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Alaska State Legislature

HOUSE OF REPRESENTATIVES



REPRESENTATIVE FRAN ULMER

MEMORANDUM

March 13, 1992

TO: Senator Pat Rodey, Chair
State Affairs Committee

FROM: Rep. Fran Ulmer

RE: CSHB 385 (L&C) am - Video Display Terminals

I am requesting a hearing on this legislation at your earliest convenience.

HB 385 was created in response to a growing health problem among state workers who spend long hours in front of their Video Display Terminals (VDTs). VDT workplace injuries include eye strain, stress and musculoskeletal disorders (wrist, back and neck injuries) including host of ailments dubbed "repetitive strain injuries" or RSI.

According to the Federal Bureau of Labor Statistics, disorders associated with repetitive strain injuries now rank among the highest reported workplace injuries in the U.S. (more than 52%). For instance, in recent years the cases of carpal tunnel syndrome (swelling of tendons in the wrist) have increased more rapidly than any other job related illness. Insurance industry sources believe that keyboard operators are one of the highest at-risk groups.

In many cases, the remedy for these conditions already exists in the workplace. Educating workers on the proper positioning of VDT monitors, keyboards and chairs can go a long way to alleviating this problem. However, phasing out or remodeling "unhealthy" work station configurations and furniture is also essential.

CSHB 385 (L&C) seeks to remedy this situation for state workers by:

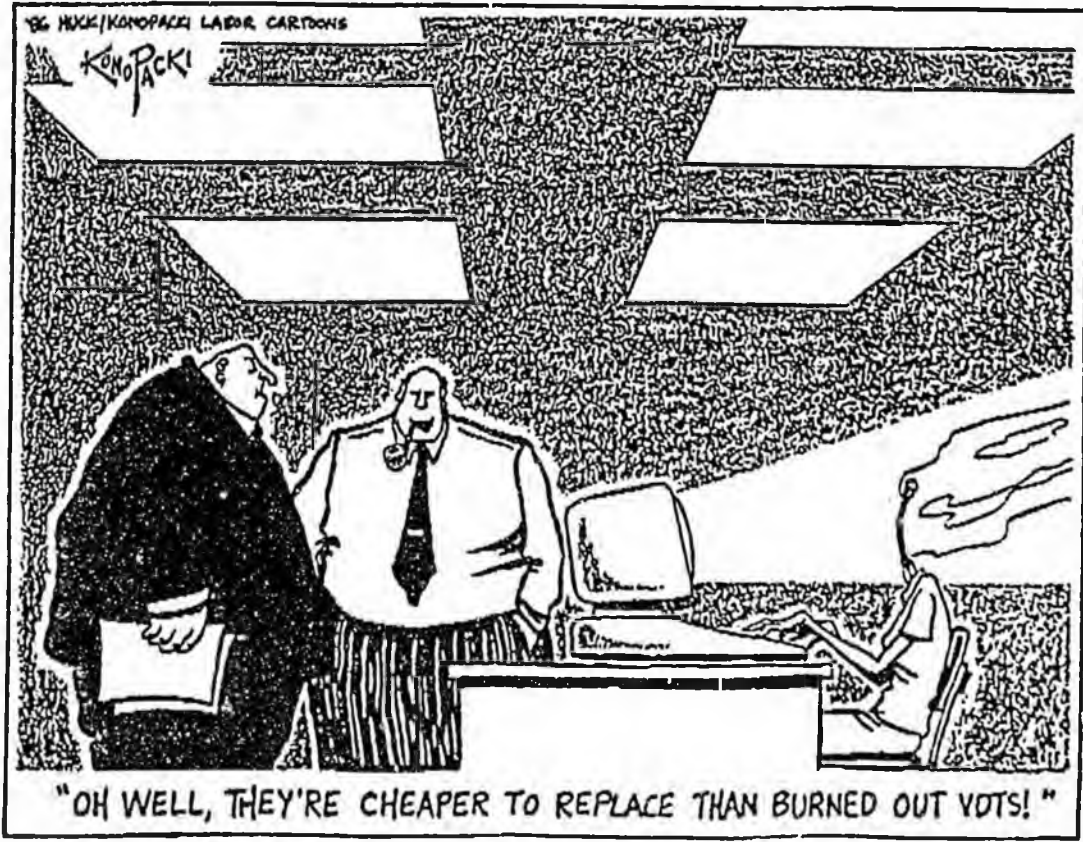
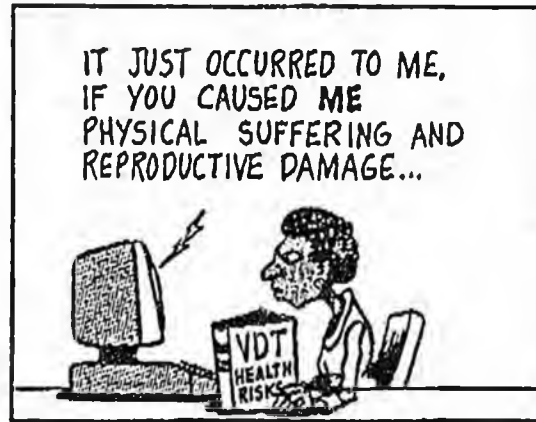
- * Requiring the training of supervisory staff about the causes, remedies and prevention of VDT related injuries.
- * Requiring the posting of notices in the workplace to advise state employees about the safe use of Video Display Terminals.

March 13, 1992
CSHB 385 (L&C)
Page Two

- * Requiring that future purchases of office furniture and equipment meet engineering standards that reduce the health risks associated with VDTs.
- * Requiring the Department of Administration to report to the legislature on the implementation of the requirements after the first and second years following passage of the bill.

CSHB 385 (L&C) has a fiscal note of 28.5 for the first year of implementation to be generated through interagency receipts shared among all state agencies.

Think of HB 385 as a dose of preventative medicine. By moving now to answer the health concerns of state workers, we will also be saving the state money by eliminating the causes of a growing number of health insurance claims.



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Huck
KONOPACKI

Section 1. FINDINGS. This section recognizes the risks and remedies of VDT use, including studies by the National Institute for Occupational Safety and Health and the World Health Organization, and that mitigation of the risks through education and new equipment standards will help reduce health insurance and worker's compensation costs.

Section 2. Amends AS 39.90 to add a new section (AS 39.90.160)

Subsection (a) states that the state shall attempt to provide for proper use of video display terminals. Subsection also states that state agencies shall appoint and train specific people at each worksite on the "ergonomically proper use of VDTs" for the purpose of providing information to other state workers. The amount of workstations assigned to each trained appointee may not exceed 75.

Subsection (b) requires the Department of Administration to prepare and place notices at the worksite advising state workers about the proper use of VDTs, and which person to contact for more information. These notices shall be posted at the worksite by the persons trained under subsection (a).

Subsection (c) requires notices and information be available at workstations in places where there are no qualified worksites, such as small offices in remote locations, where trained staff may not be immediately available.

Subsection (d) requires state agencies to purchase, lease and install office equipment related to VDT workstations in conformance with American National Standards Institute (ANSI) standards for engineering of VDT workstations, or subsequent standards at least as protective of the health and safety of the VDT user.

Subsection (e) states that the section does not:

- 1) create a cause of action;
- 2) establish a standard of care;
- 3) change administrative remedies of employees;
- 4) change collective bargaining agreements.

This section address concerns that the bill not create a new and distinct cause of action for VDT users injured on the job.

Subsection (f) defines the terms "agency", "state agency", "qualified worksite", "terminal" and "video display terminal."

Section 3. INITIAL TRAINING AND POSTING OF NOTICES. Requires that training be completed and workstation notices be in place within one year of enactment.

TECHNOLOGY

Casualties of the Keyboard

A push to end injuries from computer use

The pain in Susan Harrigan's arms at times has been so intense that she couldn't open doors or clean her teeth. Even worse, she can't teach her 8-year-old daughter to roller-skate because it hurts too much to hold the child's hand. "The slightest use of my arm can set off the pain," says Harrigan, a reporter at the Long Island newspaper Newsday. Harrigan is one of a dozen journalists at several news organizations who have filed several suits recently against Atox Publishing, the Bedford, Mass.-based company that designed and manufactured their employers' computer systems. (Atox, which includes Newsweek among its clients, has declined to comment on the suits.) The journalists claim that the design of their computers has led to neck, wrist, hand and arm pain—a syndrome doctors call repetitive strain injury (RSI).

A few decades ago, on-the-job injuries conjured up images of employees stooped by hard labor or felled by heavy equipment. But with automation, more and more workers are spending their days tethered to a computer. That may seem like safer work, but many occupational-safety specialists contend it can be just as hazardous to employees' health as old-fashioned factory work. According to the Bureau of Labor Statistics, RSI accounted for nearly half of all 1988 workplace illnesses in private industry, compared to only 18 percent in 1981. This group still includes meatpackers and textile workers, who have long been susceptible to RSI; but the big addition has been data processors, whose job performance is often judged by the amount of information they put into the computer within a set time. Journalists are at risk because they spend long hours at the keyboard under deadline stress.

Fears about working with computers are not new. Since the widespread introduction of video-display terminals (VDTs) into the workplace in the late 1970s, many employees have worried about the possible side effects of spending so much time in front of a terminal. Some of those concerns abated in the early 1980s, when government researchers found that VDTs presented no real danger from



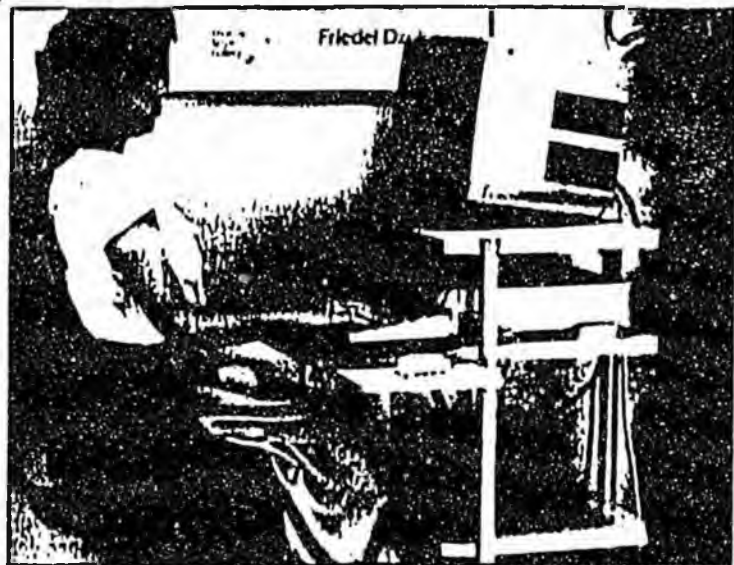
J. CONRAD WILLIAMS JR. - NEWSDAY

BAD?

Employees at Newsday work in front of their video display terminals; many have complained of injuries

BETTER?

Workers suffer fewer injuries when their screens are at or just below eye level and their tables are adjustable



JAMES D. WILSON - NEWSWEEK

radiation. Then, a few isolated studies seemed to indicate some increase in miscarriages among pregnant women using video-display terminals. But so far, scientists have been unable to establish any clear connection between miscarriages and computers.

The real hazard seems to be the nature of the work itself. Hours at the computer put continuous stress on the wrists, elbows and shoulders. Tendons in the arm become inflamed, squeezing the nerves; the result is numbness and pain. Without early diagnosis and treatment, these injuries can develop into serious lifelong disabilities and loss of ability to work.

Fortunately, experts on ergonomics, who study how humans adapt to the workplace, believe that a few design alterations can minimize problems. Next month, the government is expected to issue voluntary guidelines that reflect current knowledge in office design. "We must consider the work station as a whole," says Susan Burt of the National Institute of Occupational Safety and Health.

Most experts agree on some general rules for office design. To ease back and neck tension, terminals should be placed so that the top of the screen is at eye level or

just below. Adjustable terminal bases and desks allow for differences in height and build. Feet should be flat on the floor and, with elbows at 90 degrees, fingers should just reach the keyboard comfortably. Chairs should provide good back support. Glare from windows or indoor lighting should be minimal to prevent eye strain. Some doctors think computer screens with white backgrounds produce less glare than those with dark screens.

Warning signs: Employees can take some preventive measures on their own as well. Experts say that frequent short breaks from work are crucial. Dr. Linda Morse, a Santa Clara County, Calif., occupational-health official who has been working with RSI patients for a decade, says computer users should—at the very least—stretch their arms for a few minutes each hour. Employees should be alert for early symptoms. The sooner RSI is treated, the more likely a complete recovery. Warning signs include discomfort, stiffness or pain.

The key, experts say, is to make the office adapt to humans instead of the other way around. Then the office of the future will work for everybody.

BARBARA KANTROWITZ/USA
REBECCA CHANDALL

The computer work station

What are the hazards and how can they be prevented?

Repetitive strain injuries may occur as a result of a combination of repetitive motions with fast forceful movements, awkward positions, lack of sufficient rest time over periods of weeks, months or years. They occur in many different work situations.

Hazards

Cervical disk syndrome:

Pain, numbness and muscular spasm caused by pinching of the cervical nerves by compressed discs.



Tenosynovitis: Pain in hands and arms caused by swelling of the tendon and the sheath that covers it.



White finger:

Numbness, tingling, paleness and burning sensations caused by damaged blood vessels.



Rotator cuff injury:

Pain and limited motion in the shoulder caused when one or more of the four rotator cuff tendons is inflamed.



Carpal tunnel syndrome:

Numbness, pain, tingling and aching sensations in the wrist caused by too much pressure on the median nerve of the wrist.



Epicondylitis (tennis elbow): Pain, swelling and weakness in the elbow caused by inflammation of tendons.

Prevention

The ideal computer work area

- 1** Eyes should be from 18" to 28" from the screen.
- 2** Good lighting and one of several methods to reduce glare.
- 3** A video display terminal with an adjustable tilt from 0° to 20°.
- 4** An inclined footrest to relieve strain from legs and back.
- 5** A chair with an adjustable seat height and back rest. Elbows should not bend more than 90° to reach the keyboard.

Tendinitis
Swelling, tenderness and weakness in the hand, elbow or shoulder due to inflammation of tendons.



Source: Krames Communications

AP/Wm. J. Castello

WRIST injuries on rise

By JANE E. BRODY
The New York Times

Work-related injuries, long the plague of those who do heavy manual labor, have become a scourge among white-collar workers, too.

Experts say hundreds of thousands of office workers are disabled each year in an epidemic of motion-related damage to the hands and arms that is costing the nation many billions of dollars annually.

The problem is expected to worsen in the current recession as businesses demand greater output from fewer employees and workers ignore symptoms for fear of losing their jobs.

Over the last decade disorders caused by movements repeated many thousands of times a day, long a plague on assembly lines and in processing plants, have invaded the once low-risk environment of the office worker along with the computer.

Computer operators spend many hours in the same position doing the same task without breaks or variation, giving no time for stressed tissues to recover.

Over time, this behavior can induce crippling changes in the sensitive tissues of the wrist and hand.

High rates of injury have been reported among data entry workers, telephone operators and newspaper reporters and editors who work for many hours a day typing on a computer keyboard.

At Newsday, the Long Island and New York newspaper, for example, 40 percent of the writers and editors have reported often disabling symptoms of the hand and wrist that researchers say have been caused or made worse by excessive work on computers.

Similar problems have occurred among newsroom workers at the Los Angeles Times, The Financial Times of London, The New York Times and Reuters, the news agency.

People with the disorders, which can sometimes be permanent, can find themselves unemployable or forced to change careers. Favorite sports activities, housework, carrying groceries, or even holding a coffee cup may become difficult or impossibly painful.

The disorders have many names — repetitive stress or repetitive motion injuries, cumulative trauma disorders, of which carpal tunnel syndrome is one, and most recently, work-related

musculoskeletal disorders, the designation of the World Health Organization.

But it all boils down to damage caused principally to tissues within the hand and arm by seemingly innocent actions that are repeated perhaps thousands of times each workday, like typing on a computer, cutting meat or poultry or etching glass.

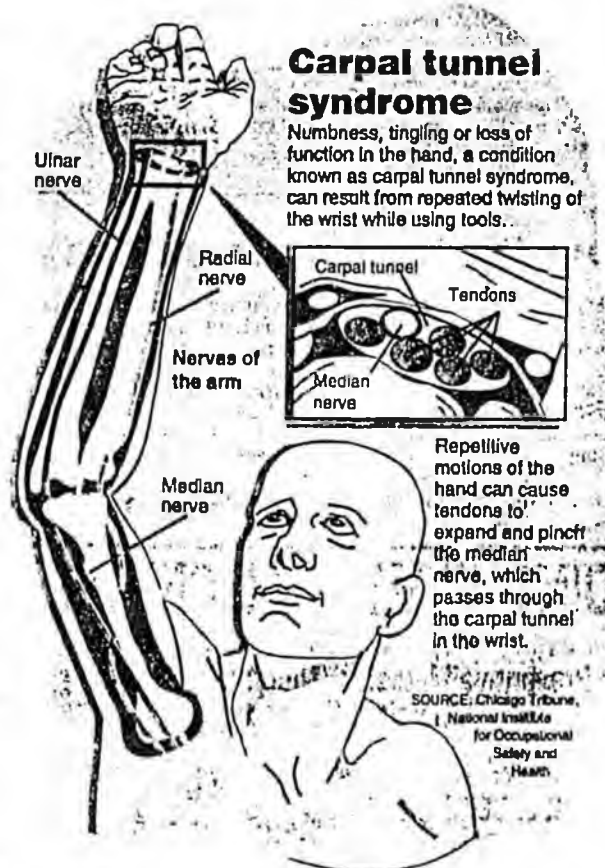
Some experts call it an overuse syndrome, the biological equivalent of mental fatigue.

"States report that 30 to 40 percent of workman's compensation claims now result from musculoskeletal disorders," said Dr. Roger Stephens, director of the Office of Ergonomics at the Occupational Safety and Health Administration in Washington.

He predicted that without dramatic changes in equipment design and work habits, these problems would soon account for half of every dollar spent on such claims.

While injuries to the back remain the nation's most costly job-related hazard, damage to the wrist and hands is now the fastest growing category of worker's compensation claims.

The American Academy of Orthopedic Surgeons estimated in 1984 that the



problem cost the nation more than \$27 billion a year in lost wages and medical care, an amount that could well have doubled by now since there has been more than a doubling in reported cases.

Dr. Marvin J. Dainoff, a psychologist who is the director of the Center for Ergonomic Research at Miami University in Oxford, Ohio, has called repetitive stress injury the "occupational disease of the '90s" similar to the asbestos crisis of the 1980s.

New companies have been formed to help workers cope. There also are several hand clinics springing up in hospitals around the country that try to rehabilitate injured workers.

At one, the Miller Health Care Institute at St. Luke's-Roosevelt Medical Center in New York, 53 white-collar workers with severe injuries to their wrists and hands are treated with rest, exercises to strengthen, stretch and relax structures in the arms and hands, and splints worn at night to keep the wrists straight.

They were videotaped while working and taught new techniques to reduce the stress on their hands and wrists. And their work

STRAIN: Hand, arm injuries on the rise at the office

Continued from Page C-1

stations were adjusted to suit their individual needs.

They were videotaped while working and taught new techniques to reduce the stress on their hands and wrists. And their work stations were adjusted to suit their individual needs.

"Those with problems that are caught early can expect to recover in a few months," said Dr. Emil Pascarella, director of ambulatory care at the hospital. "But workers with severe injuries can take a year or more to get better."

In some parts of the country, workers diagnosed with carpal tunnel syndrome are often treated with surgery to reduce pressure on the nerve that is compressed by swollen or enlarged tissue passing through the wrist.

While some surgeons say the procedure is remarkably helpful to 60 to 80 percent of patients, other experts say it is abused by doctors who do not try more conservative remedies first. Carpal tunnel surgery is now the second most common operation performed in this country.

The problem of work-related musculoskeletal disorders is not new. In 1717 the father of occupational medicine, an Italian doctor named Bernardino Ramazzini, first described cumulative microtrauma as a main cause of occupational disease.

But repetitive motion disorders received only a flicker of expert attention until they began striking white-collar workers and especially newspaper reporters, who had been all but immune to the job-related injuries that other laborers have endured for centuries.

Some of the rise in cases is widely attributed to in-

creased recognition of the problem and a new willingness to report it.

Dr. Laura Punnett, an ergonomist and epidemiologist at the University of Massachusetts at Lowell, said "historically there's been lots of underreporting" of these disorders. As she explained, "Many workers did not recognize the problem as being job-related; others who did worried about losing their jobs if they reported their injuries."

The Occupational Safety and Health Administration is only beginning to formulate regulations to curb these disorders, which continue to plague huge numbers of workers who process meat, poultry and fish, and operate machinery, as well as those who use computers.

Dr. Barbara Silverstein, an epidemiologist with the Department of Labor and Industries in Washington State, noted that the United States is a Johnny-come-lately in trying to curb problems caused by repetitive motion in the workplace.

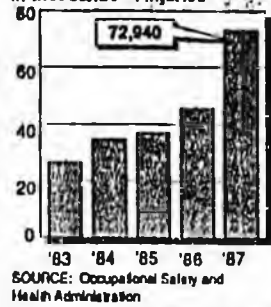
In Japan, she said, a long-standing national commission has limited the time workers can spend at keyboards and set mandatory rest periods. The result, she said, has been fewer repetitive stress injuries among keyboard operators in Japan.

A common experience of workers in the United States who report hand and wrist injuries to their employers is to find themselves suspected of malingering.

Employers' doubts are bolstered by the fact that victims of repetitive stress injury take longer to recover and are less likely to return to work if they have filed worker's compensation claims, according to a study of 28,000 workers conducted by Dr. Gary Franklin, a

Strain in the hand

The growth of personal computer use has coincided with an increase in repetitive strain hand injuries in the United States. The following bar chart shows the number of such injuries in thousands from 1983 to 1987.



SOURCE: Occupational Safety and Health Administration

neurologist who serves as medical director for Washington State's Department of Labor and Industries.

Franklin also noted that the disabilities suffered by many workers were "out of proportion" to measurable abnormalities in their wrists, a widely acknowledged finding that was prompted by Nordin M. Hadler, a rheumatologist at the University of North Carolina, to dispute whether the problem is real.

Hadler maintains that musculoskeletal activity that is "reasonable, comfortable and customary and which can be repeated without undue distress," such as typing on a computer, is unlikely to result in tissue damage.

Others, like Silverstein, report that although dissatisfied workers are prone to exaggerate their injuries or discomforts, she found in studying workers with problems at Newsday that the most devoted and talented reporters typically suffered the most.

"These are high-product-

tion people who don't listen to their bodies," Silverstein said. "They don't stop working when they start hurting. The same with musicians. It is the high-performance people who are at highest risk of musculoskeletal disorders. And one could hardly accuse musicians of seeking to get paid without working, since they don't."

In a seven-industry study of factory workers, she also found no differences in overall job satisfaction and in views about work in general among employees afflicted with hand-wrist disorders and those who were not.

Still, she and Franklin agreed that psychological and social factors can make work-related muscular stress worse by increasing muscular tension.

One complicating factor is being unable to modify the work schedule and pace of work to an individual's need. Another is receiving too little support from one's supervisor.

A third is having an uncomfortable work environment.

Among the physical factors Dalnoff lists as raising a worker's risk of hand-wrist disorders are these:

- High rates of repetition of the same action. A computer operator who types 60 words a minute can make 18,000 keystrokes in an hour.

- Awkward or unnatural posture while working. The ideal position of the wrist is flat and straight, which positions the hand level with the arm and extended in a straight line from it. Those who work with hands bent up, down or to the side risk damage to the tissues in the wrist.

- Use of excessive force while working. In Silverstein's factory study, workers who had to use high force and a high rate of

repetition had 29 times the rate of hand-wrist disorders as workers using low force and a low rate of repetition.

- Lack of adequate rest periods or recovery time. Experts estimate that hands should be relieved of repetitive motion for at least 15 minutes every 2 hours to reduce the risk of injury.

"Try telling that to a reporter writing against a deadline," Silverstein remarked.

People who work on computers, which do not require much force to operate, may nonetheless fall victim to repetitive stress injuries.

Dalnoff explained that in many computer-reliant offices like newsrooms, almost every activity is done with the keyboard, including writing, editing, taking notes, searching for information and sending messages.

In addition, there is no break to change paper or push a carriage return and no limit imposed by the machine on how fast one can type.

Some computer-based jobs are "the sweatshops of the '90s," said Dr. John Kella, a musician and biomechanic who directs a rehabilitation and retraining program for injured workers at the Miller Institute in New York.

He pointed out that computer keyboards are unforgiving and many operators press the keys too hard, causing an almost imperceptible kickback as the fingertips hit the keyboard's rock-hard bottom.

His colleague, Pascarella, likened it to dancers performing day after day on a concrete floor. "Eventually, they are going to get injured," he said.

The injuries that he treats are often not "classical" syndromes with readily identifiable pathological changes in

It's hard for me as a physician to say it's all in people's heads, especially when the frequency and severity of the disorders abates when the risk factors are reduced.

— Dr. Lawrence Fine

structures of the hands and wrists.

Some, perhaps a quarter of those complaining of symptoms, have clear cases of carpal tunnel syndrome.

Some have tendinitis, an inflammation of the tendon that passes through the wrist, and others have tenosynovitis, an inflammation of the sheath around the tendon. But many fit no recognized classification.

Dr. Lawrence Fine, an occupational medicine specialist for the National Institute of Occupational Safety and Health in Cincinnati, said: "Yet these people are in a lot of pain and are forced to take time off from work. It's hard for me as a physician to say it's all in people's heads, especially when the frequency and severity of the disorders abates when the risk factors are reduced."

Even when a rational remedy is applied, the workplace setting can sometimes cause it to backfire.

Silverstein gave on-the-job exercises to workers in a dental floss manufacturing plant.

A year into the program she found no improvement in the rate of repetitive stress injuries because the workers, forced to meet production quotas, had worked harder to make up for the time lost during their exercise sessions.

PARADOX: Do computers aid productivity?

Continued from Page C-1

ture of derision and alarm. Some industry executives

is calculated and defined. While there are several different ways of measuring productivity, all basically

sighted industry officials are increasingly looking at how companies should be redesigned to function more pro-

revolution," said Thomas Malone, who heads the new MIT program.

Some newer industries,



ANCHORAGE SCHOOL DISTRICT

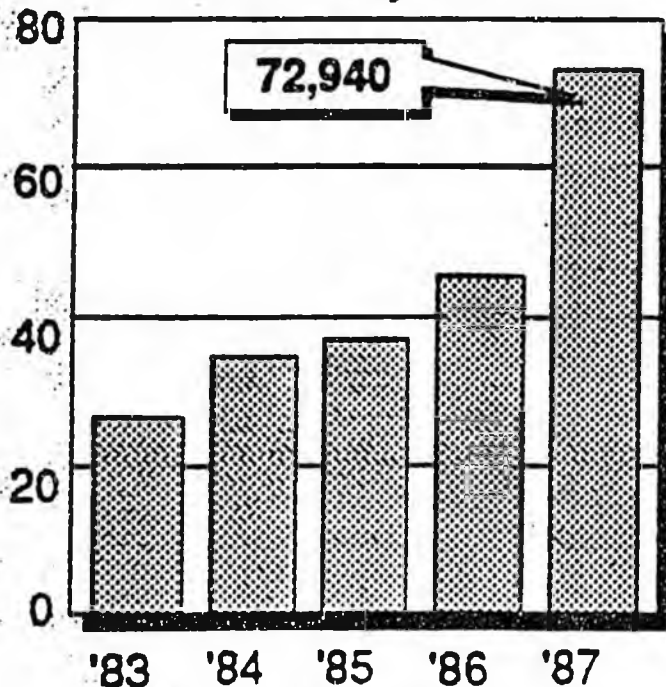
Public Meeting

Open meeting for interested parents of Spanish

Strain in the hand

The growth of personal computer use has coincided with an increase in repetitive strain hand injuries in the United States.

In thousands of injuries



SOURCE: Occupational Safety and Health Administration

Knight-Ridder Newspapers

Computer users' injuries are often preventable

By JANE E. BRODY
The New York Times

Since the building of the great pyramids, backbreaking loads, cancer-causing fibers and fumes, lung-damaging dust and other bodily threats have plagued blue-collar workers, who often paid with their health or lives for the privilege of employment.

Now, with workplace safeguards largely in place to control such risks, it is the white-collar workers' turn to suffer.

In offices, newsrooms and at switchboards, growing numbers of people who work hour after hour on computer keyboards are developing sometimes crippling symptoms in their hands.

Some try to ignore the symptoms until they can no longer hold a coffee cup, let alone type. Others, frightened by the disabilities of co-workers, seek professional help before it is too late.

Still others are banding together to seek changes in their computer equipment or office environment, sometimes by suing their employers, computer makers or both.

Unions and employers also have begun to hire companies that specialize in ergonomics, the science of fitting the workplace to the worker, to redesign office equipment and train workers to use their bodies in less risky ways.

It may be hard to understand how working with something so seemingly innocuous, efficient and simple to use as a computer keyboard could damage the body.

The problems are thought to stem from this very simplicity: Workers in many businesses do almost nothing the entire day except press keys, making many thousands of strokes every hour.

Many become "keyboard athletes," typing fast and furiously all day. Yet few have trained, as athletes must, to perform their task with the proper technique, and many are relying on equipment — keyboards, monitors, tables, chairs — that are designed for someone else's body, if for any body at all.

The result is often a form of overuse syndrome, an injury that can be hard to diagnose but nonetheless painful and incapacitating to the delicate structures within the wrist that make it possible to use the hands.

For example, there is carpal tunnel syndrome, in which the nerve passing through the wrist becomes pinched by swollen tissues. The syndrome causes numbness and tingling in the fingers at first, then crippling pain, permanent nerve damage and loss of muscle control that can render the hand almost useless. The disorder is but one of several hand-wrist problems that beset computer operators.

Researchers who have analyzed the conditions that seem to lead up to hand-wrist problems and clinicians who treat them have identified factors both within and outside the workplace that when properly

Choosing the Right Angles To Prevent Keyboard Injury

POSTURE

Back angled backward a few degrees to widen angle between torso and thighs, increase blood flow; and reduce compression of spine.

Arms relaxed and loose at sides; forearms and hands parallel to floor.

Thighs at right angle to torso.

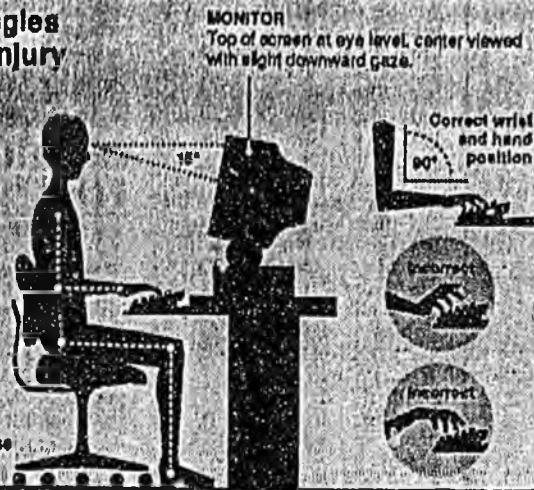
Knees at right angle to thighs.

CHAIR

Back rest fits curve of lower back.

Seat inclines forward slightly to transfer pressure from spine to thighs and feet.

Cushion curves downward at front to ease pressure on thighs.



MONITOR
Top of screen at eye level, center viewed with slight downward gaze.

Correct wrist and hand position

Incorrect

Incorrect

LIMBERING UP: Exercises for the hands, wrists and fingers



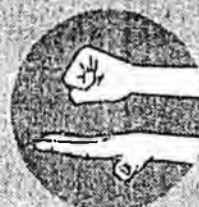
Massage inside and outside of hand with thumb and fingers.



Grasp fingers and gently bend back wrist. Hold for five seconds.



Gently pull thumb down and back until you feel the stretch. Hold for five seconds.



Clench fist tightly, then release, fanning out fingers. Repeat five times.

Source: John Knafl, Ph.D., Miami Health Care Institute for the Performing Arts; Joyce Institute

MEGAN JAEDERMAN / New York Times illustration

adjusted can help prevent hand-wrist injuries.

Dr. Marvin J. Dainoff, director of the Center for Ergonomic Research and a professor of psychology at Miami University in Oxford, Ohio, insists that physiologically sensible use of the computer starts with the user's chair.

A well-designed chair not only helps protect your back but also reduces strain on your shoulders, neck and arms and ultimately your hands.

Most experts recommend a chair that allows you to adjust the height of the seat and the tilt of the back and possibly also of the seat. An adjustable table also may be necessary for people who are very tall or very short.

You should be able to sit with your feet flat on the floor (or on a footrest), your thighs at right angles to your torso, your arms and hands parallel to the floor or perhaps slightly elevated, your head erect and your eyes looking slightly down (about

15 degrees below the horizontal) to see the screen.

To minimize stress, the chair should support your lower back and should swivel and roll on casters. To allow for relaxation of muscles and shifts in working postures, the seat back should be able to tilt backward to an angle of 15 degrees or more from the vertical.

The desirability of arm rests is a matter of debate. Some experts suggest they can aggravate wrist problems and encourage poor posture if the arms are rested on them while typing. Others laud their usefulness as a resting place when not typing.

Next comes the surface on which the computer keyboard rests. When sitting properly in your chair, you should be able to type with a flat wrist. Avoid bending your wrist up or down or twisting it sideways when you type.

If the keyboard is very wide or deep, learn to lift your hand to reach outlying keys instead of trying to stretch your

fingers to them, which distorts your wrist position.

While typing, avoid resting your wrists on the edge of the work surface; to reduce pressure on the wrists, consider using a padded wrist and palm rest in front of the keyboard. Keep fingernails trimmed; long nails force you to extend your fingers to hit the keys.

Try to avoid other potentially wrist-damaging activities when you are not typing. Dainoff cautions against moves that bend the wrist, especially if force is involved, like pushing a heavy door, opening jars, holding a telephone handset at an angle or resting your head in your hand.

Also think about home and recreational activities that might aggravate a sore wrist, including excessive use of a kitchen knife, playing a musical instrument with a distorted wrist, skating with the hand bent up at the wrist or pushing a power mower.

Use your whole hand (not just thumb and forefinger) and minimal force when gripping, grasping or lifting an object.

Take frequent brief rests while typing. Switch to another activity that uses the hands differently. Do not use more force than necessary to hit the keys. When taking notes or writing an original work, avoid holding your hands in a tensed "ready" position when waiting to type.

Do exercises that strengthen hand and arm muscles and improve circulation in the upper extremities, like squeezing a hand-ripper and swimming. When typing, try to rely more on the larger, stronger muscles of the arms and shoulders to reduce strain on the wrists and hands.

When detected and intercepted in their early stages, hand and wrist problems are relatively easy to reverse. Experts caution against trying to work through pain, since that will only make the injury worse and could result in irreversible damage to the nerve that passes through the wrist into the hand.

Therapy may involve analysis of your typing technique and retraining, adjustments in your office furniture and keyboard, physical conditioning and the use of wrist splints a night to prevent abnormal wrist positions during sleep.

Dr. Emil Pascarelli, director of ambulatory care at St. Luke's-Roosevelt Medical Center in New York, who established a hand clinic to treat injured keyboard users, said that anti-inflammatory drugs, like ibuprofen, do not seem to work well in treating work-related injuries to the wrists and hands.

He also maintains that surgery, which has become a popular remedy nationwide, should be considered a treatment of last resort, when more conservative measures seem unable to relieve the problem or when the nerve is becoming scarred or is degenerating.

ADN 3-12-92 p.48

Alaska State Legislature



Legislative Research Agency

P.O. Box Y
Juneau, AK 99811-3100
Phone: (907) 463-3891
Fax: (907) 463-3351

October 4, 1991

MEMORANDUM

TO: Representative Fran Ulmer

FROM: Linda J. Snow *LJ Snow*
Legislative Analyst

RE: Repetitive Strain Injury Associated with Use of Video Display Terminals
Research Request 92.043

You asked for information about adverse health effects associated with the use of video display terminals (VDTs). You specifically asked about the incidence and seriousness of repetitive strain injuries (RSI), and what Alaska state government positions are most at risk for this type of injury.

In this report, we present a summary of a recent report by the National Institute for Occupational Safety and Health (NIOSH), entitled *Occupational Health Aspects of Work with Video Display Terminals*.¹ Next we discuss the types of occupations that are most likely to be affected by RSI and other injuries associated with VDT usage.² We then identify which positions held by state employees are most at risk to develop the foregoing types of injuries.

SUMMARY OF RECENT NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH REPORT

Today, about half the jobs in the U.S. involve work with VDTs. Many studies have examined the possible health effects of VDT use. A recent unpublished report by the NIOSH (February 1991) entitled *Occupational Health Aspects of Work with Video Display Terminals* reviews and summarizes the existing reports on the subject. The report discusses four areas of health concern for VDT users. These areas are visual system dysfunction (eye strain), musculoskeletal disorders, stress and adverse pregnancy outcomes.

¹This study was completed by NIOSH in February 1991. It has not yet been published.

²Repetitive strain injury results from repeating the same motion over and over. It can lead to inflammation of joints and pain and numbness of extremities.

Eye Strain

Eye strain (including sore eyes, blurred vision and headaches) is the most common health complaint of VDT users. At least 50 percent of VDT users have reported occasional symptoms of eye strain, although eye strain is not unique to VDT work. There is little evidence of enduring functional problems resulting from VDT-related eyestrain. Recent studies suggest no link between the use of VDTs and increased risk of cataract development.

Some suggestions to lessen the adverse impact of VDT work on vision are: 1) to test and correct the vision of the affected workers; 2) to modify VDT display characteristics such as contrast, sharpness, type design, image stability and color to reduce discomfort; and 3) to provide adequate and appropriate workplace lighting.

Musculoskeletal Disorders

Early NIOSH studies have shown that 75 percent of VDT workers experience occasional back and neck discomfort on the job. More recent NIOSH studies show that 20 to 25 percent of VDT workers experience almost daily upper torso discomfort.

Musculoskeletal disorders include repetitive strain injuries (RSI). About 40 percent of 834 newspaper employees studied reported symptoms of cumulative trauma disorder during a one-year period. Neck and shoulder pain were prevalent complaints of the subjects. However, recent studies have shown that the hand and wrist are also susceptible to musculoskeletal disorders in VDT work. Although there is no conclusive evidence of RSI from use of VDTs, the World Health Organization stated in a recent report that injury from repeated stress is possible. Recent studies seem conclusive that chronic pain and disability are influenced by cultural, social and psychological forces. However, physical causes of chronic pain and disability cannot be ruled out.

Evidence exists that ergonomic changes in the work environment can reduce musculoskeletal discomfort associated with VDT use. It appears that the stationary and sedentary characteristics of VDT work are the primary risk factor. Tasks can be redesigned to allow for job rotation and more frequent rest breaks. Improved work station design may lessen musculoskeletal discomfort.

Stress

A third health effect examined in the NIOSH study is stress. In the U.S., increased VDT usage has caused a change in the content and organization of work tasks. Following is a list of factors that contribute to stress in VDT workers:

- increased work pressure;
- reduced autonomy;
- increased management control over the work process;
- concerns about computer breakdowns and delays;
- physical immobility;
- excessive repetition;
- reduced skill and experience levels;
- reduced task variety; and
- more uncertainty over job security and promotion opportunities.

Although stress is apparent in all VDT-related jobs, it is most pronounced in lower-level clerical jobs. Stress may result in mental disorders, cardiovascular diseases and psychological disorders. In California, 70 percent of workers compensation claims from stress came from white collar workers, and 40 percent came from the sales and clerical level. Stress can be relieved by making jobs challenging and varied; making sure that tasks have some kind of closure, or an end product; and by improving the social environment of the workplace.

Adverse Pregnancy Outcomes

It has long been claimed that VDT usage causes adverse pregnancy outcomes; however, no conclusive evidence of any relationship between VDT use and adverse pregnancy outcomes is available. A recent NIOSH report on the subject found no relationship between the two.

AT-RISK OCCUPATIONS

According to Betsy Jordon with the Bureau of Labor Statistics in Washington, D.C., disorders associated with repetitive motion (RSI) now make up 52 percent of reported job-related illnesses. Reports of carpal tunnel syndrome have increased more rapidly in recent years than reports of any other job-related illness.³

³Carpal tunnel syndrome is the swelling of the tendons where they pass through the front of the wrist. The resulting pressure can cause pain, numbness and weakness of the hands.

Representative Ulmer
October 4, 1991
Page 4

Barbara Webster, with the Liberty Mutual Insurance Company, stated that 1.5 percent of that company's insurance claims, and 2.5 percent of their costs in 1990, were for RSI. The average award per case in 1990 was \$6,168. Ms. Webster said that no one in the insurance industry keeps statistics on the occupations of those making claims for RSI, but managers in the insurance industry generally believe keyboard operators are one of the highest at-risk groups for that type of injury. The industries most affected by RSI are:

- * meat and poultry cutting and packing industry;
- * electronic manufacturing industry;
- * telephone operators; and
- * data entry/secretarial agencies.

The fourth category, secretarial and data processing agencies, file 1 percent of all workers' compensation claims in the U.S. A large number of claims for RSI are filed by reporters, automotive workers, and upholsterers.

In Alaska, 289 of 11,998 workers compensation claims made in 1990 were for inflammation of the joints. According to Jim Wilson, labor economist with the Alaska Department of Labor, this category of injury is caused almost exclusively by repetitive motion. Carpal tunnel syndrome is not included in the foregoing category of injury and is difficult to separate from its primary category of nervous system disorders.

STATE EMPLOYEES IN AT-RISK OCCUPATIONS

Table A (attached) presents a list of the most obvious job classes at risk to develop RSI and other VDT-associated health disorders in Alaska state government. It is difficult to tell what the exact duties of a particular position may entail, however, those listed in Table A are likely to require many hours of typing or data entry using VDTs. Just as some of these positions may not use VDTs for a significant portion of their duties, many other job classes not listed here (the state has over 1,300 job classes) may use VDTs for a major portion of their work day. The 2,056 positions represented by these job classes account for nearly 10 percent of the total positions in state government.⁴

I hope this information is helpful to you. If you have further questions, please feel free to call this office.

Attachment

⁴The state FY 92 budget (after vetoes) funds 21,018 positions.

TABLE A

State of Alaska Positions at Risk
for Repetitive Strain Injury
(as of September 1991)

CLASS CODE	CLASS TITLE	NUMBER OF POSITIONS
1122	Clerk Typist II	93
1123	Clerk Typist III	786
1145	Legal Secretary I	99
1146	Legal Secretary II	30
1151	Secretary I	106
1152	Secretary II	24
1182	Correspondence Secretary I	4
1183	Correspondence Secretary II	4
1184	Correspondence Secretary III	12
1185	Administrative Support Technician I	3
1186	Administrative Support Technician II	0
1187	Administrative Support Technician III	9
1188	Administrative Support Technician IV	4
1191	Data Processing Clerk I	38
1192	Data Processing Clerk II	60
1193	Data Processing Clerk III	16
1201	Accounting Clerk I	4
1202	Accounting Clerk II	98
1203	Accounting Clerk III	144
1204	Accountant I	4
1205	Accountant II	26
1210	Accounting Technician I	100
1211	Accounting Technician II	66
1212	Accounting Technician III	32
1217	Permanent Fund Dividend Specialist I	11
1218	Permanent Fund Dividend Specialist II	2
1219	Permanent Fund Dividend Specialist III	2
1610	Data Processing Assistant	2
1611	Data Processing Technician I	14
1612	Data Processing Technician II	27
1613	Data Processing Technician III	12
1621	Analyst Programmer I	10
1622	Analyst Programmer II	26
1623	Analyst Programmer III	64
1624	Analyst Programmer IV	92
1625	Analyst Programmer V	32
Total		2,056

Note: This table presents the number of existing state positions. These positions may or may not be filled at any given time.

Source: Alaska Department of Administration, Division of Personnel.

Prepared by the Legislative Research Agency, October 1991 (92.043A).

TESTIMONY OF DEBRA KNUTSON
BEFORE THE SENATE STATE AFFAIRS COMMITTEE
HONORABLE PAT RODEY, CHAIRMAN
ON HOUSE BILL 385
"STATE EMPLOYEE V.D.T. SAFETY"
MARCH 25, 1992

GOOD MORNING. MY NAME IS DEBRA KNUTSON. FOR THE RECORD, MY MAILING ADDRESS IS 5875 GLACIER HIGHWAY, NO. 4, JUNEAU, ALASKA 99801.

I WANT TO BEGIN MY TESTIMONY BY THANKING CHAIRMAN RODEY FOR ALLOWING ME TO TESTIFY ON BEHALF OF HOUSE BILL 385, AND BY THANKING REPRESENTATIVE FRAN ULMER FOR INTRODUCING THIS MUCH-NEEDED LEGISLATION.

FOR THE PAST 10 YEARS, I HAVE WORKED IN THE ALASKA DEPARTMENT OF ADMINISTRATION'S TYPING POOL AND WORD PROCESSING CENTER, AND FOR TWO YEARS PRIOR TO THIS I WORKED IN THE ALASKA DEPARTMENT OF EDUCATION AS A CLERK TYPIST. IN THE PAST 12 YEARS, MY WORK HAS CONSISTED ALMOST EXCLUSIVELY OF TYPING EITHER ON TYPEWRITERS, AS I DID IN THE DEPARTMENT OF EDUCATION, OR ON COMPUTER KEY BOARDS WITH VISUAL DISPLAY TERMINALS.

I SUPPORT HOUSE BILL 385 BECAUSE MY WORK EXPERIENCE WITH THE STATE LED TO MY DEVELOPING CARPAL TUNNEL SYNDROME AND THE NEED FOR CORRECTIVE SURGERY. I BELIEVE THIS BILL CAN NOT ONLY PREVENT OTHER STATE WORKERS FROM DEVELOPING THIS SYNDROME AND THE SURGERY NEEDED TO CORRECT IT, BUT ALSO BECAUSE, IF ENACTED BY THE LEGISLATURE, THIS BILL CAN SAVE THE STATE MONEY IN TERMS OF LOST EMPLOYEE WORK TIME, HEALTH BENEFIT COSTS TO THE STATE AND WORKERS' COMPENSATION COSTS TO THE STATE.

MY PROBLEMS WITH CARPAL TUNNEL SYNDROME BEGAN ABOUT TWO YEARS AGO. AT THAT TIME I NOTICED A TINGLING SENSATION IN MY HANDS AND FINGERS AS I WORKED.

WHEN THIS SENSATION PERSISTED FOR THREE OR FOUR MONTHS, I WENT TO SEE MY DOCTOR, DOCTOR ISTO, AT THE VALLEY MEDICAL CLINIC. AFTER EXAMINING ME, DR. ISTO ASKED ABOUT MY WORKING CONDITIONS. SHE TOLD ME THAT I PROBABLY HAD THE BEGINNINGS OF CARPAL TUNNEL SYNDROME. THIS WAS THE FIRST TIME I WAS AWARE THAT THERE WAS SUCH A THING AS CARPAL TUNNEL SYNDROME. AFTER SEEING DR. ISTO, I TOLD MY SUPERVISOR AT WORK ABOUT THE DOCTOR'S COMMENTS, BUT NOTHING WAS DONE TO ALTER MY WORKING SITUATION OR TO EASE THE PAIN. IN FACT, MY SUPERVISOR SUGGESTED SEEING A CHIROPRACTOR AND ALSO SUGGESTED I LOSE WEIGHT.

DR. ISTO PROVIDED SPLINTS FOR MY HANDS, BUT THESE DID NOT REALLY HELP. I KEPT WORKING AT MY COMPUTER KEY BOARD AT THIS TIME BECAUSE I AM A SINGLE PARENT WITH A FIVE-YEAR OLD CHILD AND MY JOB IS OUR SOLE MEANS OF SUPPORT. BUT THE TINGLING IN MY HANDS GOT WORSE, LEADING TO A NUMBNESS FROM MY RIGHT HAND TO THE ELBOW. AND THE PAIN FROM THIS WAS KEEPING ME AWAKE AT NIGHT. DR. ISTO SAID MY PROBLEM WAS FROM CONTINUOUS TYPING AT WORK, AND THAT I SHOULD CHECK WITH DR. PERKINS, WHO IS MORE EXPERT AT NERVE AND TENDON DAMAGE, AND IS FAMILIAR WITH CARPAL TUNNEL SYNDROME.

(continued)

Testimony by
DEBRA KNUTSON, Juneau

SENATE STATE AFFAIRS COMMITTEE
TESTIMONY OF DEBRA KNUTSON
ON H.B. 385, PAGE 2

DR. PERKINS SAID I HAD NERVE DAMAGE FROM CARPAL TUNNEL SYNDROME, AND RECOMMENDED CORRECTIVE SURGERY. DR. CEDAR DID THE SURGERY ON MY RIGHT HAND IN JUNE 1991. I MISSED ABOUT A WEEK'S WORTH OF WORK, AND APPLIED FOR NORMAL SICK LEAVE.

ON MY RETURN TO WORK AFTER THE SURGERY THE OFFICE WAS SYMPATHETIC AND ALLOWED ME TO TAKE A BREAK FROM TYPING BY DOING PROOFING, OR EDITING, WORK FOR ABOUT TWO MONTHS. WHEN I RETURNED TO MY REGULAR WORK, THE OFFICE PROVIDED WRIST RESTS AS A PREVENTIVE MEASURE, AND THEY HAVE HELPED A LOT. IT TOOK ABOUT TWO WEEKS TO GET THE WRIST RESTS BECAUSE THERE IS SUCH A DEMAND FOR THEM NOW THAT MORE PEOPLE ARE BECOMING AWARE OF CARPAL TUNNEL SYNDROME.

WHILE I AM NOT AN EXPERT IN THIS AREA, IT SEEMS TO ME THAT BY PROVIDING THE \$15.00 WRIST RESTS AT A MUCH EARLIER TIME AND ALTERING FROM TIME TO TIME MY WORKING CONDITIONS, THE STATE MIGHT HAVE SAVED THE \$3,000.00 IN MEDICAL EXPENSES PAID THROUGH MY HEALTH INSURANCE POLICY, AND CERTAINLY WOULD HAVE SAVED THE WORK TIME I LOST AS A RESULT OF DEVELOPING CARPAL TUNNEL SYNDROME. I ALSO BELIEVE THAT PASSAGE OF HOUSE BILL 385 COULD HELP REDUCE THE STATE'S RISING HEALTH CARE COSTS.

AGAIN, MY THANKS TO CHAIRMAN RODEY FOR ALLOWING ME TO TESTIFY, AND TO REPRESENTATIVE ULMER FOR INTRODUCING HOUSE BILL 385. IF THE COMMITTEE HAS ANY QUESTIONS ABOUT MY SITUATION, I WILL DO MY BEST TO ANSWER THEM.

THANK YOU.

(END OF TESTIMONY)

ALASKA STATE DISTRICT COUNCIL OF LABORERS

Laborers International Union of North America, AFL-CIO

2501 Commercial Drive, Suite 140
Anchorage, Alaska 99501 • 907/276-1640

Don Valesko
President

Andrew J. "Bear" Piekarski
Business Manager/Secretary Treasurer

POSITION STATEMENT

TO: MEMBERS, ALASKA HOUSE OF REPRESENTATIVES

FROM: A.J. "BEAR" PIEKARSKI, BUSINESS MANAGER/SECY'TREAS.

RE: HB 385

THE ALASKA STATE DISTRICT COUNCIL OF LABORERS SUPPORTS
THE PASSAGE OF HB 385. HAZARD COMMUNICATION TRAINING
FOR VDT USERS BENEFITS BOTH EMPLOYER AND EMPLOYEE, AND
WE URGE YOU TO SUPPORT THE BILL WHEN IT COMES TO A FLOOR
VOTE.

for El Ferguson, SE Rep.
A.J. "BEAR" PIEKARSKI
BUSINESS MANAGER/SECY-TREAS.



Alaska Health Project

Information and advocacy on occupational and environmental health.
1818 W. Northern Lights Blvd., Suite 103; Anchorage, Alaska 99517
(907) 276-2864 In State 800-478-2864 Fax 907-279-3089 Modem 907-279-3128

January 23, 1992

Representative Ulmer
State Capitol
Juneau, AK 99801-1182

Dear Representative Ulmer:

The Alaska Health Project has for the past twelve years advocated for improved safety and health at the work place. We are in support of HB 385 on Video Display Terminals. The use of the keyboard and computer have become the basic tools for much of the State's work force. It is very important that any tool be used wisely and with precautions to prevent injury.

The video display terminal has many associated health problems including the position of the users hands, arms, back, legs, and neck and head. Working for many hours with limited breaks in physical posture creates strain on many body parts. An ergonomic review of any process that is repetitive and requires the body to maintain a particular position will show multiple areas of stress.

The incidence of spontaneous abortions among users of VDTs was first thought to be due to the electromagnetic fields. Upon further research it was found that it was due to long periods of the body being held in tension, in one position. This working position stress reduced circulation to the abdomen and contributed to the miscarriages. It is now recommended that any user of a keyboard be allowed a ten minute alternative work activity for each fifty minutes of typing. This stimulation of the body reduces stress and improves health.

We support HB 385. We would like to see it expanded in two areas. First, we would like to see it deal with the ergonomic concerns of all State employees in office activities. This would include individuals who are required to stand at counters or photocopy machines for extended periods. It should also deal with those who use standard keyboards on typewriters or calculators for long continuous periods.

Second, we would like to see it deal with the electromagnetic fields associated with electronic equipment.

Representative Ulmer
Page 2

This would include video display terminals, computers, copiers, blue line machines, laminators and other equipment which give off electromagnetic radiation. It is important to know where these machines are located, the extent of their fields as they pass through walls and floors, and how frequently employees are required to be within those fields. It is true that the exact impact of electromagnetic fields is currently under debate, however, the more recent investigations are finding that there does seem to be an increase in cancer promotion for those who regularly work in electromagnetic fields.

We support HB 385 and urge that it move forward. If possible we would appreciate inclusion of the above concerns to broaden the bill. Thank you.

Sincerely,

Kris Benson
for

Carl M. Hild, M.S., Sci.Mgmt.
Executive Director

January 27, 1992

Mr. Barnaby Dow
State Capitol, Room 421
Juneau, AK 99811

Post-It™ brand fax transmittal memo 7671		# of pages ▶ 1	
To	Barnaby Dow	From	Jan B. Smith
Co.	Rep. Ulmer	Co.	Fish & Game
Dept.		Phone #	465-4160
Fax #	2108	Fax #	465-4168

Dear Mr. Dow:

I understand Representative Fran Ulmer is requesting information regarding carpal tunnel syndrome and the use of video display terminals.

My first problem with carpal tunnel syndrome began about two years before I began working for the State of Alaska. At the time, I was employed as a nurse during the day and did medical transcription at home during the evening using an electric typewriter. During this time, I developed pain in my hands and wrists to the extent that at one point I had to wear custom-molded, fiberglass splints, sometimes on one and sometimes on both wrists. This continued until I stopped doing medical transcription at home.

In July 1988, I began working for the state as a clerk typist, and within a few months I began to have problems with my wrists again. While shopping for office supplies one day, I noticed a "wrist rest" device and requested permission to buy one. My supervisor thought I was being silly to want to spend state money in such a manner, but finally allowed the purchase. Coworkers ridiculed me for using the wrist rest, and frequently I returned to my desk to find the wrist rest on the floor. However, soon after beginning to use the wrist rest, my symptoms abated and I have had essentially no problems with carpal tunnel syndrome since.

In August 1990, I began working for the Department of Fish and Game, Division of Fisheries Rehabilitation, Enhancement and Development (FRED). Shortly thereafter, I obtained a wrist rest, received no ridicule for using it, and continue to be symptom-free.

Sincerely,

Jan

Jan. B. Smith

STATE OF ALASKA
1992 LEGISLATIVE SESSION

No. 1

Bill Version: CSHB 385 (STA)

(H) Publish Date: 2/18/92

Revision Date: _____

Title: Relating to video display terminals.

Department Affected: Administration

BRU: Personnel/OEEO

Component: Personnel/OEEO

Sponsor: Ulmer

Requestor: House State Affairs

COMPONENT SERIAL NO.

		5	7
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Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98
PERSONAL SERVICES						
TRAVEL	8.0	1.7	1.7	1.7	1.7	1.7
CONTRACTUAL	20.5	4.3	4.3	4.3	4.3	4.3
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	28.5	6.0	6.0	6.0	6.0	6.0

CAPITAL	0	0	0	0	0	0
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REVENUE						
FUND SOURCE:						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
FUND SOURCE: VA Rec't	28.5	6.0	6.0	6.0	6.0	6.0
TOTAL	28.5	6.0	6.0	6.0	6.0	6.0

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

Estimate of current year impact: _____

ANALYSIS: (Attach a separate page if necessary.)
 See Attached.

Prepared by: R. H. King, Director *Richard H. King*
 Division: Personnel/OEEO

Phone: 465-4430
 Date: January 28, 1992

Approved by Commissioner: Nancy Bear Usara *Nancy Bear Usara*
 Agency: Administration

Date: 1/28/92

Distribution (by preparer): Leg. Fin., Legislative Sponsor, Requestor, OMB/DBR, Gov. Legis. Ofc., & Impacted Agency(ies).

ANALYSIS: (continued)

This bill requires the Department of Administration to train employees designated by all agencies on the hazards of video display terminals and the measures that may be taken to avoid or lessen those hazards. We estimate that 500 employees will need to be trained initially. For this initial training, it is cost effective to take the training to the various locations. First year costs are for the development of the training, preparation and printing of required notices, course negotiation and contracted instructor costs. Travel for delivering the training throughout the state is provided.

For the second and subsequent years, we anticipate offering the training twice annually, but only in Juneau, Anchorage and Fairbanks. Agencies will be expected to send their new designated employees to one of these courses.

Interagency receipts are shown as the funding source on the assumption that agencies will pay the costs. If that assumption is incorrect, the funding source will be general funds.

FISCAL NOTE

STATE OF ALASKA
1992 LEGISLATIVE SESSION

BILL NO. CSHB 385 (L&C) ar

Revision Date: _____ Department Affected: Department of Corrections
 Title: "An Act relating to video display terminals." BRU: Statewide Operations
 Component: Various
 Sponsor: Rep. Ulmer
 Requestor: Senate State Affairs COMPONENT SERIAL NO.

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EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98
PERSONAL SERVICES						
TRAVEL	6.7	6.7	6.7	6.7	6.7	6.7
CONTRACTUAL	.8	.2	.2	.2	.2	.2
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	7.5	6.9	6.9	6.9	6.9	6.9
CAPITAL	-0-	-0-	-0-	-0-	-0-	-0-

REVENUE						
FUND SOURCE:						

FUNDING: (Thousands of Dollars)

GENERAL FUND	7.5	6.9	6.9	6.9	6.9	6.9
FEDERAL FUNDS						
OTHER FUND SOURCE:						
TOTAL	7.5	6.9	6.9	6.9	6.9	6.9

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

Estimate of current year impact: 0

ANALYSIS: (Attach a separate page if necessary.)

Please see attached fiscal analysis.

Prepared By: Diane Schenker, Legislative Liaison Phone: 465-3376
 Division: Office of the Commissioner Date: 03/24/92
 Approved by Commissioner: Lloyd Hames, Commissioner
 Agency: Department of Corrections Date: 03/24/92

Distribution (by preparer): Leg. Fin. Legislative Sponsor, Requestor, OMB/DBR, Gov. Legis. Ofc., & Impacted Agency(ies).

Rev 10/7/91

Page 1 of 2

CONTINUATION OF FISCAL ANALYSIS

BILL: CSHB 385 (L&C) " An Act relating to video display terminals."

The bill would require each state agency to appoint a person responsible for providing information on the risks and proper use of video display terminals (VDTs) at each "qualified work site." A qualified work site means a cluster of at least four VDTs. The Department of Administration would be required to train the appointees in the proper use of VDTs to avoid or lessen risks involved with improper use. The Department of Administration has submitted a fiscal note based on the assumption that this training would be paid for by the state agencies receiving training.

NOTE: The Department will request that training be provided in writing or on videotape in order to reduce travel costs to zero; however, based on assumptions in the Department of Administration's fiscal note, the following costs are estimated for training:

Travel Costs: The Department would send the following numbers of appointees to yearly training in either Anchorage, Fairbanks, or Juneau. It is assumed that current airfares will remain constant, and that each training session will require one overnight and full day of per diem.

<u>Location</u>	<u># of worksites</u>	<u>transportation</u>	<u>per diem</u>	<u>Total</u>
Anchorage	6	0.00	0.00	0.00
Palmer	3	0.00	108.00	108.00
Kenai	3	282.60	108.00	390.60
Seward	1	76.20	36.00	112.20
Kodiak	1	276.00	95.00	371.00
Dillingham	1	446.00	95.00	541.00
Fairbanks	2	0.00	0.00	0.00
Nome	2	1228.00	190.00	1418.00
Bethel	2	1388.00	190.00	1578.00
Kotzebue	1	614.00	95.00	709.00
Barrow	1	470.00	95.00	565.00
Juneau	3	0.00	0.00	0.00
Ketchikan	2	496.00	190.00	686.00
Sitka	1	174.00	95.00	269.00
<u>TOTAL COSTS</u>				<u>\$ 6,747.80</u>

Contractual Costs: The Department of Administration's fiscal note assumes that contractual costs for preparing and presenting the training will be paid by the receiving agencies. It is assumed that the contractual costs identified each year in that fiscal note will be divided among the agencies receiving training, or approximately 25 agencies, to estimate the cost to this Department.

FISCAL NOTE

STATE OF ALASKA

BILL NO. CSHB051 & C.H

1992 LEGISLATIVE SESSION

Revision Date: March 20, 1992

Department Affected: Revenue

Title: Relating to video display terminals

BRU: Administration & Support

Component: Administrative Services

Sponsor: Ulmer

Requestor: Senate State Affairs Committee

Component Serial No.

0	1	2	5
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Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL	5.0	1.0	1.0	1.0	1.0	1.0
SUPPLIES	1.0					
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	6.0	1.0	1.0	1.0	1.0	1.0

CAPITAL						
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REVENUE FUND SOURCE						
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FUNDING: (Thousands of Dollars)

GENERAL FUND	6.0	1.0	1.0	1.0	1.0	1.0
FEDERAL FUNDS						
OTHER FUND SOURCE						
TOTAL	6.0	1.0	1.0	1.0	1.0	1.0

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

Estimate of current year impact: _____

ANALYSIS:The Department of Revenue would require 9 designated worksite representatives. This fiscal includes training, printing and notice distribution expenses. It does not include any equipment repairs, upgrades or replacement.

Prepared by: Tracy L. McGill Phone: 465-2313

Division: Administrative Services Date: 3/20/92

Approved by Commissioner: Darrel J. Rexwinkel

Agency: Revenue

Distribution (by preparer): Legislative _____ Agency(ies).

FISCAL NOTE

**STATE OF ALASKA
1992 LEGISLATIVE SESSION**

No. 2
 Bill version: CSHB 385(STA)
 (H) Publish Date: 2/18/92

Revision Date: _____
 Title: "An Act relating to video display
 terminals."
 Sponsor: Representatives Ulmer, B. Davis
 Requestor: House State Affairs

Department Affected: Labor
 BRU: Workers' Compensation & Admin. Svcs.
 Component: Workers' Compensation
 & Labor Market Information
 COMPONENT SERIAL NO. 344 & 336

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND&STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL						
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REVENUE FUND SOURCE:						
---------------------------------	--	--	--	--	--	--

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

Estimate of current year impact: None

ANALYSIS: (Attach a separate page if necessary)
 This bill requires a report to be prepared by the Department of Labor concerning video display terminal injuries. The department can report to the legislature on injuries identified on the Initial Report of Occupational Injury Form completed by both the employee and employer and collected by the Workers' Compensation Division. There would be no additional fiscal impact to the department.

Prepared by: Arbe Williams^{AW}, Special Assistant Phone: 465-2700
 Division: Commissioner's Office Date: 1/28/92
 Approved by Commissioner: John Abshire, Acting Commissioner
 Agency: Department of Labor Date: 1/28/92

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