

INFORMATION  
ON

# STRESS

FROM THE WOMEN'S OCCUPATIONAL  
HEALTH RESOURCE CENTER

by

That is, the people whose jobs and tasks were timed and controlled showed the greatest physiological effects of stress.

### What makes jobs stressful?

Research has shown that occupations in which people experience the highest rates of stress-related illness and disease are those which place numerous demands on them all at once. For example, according to several researchers, one of the most stressful jobs is assembly-line work. Typically, these jobs are physically restrictive, while also placing a high demand on the person and allowing for little or no control over the pace of work or over work processes and tasks.

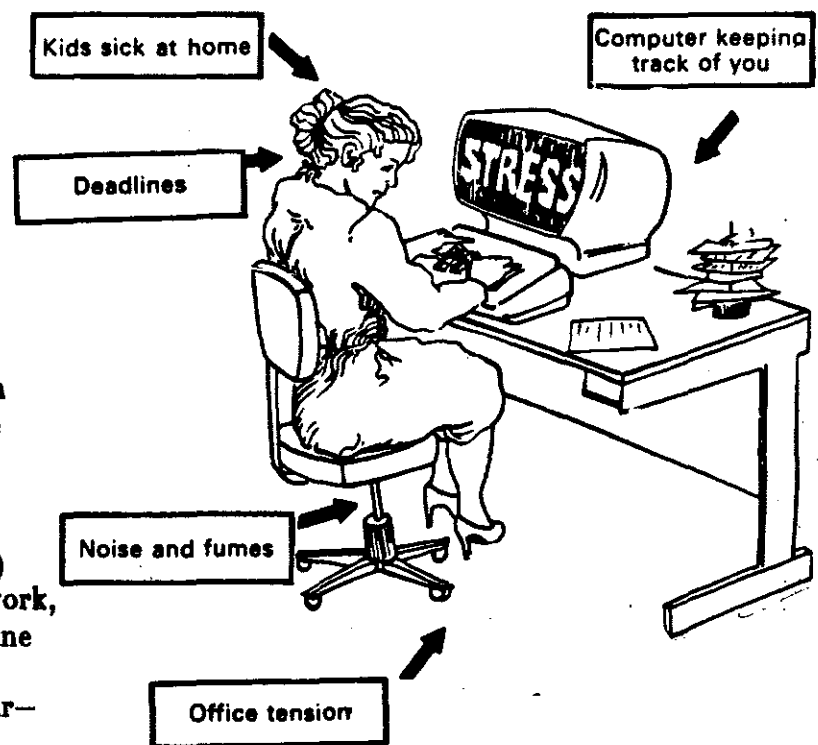
Many experts agree that it is not the demands of a job alone that automatically lead to stress but the combination of a demanding job with little or no control over how, when and why the required tasks are carried out. (Having autonomy and discretion on the job are other ways of expressing this idea.) For example, professional and managerial jobs, such as physicians and corporate vice presidents, can be very demanding, yet, researchers have found that, on the average, people in these occupations have much lower rates of stress-related illnesses like mental disorders, emotional exhaustion, high blood pressure and heart disease, than people in jobs at the opposite, low end of the occupational 'hierarchy.'

Some specific job characteristics which have been associated with stressful work are discussed below.

**AUTOMATION:** One of the most stressful of any kind of job is assembly line work. The major sources of stress (stressors) appear to be machine-controlled speed of work, and monotony. Most automated assembly-line jobs typically do not allow workers to use more than a fraction of their ability and narrowly define their tasks.

*"Surely no one would argue that the way to deal with toxic fumes or dusts in the work environment is to teach people not to breath. Similarly, stress in the workplace cannot be eliminated by seeking to control the bodily stress reaction. We have to take care of ourselves -- but we also have to work toward eliminating controllable sources of stress."*

Although the number of assembly-line jobs in factories is decreasing in North America each year, the negative characteristics of assembly work, such as rigidly identified and structured tasks, has spread to many other jobs. Key punch operators, laboratory technicians, VDT data entry clerks, typists, coders, and telephone operators are among those who hold non-traditional assembly line jobs yet are subject to monotonous, uncreative, rigid tasks, often controlled and monitored, by a machine.



from Office Work Can Be Dangerous To Your Health

## PEOPLE-CENTERED JOBS:

### Jobs

which involve responsibility for the welfare and supervision of other people add another dimension to stress. The term "burnout" has been coined to describe the stress effects of such jobs, which are a kind of physical and emotional exhaustion. A *WOHRC Factsheet* at the rear of this publication gives more details.

Nurses, teachers, social workers, prison guards and attendants are all in occupations that place them at particularly high risk for burnout. Many human service workers are employed in the public sector or in non-profit agencies which are often faced with the added stressor of cutbacks, leading both to a reduction in staff and in available services for recipients.

People who are required to deal frequently with customers or the public, like receptionists, cashiers and telephone operators may also find themselves Under a similar kind of stress. Often, they are required to 'mediate' between the employer (or institution, or agency) and the customer or client when problems arise. They may find themselves having to apologize or explain situations over which they have little or no control. They may face complaints, verbal abuse, sometimes even violence, from customers and clients who may have been waiting in long lines, wading through excessive amounts of paper work, or dealing with seemingly endless bureaucracies in order to obtain the needed services. Throughout all of this stressful interchange, the workers are expected to be polite and smile in order to maintain a positive image for the company or agency.

"Burnout" is considered to be a women's issue by many people because such a large number of people-centered jobs are filled by women. The dominance of women in these jobs is partially explained by the fact that in most societies, women's roles have traditionally been considered that of caretaker for the needs and well-being of others, both at home and on the job.

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## PHYSICAL ENVIRONMENT

The physical environment can cause stress. Noise, overcrowding, poor indoor air quality, toxic chemical, are all examples of stressful hazards. In fact, research by the authors of this booklet has found that the physical environmental can contribute more to the overall stress of workers than the organizational environment or job factors such as those just described. In one study, office noise was the best predictor of the overall levels of increased stress in the group under study.

The number and patterns of hours worked can also be stressful. Excessive overtime, particularly if it is not voluntary, can be a serious occupational stress hazard. Shiftwork (work not carried out during standard daytime working hours) has been associated with stress-related diseases like heart disease and ulcers, as well as with serious disruption of family and social life. People whose shifts change from week to week are particularly vulnerable.

The extent of stress you experience will, in general be the result of the combination the social climate at work, the nature the of the work you do, the environment it is carried out in, how much you are paid and so on. The more negative (or positive) work is, the higher (or lower) the stress-related effects you may feel.

## Understanding what stress does

All living things, even plants, respond biochemically to the demands of their environment. Sometimes the responses are physically noticeable: a person may blush in an embarrassing situation, or feel cold and clammy and have sensation of "butterflies" in the stomach when frightened. There will also be unperceived physical responses. Virtually every major organ system is involved in stress. For example, the blood pressure will usually rise when a person is exposed to high levels of noise. The stomach will secrete greater quantities of acid. The heart will begin to pump faster. Whether the source of the demands is happy, like excitement at a football game, or sad, like the death of a loved one, or a physical stressor like noise or extreme heat or cold, the human body will respond with a similar set of biochemical reactions called a general stress response.

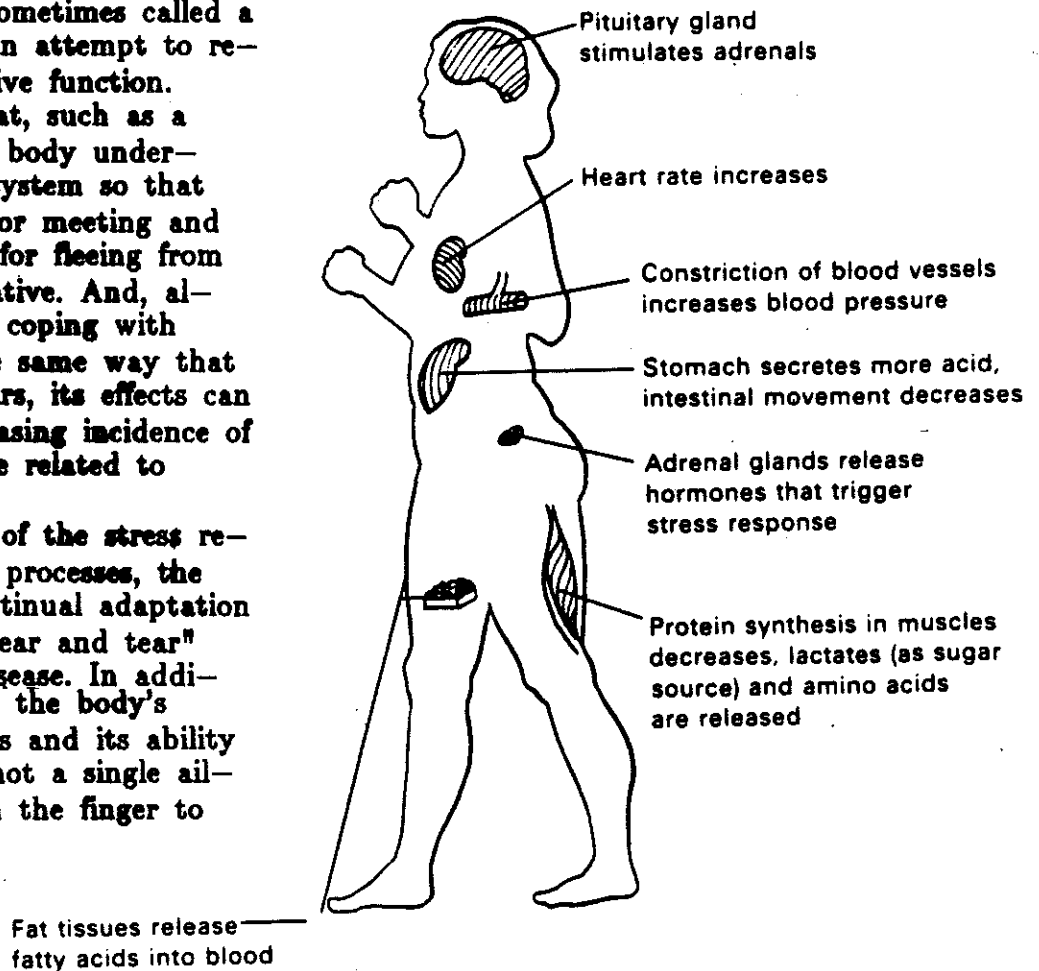
The stress response is sometimes called a "fight-or-flight" reaction in an attempt to relate the response to its primitive function. Confronted by a physical threat, such as a wild animal in the jungle, the body understandably activates its alarm system so that maximum energy is available for meeting and combatting the emergency, or for fleeing from it, if that is the logical alternative. And, although the energy involved in coping with stress is not measurable in the same way that we calculate mileage on our cars, its effects can be observed by the ever-increasing incidence of disease and disabilities that are related to stress.

Although the pathways of the stress response are normal biochemical processes, the net physiological result of continual adaptation to stressors will be at best "wear and tear" and at worst stress-related disease. In addition, the stress response affects the body's general resistance to all diseases and its ability to recover. There is probably not a single ailment, from the smallest cut on the finger to

major diseases like cancer, whose progress is not affected by stress. A person under stress will not recover as rapidly as the person with peace of mind and a serene, less demanding environment.

The mechanisms of the stress response are controlled by the same nerves and glands that orchestrate the day-to-day functioning of the body. Glands produce and release hormones into the bloodstream. These are extremely potent chemicals that act as messengers to every organ and system, beginning, stopping, and otherwise modifying their actions. Most biological functions depend on specific hormones for direction.

### The Body's Response to Stress



The nervous system begins in the brain, which acts as a central control with pathways extending down the spinal cord. The nerves branch out from the spinal cord and eventually link up with every muscle, vein, artery, and organ in the body. Major nerves lead to the major organs, and tiny nerves to the smallest parts of the body. When the brain transmits an electrical impulse, it stimulates the production of chemicals directly at the microscopic nerve endings and junctions. These chemicals are equivalent to the hormones produced by the glands, except that they remain localized at the nerve junctions instead of circulating throughout the bloodstream. The nervous system and the glands are not independent of the external environment. While we do not think about making the heart beat, the lungs breathe, or the hormones circulate, the stressors in our surroundings can profoundly affect the functioning of the autonomic nervous system and the glands, and thereby alter respiration, heartbeat, and hormonal activity.

As an example, when the brain responds to stress, it automatically sends a signal to the vagus nerve, which stimulates the secretion of gastric acid in the stomach. Usually the lining of the stomach wall can withstand the extreme acidity of the stomach. But at the same time that stressors are stimulating the secretion of more acid, the steroids produced by the stress response are decreasing the ability of the intestinal lining to protect itself from stomach acidity. This may be one way that stress exacerbates ulcers. Less serious but very disturbing and fatiguing are the indigestion, diarrhea, and loss of appetite (or sometimes the urge to overeat) that are frequently caused or aggravated by stress.

Many aspects of the stress response, however, are not yet understood. For example, one component of the stress response is a rise in blood pressure resulting from a comprehensive series of biochemical changes. Hypertension, or chronic high blood pressure, is also associated with stress, although the relationship between the instantaneous rise in blood pressure caused by the stress response and chronic dis-

ease is not clear. It is interesting that studies correlate as much of a relationship between heart disease and stress as between heart disease and physical factors such as cholesterol levels. It is ironic that we as a society seem much more eager to reduce the fat in our diet than we are to develop social methods to decrease the levels of stress in our lives.

Other diseases of the circulatory system, such as coronary heart disease (damage to the major arteries of the heart) and stroke, have also been related to stress. But as with so many other chronic diseases, stress is but one of a complex array of causative factors. Family history, occupational environment, and aspects of personal life-style such as smoking, all contribute to the development of these diseases.

Nor can science explain the death of a spouse from "natural causes" just a few short weeks after the death of a lifelong marriage partner. It may be that science will never explain such phenomena, and perhaps that is good. Some stressors are natural and some are even fun, while others are simply unavoidable. A meaningful way to look at stress is to recognize that extraordinary or continuous unwanted stress costs us energy, deprives us of tranquility, facilitates the occurrence of some diseases and causes others outright, and prolongs the time of recovery from any disease. It is logical to try to minimize exposure to stressful conditions and to eliminate them from our working environment as much as possible.

### Studies measuring stress

There are a number of physical changes in the body that occur when a person is under stress. These changes can be monitored scientifically. Some common physiologic measures are:

- Blood Pressure
- Heart rate
- Pulse rate
- Catecholamines  
(Adrenaline, noradrenalin)
- Cortisol
- Thyroxin

Several experiments and field studies of actual work situations have measured the body's reactions to stress using such measures. We briefly describe a few here. More information is available from the sources cited in the reference list.

**CATECHOLAMINES:** In one experiment, a group of Swedish researchers set up a four day experiment to compare the effect of salary and piece wages on stress levels of a group of invoicing clerks. On days 2 and 4 of the experiment, the clerks were assigned their regular invoicing tasks at their regular rate of pay. On the first and third days of the experiment, the clerks were paid according to how many invoices they completed. The results show that when the clerks were assigned 'piece work' (days 1 and 3), they had higher adrenaline levels than on the days when they did the same worked for a straight salary (days 2 and 4). (Levi, 1981)

**PULSE RATE:** In this study, pulse rates and other physiological measures were compared between a group of machine-paced and self-paced workers. The assembly-line (machine-paced) workers were found to have a much higher pulse rate than a similar group of self-paced workers. The differences between the groups were larger in the morning; in the afternoon both groups showed an increase in pulse rate, although the rate for the machine-paced group remained higher. (Salvendy and Gardell, 1981)

**HEART RATE:** A study was undertaken to examine the effects of increasing the machine pace among a group of photo-processing workers at Kodak. One unexpected "accidental" finding of the study was that a marked increase in one operator's heart-rate when the machine jammed 12 times in just 25 minutes. (Salvendy and Gardell, 1981)

**HORMONAL CHANGES:** By analyzing hormones in the blood and urine of workers under stress, researchers can actually gather clues about what is happening in the body which may be causing disease. One hormone which can be studied is cortisol. An experiment was carried out in which one group of workers was forced to perform at a set rate of speed while another group was allowed to adjust the speed to their individual liking. The latter group not only had lower levels of cortisol, but also were reported to have found their work "pleasant and stimulating." (Levi, 1981)

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**HEART DISEASE:** Heart attack (myocardial infarct) patients who reported "high" social isolation and "high" life stress were found to have a four-fold increase risk of death, compared with patients who did not experience either social isolation or excessive life stress. (Ruberman et al, 1984.)

In another study, rates of coronary heart disease were found to be almost twice as great among women holding clerical jobs compared to housewives. The strongest predictors of developing coronary heart disease were suppressed hostility, having a nonsupportive boss and having decreased job mobility. Among working women, clerical workers with children and who were married to blue collar workers were at the highest risk of developing coronary heart disease. (Haynes et al, 1980)

## Reducing Stress

The best way to reduce occupational stress is by changing the way the workplace is designed and managed. In addition there are also ways that *you* can try to achieve a less stressful and more health work and personal life style.

### Start at Home

*Easing the stress of women's many roles:* Women often feel that if they were only more organized, housework would be easier. But there is no magic "system" which can help a women get it all done effortlessly while holding down her other job, and being a responsive wife and mother, etc. etc. One woman just can't do it all! The first step towards easing the stress of women's many roles is to get the rest of the family to take over their share of the homemaking role.

Here are some suggestions:

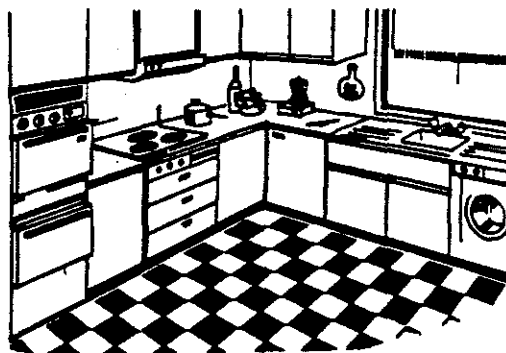
Have a family meeting to divide up the chores. Let everyone start by choosing which chores they would like to do. If the division of labor doesn't look fair, someone is going to have to do something they don't like to do — but that doesn't always have to be you!

Don't stop at dividing up the chores. Specify how often they have to be done (otherwise they may never get done). Make a big check-off chart and stick it on the refrigerator door. List everyone's name next to their assigned tasks and the days on which they should be done. An erasable board will let people check off when they have completed their tasks. Repeat family meetings as many times as necessary until the system works.

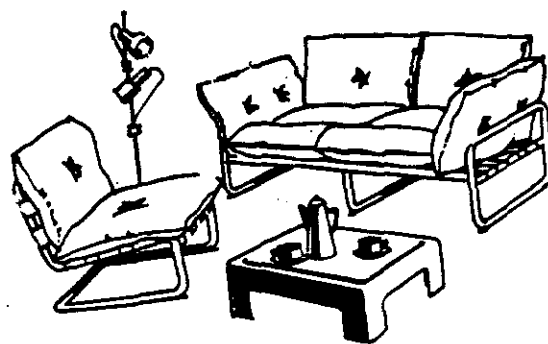
It's hard to delegate tasks you may have been doing for years. You may have an impulse to do someone's chore for them so that it will be done "right." Don't! Let them learn to do it right — or relax your standards a little.

Remember, supervising everyone else (or scolding them because the job's not done) is work too. If you find yourself doing

this kind of work, it may be time for another family meeting.



*Since this room is not your private space, taking care of it need not be your responsibility alone!*



*Are you the only person to use your living room? If not, you shouldn't be the only person to clean it!*

## On the Job

**Some ideas for workers -- *Talking to others:*** One important way to make one's work situation less stressful is to develop friendly and supportive relationships with the people you work. You may find that negative reactions you're having to work are shared by many other people. Talking to coworkers can also help to reduce some of the isolation that people feel at work. Having positive relationships with the people you work not only creates a better working atmosphere, it is also good for you. Researchers have found that the healthiest people are those who have positive relationships with others.



***Documenting the Problems:*** When it comes to stress, some people still carry around the myth that "it's all in your head". While it's true that we all have our individual reactions to stressful conditions, and that some of our reactions are not very "healthy", many times it is the conditions around us that are causing the stress, not simply our reactions to them. One way to deal with the myth that stress is all in your head is to document the causes of stress on your job.

If your supervisor is a problem, there is often strength in numbers. One person's complaints may not be taken seriously, but if several people in the same company or department are facing similar conditions that are causing them to feel sick, it will often receive greater attention.... both by the people who are feeling sick and by management. In addition to just getting together with co-workers to develop a plan and to talk about the problem, will itself be one stress reliever.

***Doing Surveys:*** A useful way of documenting working conditions and any health problems is by doing a survey... either formally or informally of your work environment and of your coworkers.

A good survey will consider all aspects of the work environment: the physical environment, the organization, the tasks people do. It should also include questions on reactions to stress. A sample survey is included in this booklet. Doing surveys also helps to start people thinking and talking about the issues, sharing their experiences and their ideas about what's wrong and what could be better.

***Develop the Issues and A Strategy for Dealing with Them:*** Once you've done a survey of your workplace, the next step is to determine what the central issues are and what can be done about them. If you're in a union, you may want to call a special meeting to discuss the issues or bring it up at a general meeting.



## Some ideas for managers

Many managers find themselves in the position of having to mediate between employees and corporate management, which itself can be a major source of stress. At the same time, managers are often in a direct position to influence the work atmosphere, and often effect how much satisfaction, cohesiveness, and stress the people in your department feel.

### *Recognizing Sources of Stress*

The same advice that is good for workers is good for managers. Survey the workplace both for environmental and for organizational factors which can cause stress. Identify all current and potential problem areas. The survey included in this booklet will help provide a direction for the survey. Better yet, why not carry out the survey with a joint labor-management committee charged with assessing the situation. This will be one good way of showing that you are really interested and willing to make changes where they are needed.

*Provide Real Concern:* A supportive and friendly supervisor is one of the key factors in reducing job stress. Manuals on stress management emphasize that the key to positive relationships between employees and supervisors is a two-way flow of communication. A good manager not only needs to be able to provide direction but also to listen to employees' concerns and suggestions about how the work could be done better. Often the people on the 'front lines' are in the best position to know what the problems are and come up with workable solutions.

One recent survey of hospital nurses found the number one stressor to be poor interpersonal relationships -- conflicts with staff, physicians, administrators and residents. To overcome this problem, management sponsored workshops on conflict resolution and training modules on group process, communication, assertiveness, and conflict resolution.

The management of another long-term care facility which sponsored a similar training program for its RNs, LPNs and nursing assistants found decisively positive results: The quality of the work performed was higher, nursing personnel became more self-sufficient; responsible for patient care.

*Provide Clear Job Objectives:* Another source of employee stress can be unclear job objectives and conflicting demands. Clear goals and evaluation criteria are essential both for employee morale and for effective management. Avoid using different criteria for different workers. Favoritism and nepotism are sure ways to create workplace stress and an unhealthy working environment.

*Quality of Worklife (QWL):* Many companies have developed "Quality of Worklife Programs" (QWL) in the last several years, as a way of combatting stress on the job. There are numerous programs now in existence, and they may vary in their effectiveness in actually changing the conditions of work and in reducing employee stress. One key ingredient to the success of these programs seems to be the extent to which they provide a real opportunity for employees to influence their jobs and work environments.

*Physical Environment:* The environment at work can have a profound effect on the way employees act and feel. The quality of the indoor air, the presence of toxic substances, the amount of space and privacy per person, the noise levels and the ergonomics (fit between workers and their equipment) are examples of potential stress hazards. Many of these problems can be eliminated quite easily. For example, low cost adjustable chair backs for workers who sit for many hours, are available. A single lost work day due to a stress-related backache will cost more than a new chair. Make sure your workplace survey takes careful note of the physical environment.

## For Yourself

There are several steps that you can take to achieve a less stressful and more 'healthy' life style.

**Education:** You have already taken the first step in dealing with stress by educating yourself on its effects and causes. Identifying sources of stress and ways of reducing them is also an important first step.

**Taking care of yourself Exercise:** Take an exercise break at work. Isometric exercises can even be done right at your desk without either drawing attention to yourself or asking permission to take time off.

**Nutrition:** One sign of a person under stress is poor eating habits. When you have to wake up early, get the family ready and get to work by 8 or 9 A.M., often there's not enough time to prepare and eat a proper breakfast. Many people literally grabbing a donut and coffee on the way to work. Sometimes people work straight through lunch to keep up with the work, or to get off half an hour early. Or, you may pick up a hamburger and fries at the nearest fast food chain. If you are very tired at the end of the day, you may not feel like either preparing or even eating a big meal. The effect of eating like this day after day may be to rob your body of needed vitamins and nutrients and make you feel run down.

**Personal Habits:** Vacations, work breaks, getting enough sleep are all important. Americans have among the shortest vacations and the longest hours of work in the world. This can lead to overload. Don't skip vacations and don't plan so many activities on your vacation that you just never get a time to rest. This will be very defeating to your health and well-being in the long run.

**Getting Help:** There may come a point when you have done all you can do personally to "manage" stress, and the pressures of work, family, school, etc. become over whelming. A person in such a situation may start to ex-

perience persistent, sometimes debilitating symptoms -- things like depression, extreme fatigue, migraine headaches, heart palpitations, serious alcohol or family problems. At that point, it may be necessary to seek outside professional help to deal with the problems.

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## A Caution About Coping

In the last few years, a whole 'stress management' industry has developed to help people cope better with the stress in their lives. Improving one's diet, learning relaxations techniques, and eating a proper diet help to alleviate unhealthy reactions to stress. But we emphasize that there is a potential danger if these techniques are used to help a person adapt to a poor environment. As much of the research which we have presented here shows, there is a limit to which human beings can be forced to adapt. Surely no one would argue that the way to deal with toxic fumes or dusts in the work environment is to teach people not to breath. Similarly, stress in the workplace cannot be eliminated by seeking to control the bodily stress reaction. We have to take care of ourselves -- but we also have to work toward eliminating controllable sources of stress.

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## SPOTTING STRESS ON THE JOB<sup>2</sup>

The following survey is designed to provide you with an outline of the main potential causes of stress in your workplace that you should be aware of and survey regularly. We have divided the survey into sections -- the physical work environment, the job you do, and the organization you work in. We have also included questions on sources of stress outside of work and a section about personal health and symptoms of stress..

### Personal Health

In this section, any 'yes' answer may mean a stress problem.

Do you regularly experience any of the following symptoms?

- Indigestion or heartburn?
- Gas or gas pain?
- Nervous or upset stomach?
- Painful or stiff neck or shoulders?
- Back pain?
- Extreme fatigue or exhaustion?
- Headaches?
- Asthma?
- Hives or skin rashes?
- Colds?
- Sore throats?
- Feeling sad or depressed?
- Feeling lonely or isolated?
- Feeling anxious?
- Feeling tense?
- Feeling annoyed or irritated?
- Feeling "burned out"?
- Overeating?
- Loss of appetite?
- Getting drunk?
- Taking sleeping pills or tranquilizers to help you relax?
- Had arguments with coworkers?
- Had arguments with family?
- Dreamed about work?
- Had trouble sleeping because of work?
- Woke up in the middle of the night thinking about work?

<sup>2</sup> Adapted from J. Stellman and M. Henifin, "Office Work Can Be Dangerous to Your Health," (Pantheon, 1983) with permission.

## Workplace Health

The questions in this section are framed so that "yes" is the 'correct' answer. *Every "no" and "I don't know" could mean a source of stress, or stress-related problem.* After you complete the survey, the negative or unknown responses can be the starting point for you or a health and safety committee to begin to work on improving working conditions.

### YOUR JOB

- Can you determine the speed at which you work?
- Do you have enough time to finish your work?
- Can you take a break when you need to?
- Does your job allow you to make a lot of decisions on your own?
- Does your job allow you to keep learning new things?
- Is there variety in the tasks that you do?
- Does your job require you to leave your work station and move around the office?
- Is talking on the job with coworkers permitted?
- Are there enough people in your department to accomplish the tasks?
- Do you have good job security?
- Are there good opportunities for promotion in your job?
- Is the employer concerned about giving everyone a chance to get ahead?
- Is your supervisor helpful to you in getting the job done?
- Are you appreciated by your supervisor?
- Does your supervisor let you know what is expected of you?

### THE ORGANIZATION

- Are you treated with respect and dignity by your immediate supervisor?
- Are you generally treated like an adult in the organization.
- Do superiors recognize it when you do a good job?
- Are coworkers helpful in getting the job done?
- Do you have friends at work whom you can confide in?
- Are the people you work with friendly?

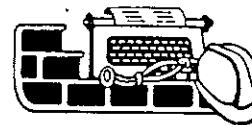
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# WOHRC FACT SHEET

WOMEN'S OCCUPATIONAL HEALTH RESOURCE CENTER



## The Stress of "Women's Work"

Some very interesting news has emerged from recent research on occupational stress. Contrary to popular conception, it is not top-level executives who suffer most from the high demands of their jobs, but low-level, low-status workers who have demanding jobs but little or no control

over them. The fact that most women are still segregated in these kinds of jobs makes them prime targets for stress. The added fact that most women with paid jobs also do a considerable amount of unpaid work at home only tends to increase their stress load.

Women's jobs with the most stress, according to Dr. Robert Karasek of Columbia University, are assembly line worker, waitress, sewing machine operator, nursing aide and office worker — including telephone operator, file clerk, clerk-typist, keypunch operator and video display terminal operator.

Dr. Karasek, a leading researcher of occupational stress, arrived at these conclusions by studying both health statistics — mostly notably those on heart disease — and the characteristics of many occupations. He found the most heart disease in both men and women on assembly lines.

### Low control is decisive

"High demands, low control and a low level of physical exertion are the three major job factors leading to stress-related disease," says Karasek. "But low control is the most decisive of the three."

Karasek's findings are buttressed by those of another internationally known stress researcher, Dr. Marianne Frankenhauser of the Karolinska Institute in Stockholm. By analyzing hormones in the blood and urine of workers under stress, Dr. Frankenhauser can actually tell us what happens in the body to cause disease. Her work concentrates on two types of stress hormones often connected with heart attack and stroke. One type is connected with adrenaline, the hormone that "charges up" the body for fight or flight; the other type is cortisol which is connected with feelings of anxiety.

Working under pressure, she finds, causes the body to produce more of both hormones. Although both may be necessary in emergency situations, their presence in the bloodstream over extended



Clerk-typists' jobs are those ranked among the highest in stress.

periods of time puts too great a strain on the heart and other organs.

### Control decreases cortisol

However, if a worker is given more control over her job, the cortisol level will go down. This is not only healthier, but the worker will actually feel better.

Dr. Frankenhauser induced these feelings in the laboratory by setting up experimental work situations in which one group of workers was forced to perform a job at a set rate of speed, while another group was allowed to adjust the speed to their individual liking. The latter group not only had lower levels of cortisol, but found the work "pleasant and stimulating."

### Boredom is stressful

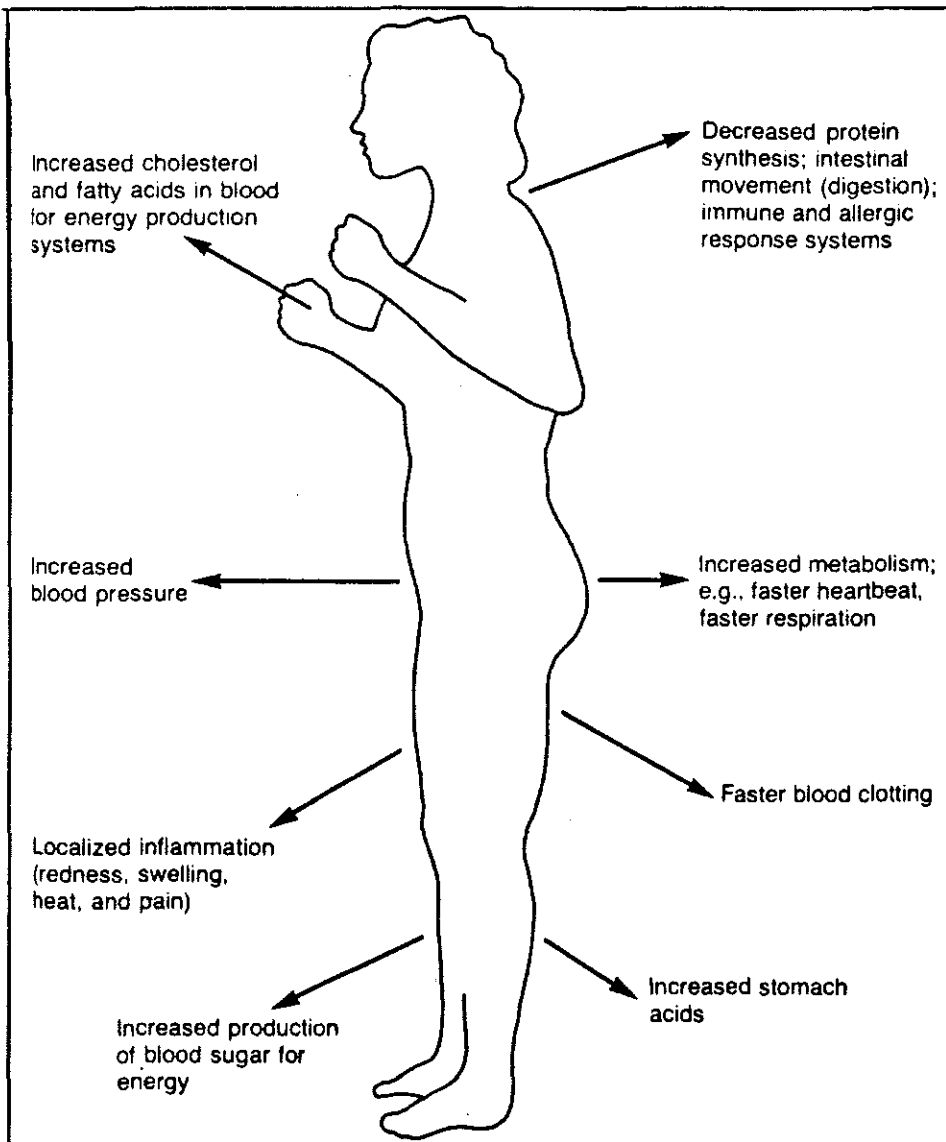
Boredom is another important factor leading to stress, say researchers. The work that many women do is repetitious and monotonous. Women workers are often considered frivolous or "gossipy" when they spice up such jobs by chatting while they work. This, however, is a normal and healthy human reaction to stressful boredom. The worker in a much worse situation is the one whose work pattern prevents her from any kind of socializing on the job. This is the case with many of the new automated office jobs which require high speed and concentration.

Dr. Frankenhauser finds that in extreme cases of boredom the brain processes will actually slow down. The worker will feel alienated, completely uninvolved, almost literally "bored to death."

Surveys done by 9 to 5, the National Association of Working Women, come up with similar findings. "The highest rates of total fatigue or exhaustion are associated with the highest reports of monotony on the job," says a 9 to 5 report on health hazards to office workers. "Performing the same set of routines without the chance to learn new skills can lead to boredom, frustration and decline in self-esteem."

### Individual differences

Some people seem to suffer more from stress than others. The fact is that they actually do, although why is not always clear. Researchers tend to say that it depends on the way the person *perceives* the stress: what may be very upsetting to one may not be to another. This may depend on a worker's physiology and personality, her personal and job history and even on the way her family taught her to



Jeanne Stellman, Women's Work, Women's Health

This diagram shows some of the physical and chemical stress responses of the body.

cope with stress.

### Dual role stress

Whatever the personal differences, however, most women suffer from the stress that comes with having two jobs at once — one inside and one outside their homes. Unwinding after stressful work, say the researchers, is essential for reducing excessive adrenaline levels and the strain they put on the body. A woman who comes home from a stressful job only to face more chores at home has no chance to unwind or relax.

In one study reported by Dr. Frankenhauser, women office workers who were forced by an emergency to work 73-hour weeks for four weeks in a row still showed remarkable amounts of adrenaline in their blood after the work was completed. There was a time lag between the height of

the work emergency and the greatest buildup of stress hormones in their bodies. Thus, the job stress followed them home, where they still reported feeling tired and irritable, while tests showed that their hearts were beating faster than normally.

Yet the average working woman is estimated to spend 30 to 40 hours a week on housework *in addition to* the 40 hours she spends on her paid job. It is easy to see why she is a natural victim of stress.

### Alleviating stress

Individuals and groups can work in a variety of ways to reduce job stress and its effects.

Individual exercise, like jogging and swimming after work, may help reduce the effects of stress, but it is not enough to undo all the harm a really stressful job may cause. In effect, since it doesn't

remove the causes of stress, exercise treats the symptoms, not the "disease."

"Letting off steam" or griping can be healthful. But before you do so, make sure that you do not vent your anger on family members and fellow workers. They probably have stresses of their own and do not need the additional amount your anger may cause them. What is more, they can be valuable allies in your resistance to stress.

Many employees in a single workplace can suffer from the same stressful situations. Instead of snapping at each other, it is far more useful to join forces and try to change the situation.

In some places workers have managed to eliminate loud and irritating noises. Others have worked for better designed workplaces, clearer job descriptions, adequate rest periods and even job rotation, so that monotonous jobs can be alternated with more interesting ones.

In other places, "stress groups" have been formed by workers to give each other support and to find ways of reducing stress. The Labor Institute for Mental Health in Oakland, California, has pioneered in developing these groups with union locals. For more information, call the Institute at (415) 653-6166.

Members of families, too, can work together to relieve stress. When chores are shared the burden on any one person is lightened. The employed mother is not only healthier, but happier, which cannot fail to have an effect on the entire family.

Many women still need to rid themselves of the old compulsion to "do it all by themselves." Husbands and children need to learn that they themselves have something to gain by sharing the housework — a healthier and happier family life.

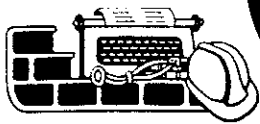
Occupational health specialists tell us that any kind of individual isolation tends to emphasize stress. People seem to suffer less from it who take part in groups — community, church, trade union, political or cultural. All of these can be valuable stress relievers. □

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**Women's Occupational Health  
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# WOHRC FACT SHEET

WOMEN'S OCCUPATIONAL HEALTH RESOURCE CENTER

## Job Burnout in the Helping Professions

Job burnout is a kind of exhaustion—both physical and emotional — that has become epidemic in the helping professions. Those who experience it describe it as a feeling of emptiness or depletion, a sense of being weighed down or trapped.

A large number of nurses, teachers, day care and social workers simply give up and leave their jobs. But many others cope by becoming more and more detached from their students or clients. They start to keep them at a distance, to shorten the time of their contacts. They begin to "go by the book," become petty bureaucrats. Others take the problems home, where they interfere with their family relations.

### Causes of burnout

The causes of burnout are many, but clearly in the helping professions much has to do with the work itself. Helping people with problems is emotionally draining. Surveys have established the not-surprising fact that emergency room nurses, for instance, suffer from more burnout than those in pediatrics or general service. Workers who have constant contact with clients or students get burned out faster than those whose work is more mixed. Day care workers, although they reported that their work with children was the most gratifying part of their job, were far more burned out when they were "on the floor" throughout the entire day.

Staffs that are reduced by cutbacks and budget crises, so frequent in these times, can intensify the problem. For example, the numbers of unemployment counselors are being cut at the very same time that the number of unemployed is rising.

"Burnout is inevitable when a professional must care for too many people," writes Dr. Christina Maslach, a well-known researcher at the University of California. "There's higher and higher emotional overload. Like a wire that has too much electricity, the worker emotionally disconnects."

People in the helping professions, it is often remarked, tend to see their work not simply as a job, but as a "calling." They feel impelled to help people, but often they cannot be successful through

The process of burnout, notes Dr. Herbert Freudenberger who is credited with inventing the term, is so gradual that the person experiencing it often does not realize it is happening. All that she knows is that she seems to be working harder and harder and accomplishing less and less. Stress symptoms such as insomnia, gastrointestinal disease and high blood pressure occur. Many such workers find themselves turning to cigarettes, alcohol and drugs to help them get through the work week. Frequently, the victims blame themselves rather than analyzing what about the job may be contributing to these problems.



Prime targets for burnout are teachers, like this one in a Brooklyn classroom.

no fault of their own. Besides, success is hard to measure in many of these professions. A patient may get well and some students may bloom before a teacher's eyes. But many clients provide little feedback. Some, in fact, may blame the worker when they make no progress. Colleagues and administrators rarely remark on how well one is doing. There is little to stoke the emotional reserves of the helper.

### Women taking care of others

Women's issues are intimately connected with burnout, note social work consultant Diane Ryerson and psychologist Dr. Nancy Marks who have conducted innumerable workshops and training sessions on the problem. Although male physicians, psychiatrists and legal aid lawyers also suffer from the syndrome, most line workers in schools and social agencies are women. Constant



NUHRC

**Nurses, with constant responsibility for others, are also prone to burnout.**

responsibility for others is a potent source of burnout. In addition to "giving of themselves" to students and clients, many have home and child care responsibilities as well. This gives them what Ryerson and Marks call "dual careers in giving."

Furthermore, they note, women unlike men have been socially conditioned to measure success not by productivity and financial reward but by the meeting of human needs. The administrators of schools and agencies are traditionally male and are seldom sensitized to the needs of their female employees. The latter, in turn, seldom have been trained to press their own needs.

The result, say Ryerson and Marks, is that many women professionals feel "powerless and helpless in systems dominated by a male hierarchy."

### **Public indifference contributes**

The public perception of the helping professions as not very important or worthy of much funding also contributes to burnout. "It's women's work and so nobody sees it as important," is the way one day care worker succinctly described her profession. Day care provides probably the most dramatic examples of socially and politically-caused burnout. According to a recent national day care study, workers in this field, despite considerable education and training, earn close to or under the minimum wage. The staff turnover at most child care centers is 15 to 30 percent a year which exceeds the national average of 10 percent for most human service fields, reports the Child Care Staff Education Project. Day care workers commonly buy supplies for their underfunded centers with money out of their own pockets. Yet federal funds for day care are continually cut.

In spite of all this, day care workers join with other helping professionals in calling for changes that can result in burnout prevention, even now under existing circumstances.

### **What can be done**

■ One widely recommended reform is **lessening the hours** that all helping professionals spend in direct contact with clients. This can be achieved not only by flexible hours and a shorter work day, but by allowing workers a greater variety of tasks within the day. Dr. Maslach calls for "time-outs," not merely rest periods or coffee breaks, but opportunities to voluntarily do other, less stressful work, such as paperwork or attending meetings. If these are built into the schedule, she suggests, other professionals can temporarily cover for the absent worker — a much better way of coping than allowing the burned out professional to limp along, failing to meet client needs.

■ Many researchers of burnout also stress the importance of **peer support** — the formation of support groups, special staff meetings and workshops in which workers can share burdens and help each other to solve problems. Particularly difficult patient or client problems might better be handled by a team focusing on the problem, some suggest.

At one social agency, for example, social workers meet for an hour each week to discuss their problems in dealing with certain clients. By sharing suggestions, helping each other, they form what is in fact a support group.

■ **Administrators, too, should give more support**, they say. Dr. Robert L. Kahn of the University of Michigan recommends the expression of "liking, respect, admiration" for colleagues and those one supervises. "It is supportive to confirm their own realistic impressions" that the job is difficult, he says, "rather than let them think their sense of strain implies a defect on their part." Dr. Maslach even suggests that in some situations, such as social work, clients be oriented to act as partners in solving problems rather than mere receptacles of help. Thus the worker is not always giving and never receiving, while the client is also strengthened. She also suggests that at the outset client and worker discuss their expectations of what can be accomplished. In this way, no one starts out with unrealistic goals which can only meet with frustration.

Experience with burnout workshops dramatically illustrates the benefits of sharing and support groups, say Ryerson and Marks. But the benefits will be short lived unless administrative reforms are also made.

### **Administrative reforms**

■ In addition to shortened hours — including a more flexible attitude by administrators toward part-time professional work — many writers on burnout call for a more democratic workplace. It is essential, they say, that **those who work directly with clients have some say in the making of the rules that govern their work**. It is also important to develop some kind of meaningful evaluation procedures so that workers have some realistic feedback about their performances.

■ Many helping professionals feel trapped in their careers because they have no place to advance, other experts point out. Many able line workers are never promoted because the next job requires a different kind of training or degree. **Administrations should create, and workers should press for, career ladders that allow for reward of skills**. Dr. Michael R. Daley of the University of Wisconsin suggests the creation of posts such as "advanced therapist" or "direct service consultant." Others call for lateral job transfers, inservice training, increased opportunities for managerial experience.

■ Ryerson and Marks recommend that in their very training **helping professionals be taught to recognize their own personality needs and coping styles**, how to spot symptoms of burnout and what to do about them. Learning to cope with stress, they suggest, may involve not only handling the symptoms but learning political skills which can be used to achieve administrative reforms.

Political skills may also be needed, some say, if helping professionals are to make the public more aware of the importance of their work, and to gain the funding and the salaries they deserve. □

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# Social Stress and Social Welfare Work NYC Improves Conditions; Union Study Helps

The City of New York and Local 1180 of the Communications Workers of America, CWA, have reached agreement on important changes in working conditions for Group Supervisors at the city's extensive Income Maintenance Centers. Agreement on reduced caseloads, training, and other conditions of work, was reached through the assistance of a mediator, after several years of effort.

A Group Supervisor is responsible for the distribution of approximately \$4-5 million in benefits each year to a caseload of 800 families on public assistance. The position is regarded as a para-professional one, and is a hybrid of administrative responsibilities, clerical tasks and direct service work with clients. Some of the public assistance programs include Aid to Dependent Children, Home Relief, Food Stamps and Medicaid.

## Stress Symptoms Alarming

Alarmed by the growing number of members who appeared to be suffering from stress symptoms such as chronic fatigue, stomach problems, excessive smoking, drinking and drug use, Local 1180 occupational health consultant Marsha Love assembled a team of researchers from the Montefiore Medical Center and the School of Health Sciences at Hunter College to carry out the first major study of stress among Group Supervisors.

The study documented extensive stress-related problems (see below). Subsequent to the publication of the study, hearings on the working conditions at the Income Maintenance Centers were held before a mediator. These hearings lead to negotiations between the City and the Union.

## Workload and Training Changes

The City has agreed in principle that each Group Supervisor will supervise 5 'eligibility specialists', the people who deal with clients to determine their program eligibility. A 6th worker can be added to a Group Supervisor's responsibilities, but when a Center needs a third 6-person group, it must create a new group with a new

Supervisor. In addition, since Supervisors are absent for reasons like vacations, illnesses, the City has agreed to try out a system whereby the employees supervised will be equally distributed amongst the other Supervisors at the Income Maintenance Center. The program will begin experimentally at 7 Centers and will be expanded to all 40 Centers if it is successful.

In addition, 5 'floating' substitutes will be hired for long-term substitution around New York City.

Another major problem associated with stress has been inadequate training. Poorly trained workers generally tend to make errors or to be inefficient, which increases the pressure

and workload on supervisors responsible for the work of these employees. A new improved training program is being formulated to meet this need.

## New Areas for Negotiation

The agreement reached between New York City and Local 1180 represents a new area of collective bargaining. Previous negotiations had generally considered that such areas were 'management prerogatives' and not subject to negotiation, a situation that is common in many collective agreements. According to local union president Arthur Cheliotis, "it is an historic step."

The Union is planning to carry out another expanded stress study in the future.

## Study on Welfare Supervisors' Stress

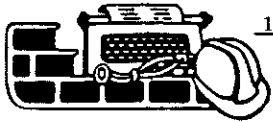
When Communications Workers of America Local 1180 became aware of what it believed to be severe stress problems among Group Supervisors at New York City Income Maintenance Centers, it set about trying to scientifically evaluate the situation. A sub-group of Supervisors was invited to participate in a survey about their work, their health and their personal feelings. Supervisors oversee the work of other employees who evaluate client eligibility for public assistance programs,

The study was designed and executed by a team led by Local 1180's occupational safety and health consultant Marsha Love. Team members included Ernest Drucker, PhD, David Michaels, PhD and Deborah Nagin, MPH of the Montefiore Medical Center, Bronx New York, and Jack Caravanos, DrPH and Stephen Zoloth of the School of Health Sciences of Hunter College in New York.

They designed a questionnaire based on established stress research, containing questions from sources such as the Maslach Burnout Index, to determine whether a person is suffering from 'burnout'. 'Burnout' is characterized by emotional exhaustion, alienation from one's work, and other feelings of depersonalization, as well as by feelings of personal inadequacy. 'Burnout' is a hazard for people in care-giving occupations.

Members of Local 1180 exhibited high levels of 'burnout'. At least once a week, 77% of the participants reported feeling "emotionally drained" by their work. Eighty-seven percent felt "used up" by their jobs and also expressed fears such as that their jobs were "hardening them" emotionally. Such fears were twice as prevalent among the Group Supervisors as among other groups that had participated in similar national surveys.

The physical health of the Supervisors also appeared to have been affected by their jobs. As many as 60% had trouble sleeping, with one out of four waking up in the middle of the night, thinking about work. Sixty percent also suffered from stomach problems and two out of three were smoking more when under job pressure within six months of the survey. These data are in need of further study and comparisons with other groups of working people.



# Update: VDTs and Health

## New Research Report Shows Visual and Musculo-Skeletal Effects

Clerical workers who spend all day working with VDTs exhibit significantly higher levels of adverse musculo-skeletal and visual effects than workers who use the machines for only part of the day, or typists or non-machine users, according to a newly published report by WOHRC Executive Director Jeanne Mager Stellman and Center associates Susan Klitzman, Gloria Gordon and Barry Snow.

The report, based on a questionnaire survey of more than one thousand female public service workers in Canada and the United States, also finds that all day VDT users in offices are significantly less satisfied with their jobs and with their office environments. One interesting finding is that they find the lighting less satisfactory than their co-workers, despite the fact that all the workers worked in similarly lit environments. The researchers hypothesize that this difference in perception may be due to the greater strain of VDT use on the eyes.

### Nature of Work Differs Widely

The women who worked on VDTs all day also found their work more repetitious and demanding than did women who typed all day. Interestingly, part-day VDT workers were not found to be different from typists and other clericals. The VDT workers also found that their work made "less sense" and they had less understanding of the work process.

### Supervisory Benefits Lessened

An interesting contrast was observed between those workers who supervised other workers and also used a VDT all day versus those supervisors without all day VDT usage. Most research has found that added supervisory responsibility enhances job satisfaction. However, when a supervisor uses a VDT all day, her levels of satisfaction drop below those of non-VDT using clerical workers. VDT's seem to have a powerful and negative levelling effect, according to the researchers.

One conclusion is that breaking

## AMA Reviews VDT Effects; Issues Recommendations

The American Medical Association's Council on Scientific Affairs has issued a report entitled *Health Effects of Video Display Terminals* in which various potential effects of VDTs are reviewed and evaluated. The Council concludes that "no association has been found between radiation emissions from VDTS" and effects such as birth defects, cataracts and spontaneous abortions.

The most substantial effects, characterized as either "perceived and real," according to the Council, tend to be associated with workplace design related stresses. The Council urges, however, that individual tasks be carefully evaluated when assessing hazards because the "nature of the task may be more responsible for workers' symptoms than the equipment."

The AMA recommends that further study be carried out on VDT worker complaints, particularly for ergonomic (design) effects and that stress reduction measures be taken. It urges that management be aware of the need to take human design needs into account and to develop more effective communication with workers. Finally, the AMA considers that continually monitoring of the field be undertaken so that responsible parties can be alerted if "adverse health effects appear to be suggested."

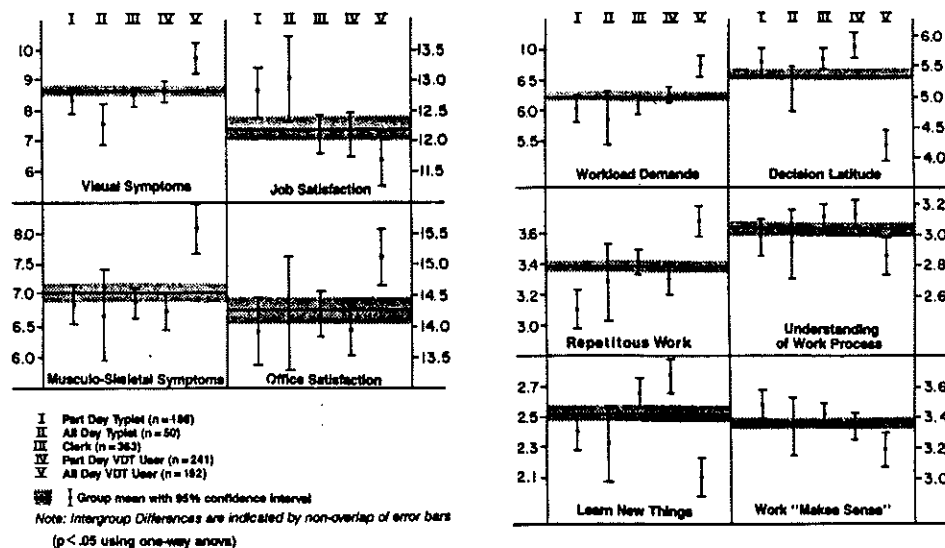
(Reference: Council on Scientific Affairs, "Health Effects of Video Display Terminals", *JAMA* Vol 257(11) 1508-1512, March 20, 1987.)

up VDT tasks with other kinds of office work may significantly decrease any eye and muscle strain effects of VDT work.

The study was carried out with cooperation of the Communications Workers of America, the Canadian Union of Public Employees and the British Columbia Government Em-

ployees Union, as well as the various managements involved. Confidentiality agreements preclude disclosure of individual participating sites. It was funded by the National Institute for Mental Health.

(Reference: Stellman, J., et al, "Work environment and the well-being of clerical and VDT workers," *J Occ Behaviour* (8), pp 95-114, 1987)



These figures illustrate the differences among groups of clerical workers with varying VDT usage, as identified above. All day VDT users (group V) have significantly different job characteristics, with less ability to exercise control over their jobs and more repetitious work. They also have significantly greater levels of visual and musculo-skeletal symptoms. Workers who use VDTs for only part of the day are not statistically distinguishable from other clerical workers.