduct the basics of the respiratory protection, certification of personal protective clothing and equipment (PPCE) requirements, confined-space entry, and HAZCOM programs, all of which deal with the results of the information gathered in the initial surveys. ☐

—POC: Fred Fanning, V Corps Safety Office, DSN 370-5670 (49-6221-57-5670)

BackTalk

Musculo-skeletal injuries in DOD

Are back injuries counted in statistics on work-related musculoskeletal disorders (WRMSDs)?

Are all back injuries and WRMSDs reported?

For military personnel?

For civilian personnel?

Answers to these questions currently vary in Department of Defense. The result is confusion and imprecision concerning the magnitude of the back-injury problem and the real impact of WRMSDs in Army worksites. As a result, prevention efforts might not be targeted at the areas truly causing the most pain and suffering and the biggest drain on resources. Anecdotal information, feedback from installations, demand for ergonomic services, field surveys, and observation indicate serious work-design problems in DOD. The Services and the DOD Ergonomics Working Group have developed policy and program initiatives in response to the concerns.

Among initiatives under way from the DOD Ergonomics Working Group is a template for a cross-sectional, epidemiological study of WRMSD problems in DOD. This study would establish a benchmark for the percentage of problems that have workplace risk factors present. One of the advantages of the study design is that comparable data will be collected across the Services. At this point, each of the Services plan small-scale studies using this study template; results will determine whether there's a need for a larger-scale study.

WRMSDs include the upper extremities, neck, back, and legs. Disorders directly related to workplace conditions, jobs, and tools account for a significant portion of the injuries and illnesses reported to the Department of Labor (DOL). According to the Bureau of Labor Statistics (BLS), sprains and strains account for about 44 percent of the injuries and illnesses that result in lost work time in the United States. Forty percent of these sprains and strains involved the back and other portions of the trunk.

Data sources in DOD are limited. And most of the sources that do exist don't collect the data needed to accurately describe the magnitude of the WRMSD problem. Back-injury data is routinely collected by all the Services; however, there are not only indications of under-reporting but also disturbing discrepancies. Comparison of data reveal wide variations within DOD as do records maintained by the Office of Workers Compensation Programs when compared to installation records. In addition, an Air Force study indicated under-reporting of injuries and illnesses by an overall factor of 2.3 (Armstrong Laboratories). Preliminary indications are that this factor is consistent throughout DOD.

Civilian insurance-company data can be used as benchmarks for the percentage of back injuries and related costs. Liberty Mutual reports that back injuries account for 16 percent of total workers compensation cases and 33 percent of the costs (Smith, 1995). This is consistent with BLS data, and its application to DOD is supported by Army Safety Center analysis of injury data (CAPP Report, V6N1).

One of the most disconcerting statistics reported in the Liberty Mutual analysis was that the disability rate from low-back pain in 1993 increased 14 percent faster than the growth of the population.

Upper-extremity cumulative-trauma disorders (CTDs) such as carpal-tunnel syndrome have received considerable attention in the past few years. However, general-industry statistics show that CTDs comprise less than 1 percent of all claims and about 1.6 percent of the costs.

Some of the confusion about the magnitude of the upper-extremity CTD problem is related to BLS coding procedures. When correctly coded, back conditions are recorded as injuries and upper-extremity CTDs as illnesses. The number of reported upper-extremity CTD "illnesses" has increased dramatically; however, they represent a relatively small portion of the overall injury and illness picture. Based on these benchmarks, we can estimate and compare the cost of back injuries and upper-extremity CTDs for DOD and the individual Services (DOL, FY 95):

Component	Back injuries (33%)	Upper-extremity CTDs (1.64%)
Navy	$84,810,000	$4,215,000
Army	$54,450,000	$2,206,000
Air Force	$39,270,000	$1,952,000
Total DOD	$198,000,000	$9,889,000

Active-duty data is even more limited. One of the most reliable data sources is medical-retirement information. The top five medical-retirement diagnoses involve musculoskeletal conditions and account for the majority of the retirements (Army PASBA data, 1995). Interestingly, many tasks active-duty DOD personnel perform were designed for male physical capabilities and are particularly problematic for

female personnel.

In summary, many resources are available to assist Army activities with back-injury, WRMSD, and related issues. Consultation services, training, awareness products, and related materials have been widely reviewed in previous issues of CAPP Report. A Department of Army pamphlet on installation ergonomics programs is expected to be published by September 1996. A technical guide is planned to accompany the pamphlet. Other references and contacts, some of which are cited in this article, include the following:

Armstrong Laboratories Ergonomics Program (Air Force), DSN 240-6120.

Behrens, V., P. Seligman, L. Cameron, T. Mathias, and L. Fine. "The Prevalence of Back Pain, Hand Discomfort, and Dermatitis in the U.S. Working Population." American Journal of Public Health, 84 (1994): 17801785.

Bureau of Labor Statistics, U.S. Department of Labor. Survey of Occupational Injuries and Illnesses in 1992.

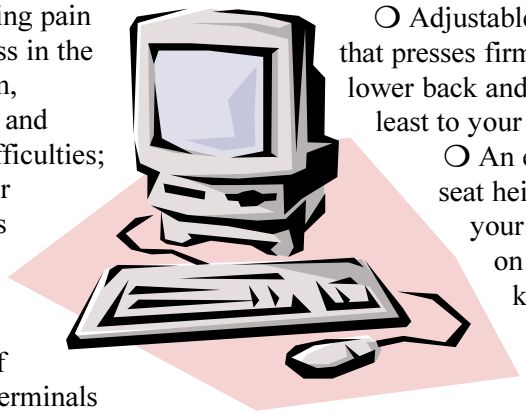
Smith, S.L. "Why Industry Needs to Watch its Back." Occupational Hazards (July 1995): 30-34.

U.S. Army Safety Center. CAPP Report, Vol. 1, No. 6, 1996. ☐

—courtesy of U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM), Ergonomics Services Program, DSN 584-2559 (410-671-2559)

Making the workstation "fit" the worker

A poorly designed computer workstation can put people at risk for a variety of health problems. Musculoskeletal injuries, including pain and/or numbness in the hand, wrist, arm, shoulder, neck, and back; vision difficulties; stress; and other health problems have been associated with prolonged improper use of visual display terminals (VDTs). The right furniture and equipment in the correct arrangement can help prevent injury and discomfort. Supervisors should take an active role in evaluating workstations and ensuring that they are ergonomically correct. In addition, supervisors should use the following guidelines to teach their workers basic ergonomic principles.



Ergonomics

Ergonomics is the science of designing workplaces and jobs to fit people. This means that your work area should be designed to fit you and your work style. Ergonomists today agree that no one can maintain one "ideal" posture all day. For this reason, adjustable furniture that can support proper posture in more than one position is a basic requirement for your workstation. There are five components that you must arrange to maintain proper structure. They are as follows:

■ Work surface. Work-surface height (or keyboard height independent of the main surface) should be adjustable. Leave enough leg room to allow your legs to move freely, and do not use the area underneath the desk for storage. In addition, avoid resting your wrists on a hard or sharp surface; use a wrist rest if necessary.

■ Chair. Ergonomically correct chairs have—

❍ Adjustable back support that presses firmly against your lower back and extends up at least to your mid back.

❍ An easily adjustable seat height to permit your feet to rest flat on the floor with a knee angle of roughly 90 degrees. (Some people might need a footrest to achieve this angle.)

❍ A rolling, five-pronged base for stability and to prevent unnecessary twisting.

❍ Adjustable padded armrests to support the weight of the shoulders. You should use the armrests if you will be working at a computer for more than 2 hours at a time.

❍ A seat pan that adjusts to allow you to work comfortably in a forward or reclined position.

■ Keyboard. The keyboard should be thin and detachable and must be positioned low enough to keep wrists straight, shoulders relaxed, and elbows angled between 90 and 120 degrees. (A wrist rest can help you maintain straight wrists.) Alternative keyboards provide additional options that may alleviate discomfort.

■ Mouse or trackball. The mouse or trackball should be within easy reach and at the same height as the keyboard. The trackball might be a better alternative because it eliminates some arm movements required by the mouse.

■ Monitor. Monochrome monitors have better character resolution than color monitors. Therefore, monochrome monitors should be used for all but design work. The monitor should be positioned directly in front of the keyboard with the top of the screen slightly below eye level for a viewing angle of about 30 degrees.

Avoiding eyestrain

Computer work requires that you use your eyes at close range for long periods of time, which may result in eyestrain. Glare on the screen from windows or overhead lights, even though it might not be noticeable, puts additional stress on your eyes. Symptoms of eyestrain include blurred vision, sore eyes, focusing problems, and headaches. In addition to properly corrected vision and regular eye exams, the following can reduce eyestrain:

■ Copy holder. Use an adjustable copy holder. Place it on the same plane as the screen—either right next to it or between the keyboard and monitor—to reduce awkward movements of the head and minimize the need to adjust your eyes to different distances.

■ Computer placement. Place the monitor parallel to and between overhead lights and perpendicular to windows and other major light sources so the light strikes neither the screen nor your eyes. Glare screens and window blinds also help.

■ Lighting. Ideally, lighting for computer work should be at half the normal level for office work. (One way to achieve this is to remove every other overhead light bulb.) Adjustable "task lights" are then used for reading and other desk work. ☐

Rest breaks

Take regular breaks from computer work; change position, do a different task, and/or stretch. The National Institute of Occupational Safety and Health (NIOSH) recommends—

■ 15-minute rest breaks every 2 hours for moderate VDT work.

■ 10-minute rest breaks every hour for intense VDT work.

In addition, look at a distant object for a few seconds every 5 to 10 minutes to relax your eye muscles.

Exercise

Sitting for long periods of time can lead to muscle aches. At least twice a day, stop and stretch your back, neck, shoulders, arms, and legs. Get up from your workstation and walk around to improve circulation. In addition, exercise aerobically on a regular basis.

Work organization

Organize your work to avoid long stretches of time at the computer whenever possible. Intersperse VDT work with other tasks. ☐

—adapted from Resource Connection, a publication of the Industrial Hygiene/Occupational Safety Special Interest Group Training Resources and Data Exchange (IH/ORSIG TRADE)

OWCP news

Timely submission

In a recent report on the top-10 Federal agencies' timeliness in submitting Notices of Injury and Claims for Compensation, the Army ranked fifth for submitting 50 percent of claims within 30 days. The U.S. Postal Service had the best record—85 percent within 30 days.

A major disadvantage of late submission is missing the opportunity to fully use OWCP's nurse-intervention services. These include telephone contact with the employee and physician and personal visits in cases of severe injury. OWCP nurses are particularly helpful in obtaining and clarifying medical documentation, expediting surgeries, and ensuring that employees return to work as soon as medically able.

Nurse-intervention services may be requested at any time by the agency or claims examiner. There are currently 1,800 field nurses on board, and OWCP expects to have 2,000 by the end of the year.

OWCP is in the process of revising the current timeliness standard, which counts from the date of injury to the date received at OWCP. The new standard will count from the date the agency receives written notice to the date received at OWCP. Federal regulations require submission of the CA-1 and CA-2 forms within 10 working days.

For more information, call Alma Yopp, DSN 221-9980 (703-325-9980). ☐

On the worldwide web

http://www.dol.gov./dol/esa/owcp.htm

Available now

- **Federal Employees' Compensation Act**
- **FECA regulations**
- **Questions and answers about FECA (CA-550)**
- **Handbook for Employing Agency Personnel (CA-810)**

Coming soon

- **Link to FECA Procedure Manual**
- **FECA Strategic Plan and Annual Report**
- **FECA forms**

Sunblock not just for summer anymore

Think Labor Day marks the end of your worries about the harmful effects of the sun, on or off the job? Think again. Maybe you made it through the summer without a sunburn that made bending your knees painful. Or that made the thought of wearing shoes unthinkable. Or that caused you to miss work or other activities because you couldn't wear essential clothing. Good for you!

But lest you think you've escaped the sun's hazards for another year, think again.

What precautions did you take against the sun's damaging ultraviolet component? Some long-term effects of exposure are wrinkles and even skin cancer. Think long sleeves automatically protect skin? Think again. Lightweight summer shirts have a sun-protection factor (SPF) of 7 or 8; when wet, it's even less. (Dermatologists recommend a minimum SPF of 15 for clothing.)

Think you're safe because you use a chemical sunblock? Don't be so sure. You may be able to spend the day in the sun without burning and blistering, but you could be setting a time bomb for skin cancer. More research is under way to confirm the qualities of sunblock chemicals. And not all protect from all bands of ultraviolet, so read the label.

Although summer is fading, the sun's hazards are still there. Intensity may decrease as the daylight recedes, but the hazards remain. How can you protect yourself? Limit your exposure. How? Provide barriers between your skin and the sun. The best barriers are those that restrict exposure completely: awnings, umbrellas, roofs, and other structures. Impractical and unlikely? Then use other barriers such as clothing and chemicals. But remember, research shows that effects for skin cancer are cumulative. You may be doing the right things now, but past abuses still make you vulnerable.

"Sun worshippers" who grew up in the 50's and 60's and soaked up every ray from Memorial Day to Labor Day are the predominant age group in the Army's civilian workforce. Army workers' compensation records reflect very few claims for sun- or heat-related injury. However, the issue impacts on the quality of life of the workforce and can affect morale and productivity of the entire work unit when a coworker suffers a terminal or disfiguring condition—especially one that's so preventable. ☐

POC: Fran Weaver, Evaluations Branch, USASC, DSN 558-3759 (334-255-3759)

Evaluations to define road ahead

The Director of Army Safety (DASAF) has reorganized the Army Safety Center to focus on three primary services: information, integration, and evaluations.

The evaluations function is for both internal and external validation of risk-management integration. As you know, DASAF message 071911Z Feb 96, subject: FY 96 MACOM Safety Evaluations, put MACOM evaluations on hold. The pause was for development of criteria more reflective of the risk-management-integration environment.

The mission of the new Evaluations Branch is to provide Army leaders the navigational tools they need to tell where they are today so they can get where they want to be tomorrow.

Evaluations are framed as a method to sense the degree to which risk management has been integrated into Army operations, practices, processes, and activities. The starting point is Army Performance Improvement Criteria (APIC), which are based on Malcolm Baldrige National Quality Award criteria:

- Where are we?
- Where do we want to go?
- Are we headed there? If not, what course changes are indicated?
- What are the steps, plans, tasks, new policies, new procedures, and new operations to get us there?

Such questions, with valid and reliable measures, can be asked here at the Safety Center, in your office, at an installation, depot, district, or MACOM, or for the Army at large.

New metrics that provide upstream indicators of being off course before disaster strikes are necessary for success. Help us help you and the rest of the Army. If you have effective metrics that provide performance measures, let us know. If you know of other agencies (local, state, Federal), private industry, or other countries with

The Chief of Staff's vision for risk management is being translated into action throughout the Army, both on and off duty.

effective programs, let us know. We're already looking at Dan Petersen, OSHA Form 33, ACIP, Jacksonville District U.S. Army Corps of Engineers, Fort Lee, Fort Benning, and industry models such as Kodak, ALCOA, and DuPont. We solicit your ideas, particularly on operational Army measures. Load your materials to the safety BBS (CAPP Report, V6N1). ☐

POC: Fran Weaver, Evaluations Branch, USASC, DSN 558-3759 (334-255-3759), weaverf@rucker-safety.army.mil

OSHA corner

OSHA System for Compliance Assistance & Referral

Each year OSHA receives tens of thousands of inquiries from the public for information about occupational safety and health. Traditionally, these inquiries went to national, area, or regional offices where they were referred to a staff member or project team for response. The process was extremely time consuming and resulted in responses that were not always standardized or even consistent.

Enter OSCAR (OSHA System for Compliance Assistance and Referral). OSCAR is a computerized information retrieval and management system that contains an extensive collection of regulatory text and related reference material about OSHA standards. The database includes the full text of OSHA standards and their preambles, interpretive letters and IQs (interpretive quips), compliance directives, the Field Inspection Reference Manual, case law decisions, Standard Alleged Violation Elements (SAVEs), and various reference texts such as the Four Agency Manual for Hazardous Waste Operations. OSCAR sorts through all this information to instantly find and answer queries.

OSCAR is designed to provide improved customer service with one-stop shopping for regulatory information and compliance requirements. The system uses a software called "FolioView" and provides consistent and current information by consolidating multiple sources of information.

OSHA plans to make OSCAR available at the end of FY 96. It will be available on CD-ROM and through modem access (Internet and DOL Bulletin Board).

NIOSH centers of learning

Keep in mind that the National Institute for Occupational Safety and Health has developed a program to establish centers of learning for occupational safety and health throughout the United States. These Educational Resource Centers (ERCs) are located at 27 universities serving all 10 Department of Health and Human Services regions.

A catalog listing ERC points of contact and courses offered at each ERC is available from NIOSH, Division of Training and Manpower Development, 4676 Columbia Parkway, Cincinnati, OH 45226. ☐

Ladders: Familiarity breeds complacency

■ A worker repositions a fully extended 24-foot aluminum ladder he is using to paint gutters. The ladder contacts a 7200-volt overhead line located 8 feet from the gutter. The painter is electrocuted.

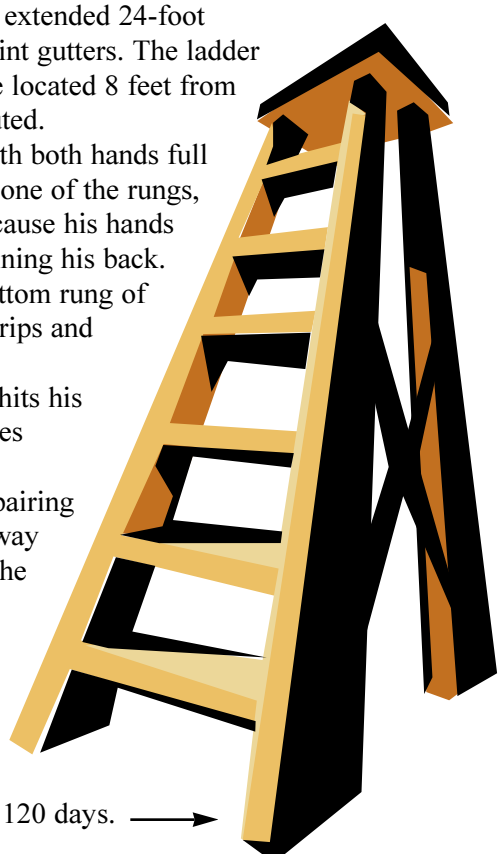
■ A painter climbs a ladder with both hands full of supplies. When he missteps on one of the rungs, he is unable to grab the ladder because his hands are full. He falls to the floor, spraining his back.

■ As a worker steps off the bottom rung of a ladder onto a rocky surface, he trips and breaks his ankle.

■ A worker climbing a ladder hits his head on a beam. The injury requires stitches.

■ A contractor employee is repairing pipe insulation. His ladder slips away from the wall it rests against, and he falls 20 feet.

■ A worker stands on top of a stepladder to reach an overhead steam line. The ladder shifts. He falls, sustaining a compression fracture of his vertebra and a bruised lung. He is off the job for 120 days. →



These examples are only a few of the more than 500 accidents and 4600 lost workdays involving ladders over the past 5 years at Department of Energy (DOE) facilities. These statistics indicate ladders are a major worker-safety issue. Of all the factors contributing to ladder accidents, one in particular seems to be playing a major role—complacency. Ladders are used widely and frequently—in fact, they're almost as common in the workplace as handtools. As a result, a worker who is extremely careful while operating a power saw may not be when using a ladder. In the case of the power saw, he perceives danger; in the case of the ladder, he does not.

Up and down

Ladder climbing should be a deliberate action. Considering it second nature is inviting an accident. Bad climbing techniques, such as not squaring the body between the side rails or not gripping with both hands, are common safety violations. Missteps occur often and produce injuries such as sprained wrists or ankles and even broken backs. Inattentive workers strike their heads on overhead ducts, beams, pipes, or valves or are unable to catch themselves after a slip because both hands are full of materials for the job. Workers climbing ladders must be aware of the space above and keep their hands free. Tools should be carried in a pouch or holster, and heavy objects should be raised with a hand line.

Working safely above

Accident records show that workers often fall off ladders while stretching to reach their work. Several workers have fallen off ladders when reaching to drill overhead. The tendency to overreach beyond a safe distance (arm's length without stretching) is generally caused by using a ladder that is too short or failing to climb down and move the ladder as necessary.

The unsecured ladder

In the last 5 years, 66 workers were injured when unsecured ladders slipped, shifted, or fell. First, an incorrect angle of the ladder against the wall can cause a problem. The distance of the base of the ladder from the wall should equal one quarter the length of the ladder (72.5º). Tying off near or at the top adds extra stability, and placing the feet carefully on a dry, firm surface (avoid ice, snow, and water) will help assure a steady structure from which to work.

Stepladders

Stepladders are deceptive. They look stable because of their A-frame construction, but in reality have caused numerous injuries to workers using them. Several stepladder injuries occurred when people in a hurry used unopened stepladders to reach something. Even when open, stepladders are not stable enough for workers to stand on the top step; the highest safe step is clearly marked. Stepladders cannot be used like regular ladders, and they must be fully open with spreaders locked and all four feet firmly planted before they are safe for use.

Where NOT to stand

- A ladder top cap; the top step of a stepladder or trestle ladder; the pail shelf of a self-supporting ladder.
- The rear braces of a self-supporting ladder unless the braces are designed and recommended for that purpose by the manufacturer.
- The top step of the extension section of an extension trestle ladder.
- The top cap or step of a combination ladder when it is used as a self-supporting ladder.
- The top 3 feet of an extension ladder or anywhere above the support point.

Pertinent regulations

- 29 CFR Part 1926, Subpart X: Stairways and Ladders
- 29 CFR Part 1910.25: Portable Wood Ladders
- 29 CFR Part 1910.26: Portable Metal Ladders
- 29 CFR Part 1910.27: Fixed Ladders ☐

—adapted from Environment Safety & Health Bulletin, No. 93-5

U.S. ARMY SAFETY CENTER

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Thomas J. Konitzer
Brigadier General, USA
Commanding

CAPP Report going monthly! This is the last quarterly issue of CAPP Report. Beginning 1 October, it will be published monthly. Watch for it.