

## SICK OF WORK

*Always on the job, employees pay with health.*

By JOHN SCHWARTZ

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American workers are stressed out, and in an unforgiving economy, they are becoming more so every day.

Sixty-two percent say their workload has increased over the last six months; 53 percent say work leaves them "overtired and overwhelmed."

Even at home, in the soccer bleachers or at the Labor Day picnic, workers are never really off the clock, bound to BlackBerries, cellphones and laptops. Add iffy job security, rising health care costs, ailing pension plans and the fear that a financial setback could put mortgage payments out of reach, and the office has become, for many, an echo chamber of angst.

It is enough to make workers sick - and it does.

Decades of research have linked stress to everything from heart attacks and stroke to diabetes and a weakened immune system. Now, however, researchers are connecting the dots, finding that the growing stress and uncertainty of the office have a measurable impact on workers' health and, by extension, on companies' bottom lines.

Workplace stress costs the nation more than \$300 billion each year in health care, missed work and the stress-reduction industry that has grown up to soothe workers and keep production high, according to estimates by the American Institute of Stress in New York. And workers who report that they are stressed, said Steven L. Sauter, chief of the Organizational Science and Human Factors Branch of the National Institute for Occupational Safety and Health, incur health care costs that are 46 percent higher, or an average of \$600 more per person, than other employees.

"The costs are significant," Dr. Sauter said, adding, "Those are just the costs to the organization, and not the burden to individuals and to society."

American workers are not the only ones grappling with escalating stress and ever greater job demands. European companies are changing once-generous vacation policies, and stress-related illnesses cost England 13 million working days each year, one British health official said.

"It's an issue everywhere you go in the world," said Dr. Guy Standing, the lead author of "Economic Security for a Better World," a new report from the International Labor Office, an agency of the United Nations.

White-collar workers are particularly at risk, Dr. Standing said, because "we tend to take our work home."

Most stress-related health problems are a far cry from the phenomenon known in Japan as *karoshi*, or "death from overwork." But downsizing, rapid business expansion, outsourcing - trends that some have credited with increasing the nation's economic health - translate into increases in sick days, hospitalization, the risk of heart attack and a host of other stress-related problems, researchers find.

The changing workplace, said Hugo Westerlund, a researcher at the National Institute for Psychosocial Medicine in Stockholm, "does pose a threat to people's health."

### **Growth of the Untraditional Job**

The days when an employer said "if you do your job, you'll have a job" are long gone.

The traditional career, progressing step by step through the corridors of one or two institutions, "is finished," said Dr. Richard Sennett, a sociologist at New York University. He has calculated that a young American today with at least two years of college can expect to change jobs at least 11 times before retirement.

Business has moved away from traditional employment, now an almost quaint concept described in a recent RAND Corporation study as "full-time jobs of indefinite duration at a facility owned or rented by the employer."

Instead, that study found, one in every four workers in the United States is "in some nontraditional employment relationship," including part-time work and self-employment. Four out of 10 Americans now work "mostly at nonstandard time," according to figures cited by Harriet Presser of the University of Maryland. The odd hours include evenings, nights, rotating shifts and weekends to meet the demands of global supply chains and customers in every time zone.

These jobs require an increasing amount of time as well. Workers in the United States already put in more than 1,800 hours on the job a year: 350 hours more than the Germans and slightly more than the Japanese, according to the International Labor Office.

Nonwork hours have also been increasingly invaded by technologies that act like a virtual leash.

"The distinction between work and nonwork time is getting fuzzier all the time," said Donald I. Tepas, professor emeritus of industrial psychology at the University of Connecticut, who has studied the health and safety effects of overwork and sleeplessness.

One result is an office culture where too much work is not enough.

And while some workers thrive in the changing workplace, others find their workplaces ruled by what one expert, Joanne B. Ciulla of the University of Richmond, calls "the work ethic of fear."

More than 30 percent of workers say they are "always" or "often" under stress at work, according to the National Opinion Research Center at the University of Chicago, and a quarter of those surveyed in 2002 said there often were not enough co-workers to get the job done.

Other surveys show no end in sight. In a new report, Kronos Inc., a human resources firm, found that 62 percent of American workers said that their job activities and responsibilities had increased over the past six months and that they had not used all of their allotted vacation time in the past year. And 60 percent of those surveyed said they did not expect any respite from increased working hours in the next six months.

Little wonder, then, that Dr. Richard A. Chaifetz, chief executive of ComPsych, the largest provider of employee assistance programs, said "the stress levels today are clearly higher than they were a few years ago."

The strain of working in an uncertain economic world weighed heavily on Sergey Shevchuk, a former programmer for financial services companies. He said he was caught in an emotional vise while the companies tried to weather the post-2000 stock slump by purging the ranks and looking toward cheaper labor through outsourcing.

"I was depressed and getting easily sick very often," he recalled. "I was coming home empty."

Mr. Shevchuk has since left the world of programming, where his work could bring \$135,000 a year, and started Distinct Construction Service, a home contracting business in Fairlawn, N.J.

Diane Knorr, a former dot-com executive, said she believed that the stress of her job contributed to persistent stomach pain and sleeplessness. At first, she said, the feeling of being on call at all hours was exciting.

"The first time I got a call way after hours from a senior manager, I remember being really flattered" and thinking, "Wow! I'm really getting up there now."

But gradually, her work and family life became a blur with hours that were hard to scale back.

"If I leave at 5 and everyone else leaves at 6:30, I might look like the one who is not pulling his weight," she said.

In college, Ms. Knorr set a goal of making a six-figure salary by the time she was 49. She reached it at 35, and "nothing happened; no balloons dropped,"

she said. "That's when I really became aware of that hollow feeling."

A doctor suggested that she begin taking an antidepressant for the stomach pain, "which struck me as bizarre," she said.

The doctor described it as a treatment to increase the amount of serotonin in the digestive tract, but Ms. Knorr said she now realized he might have been giving her a subtle message about her own level of anxiety and depression. She eventually quit her job, and used her savings to start a nonprofit group, Wonder Inc., which provides mentors and activities for foster children.

Work can be seductive, said Dr. Arlie Hochschild, a sociologist at the University of California, Berkeley. One in five of the people she interviewed in the course of research for her book "The Time Bind" said the rewards of work could actually become stronger than the comforts of home, so "home became work, and work became home."

Dr. Hochschild warns of "the splintered self," a state of constant distraction, doing one thing and expecting another.

"It's not just time" that is lost, she said, "it's basically attention: what we give to one another."

### **Stress Equals Illness**

Researchers are beginning to document the toll that the changing nature of work takes on health. The National Institute for Occupational Safety and Health, which has studied the links for decades, began a major initiative two years ago to study "the changing organization of work" and has worked with the American Psychological Association to build up the field of occupational health psychology at a dozen academic institutions nationwide.

Downsizing, studies find, is associated with poorer health, whether workers are fired or survive the downsizing and continue in their jobs.

Pioneering studies in Scandinavia, where centralized health care allows researchers access to vast databases of medical conditions and treatment, also have shown a strong link between downsizing and illness. A study by Finnish researchers published in February in the British Medical Journal, for example, found the risk of dying from a heart attack doubled among permanent employees after a major round of downsizing, with the risk growing to five times normal after four years.

Two other studies, led by Dr. Westerlund, the Swedish researcher, suggest that other forms of strain in the workplace can also affect health. An analysis of medical records for 24,036 Swedish workers from 1991 to 1996 found that in workplaces that underwent large-scale expansions, the workers were 7 percent more likely to take sick leave of 90

days or more and 9 percent more likely to enter a hospital for some reason.

Health risks rose if the expansion, defined in the study as more than 18 percent annual job growth, continued year after year, he said. Employees in companies experiencing moderate growth, on the other hand, were slightly less likely to take extended leave, perhaps because the growth rate was more manageable.

One explanation for why expansion might lead to poor health, Dr. Westerlund said, is that it often involves tumult: in some cases, offices expand when the parent company centralizes operations or merges offices through downsizing.

In another study, Dr. Westerlund and colleagues gave a series of medical tests to 3,904 white-collar employees working in stable businesses and workers in other companies in various states of stressful transition, including reorganization, downsizing and outsourcing, in some cases because the companies were threatened by the difficulties of competing in a global marketplace.

The workers in organizations that were in transition had higher-than-average levels of cholesterol, high blood pressure and other biochemical markers of heart disease risk, the researchers found.

"All forms of structural insecurity or instability may pose risks for the health of the employees," Dr. Westerlund and his colleagues wrote, "although the mechanisms may vary."

One result of this uncertainty, experts say, is that employees are increasingly turning to medication like antidepressants and anti-anxiety drugs to help them cope with the added pressures.

"Medication has, for some people, become a coping mechanism to help them feel better so they can perform better," Dr. Chaifetz of CompPsych said.

Some researchers are trying to tease out the types of stress that are most detrimental to workers. In a large study conducted in the 1990's, Dr. David M. Almeida, a developmental psychologist and associate professor of human development and family studies at Penn State, interviewed 1,500 people, asking about their "daily hassles" and "chronic stressors" at work and at home over a period of eight days.

Different types of stress produced different reactions, Dr. Almeida found. Tension with co-workers and overbearing bosses was more likely to lead to psychological and physical health symptoms, he said, while deadline pressure could actually "make you feel masterful."

Central to understanding how much stress the workers experienced, he said, was whether they felt in control. Citing research by Robert A. Karasek of the University of Massachusetts and colleagues, he said workers who felt that they had a measure of control over their environment were far less likely to

find work stressful than those who felt utterly at the mercy of a capricious boss, a child's illness or a lurching economy.

That combination effect is well known to psychiatrists like Jeffrey P. Kahn, president of WorkPsych Associates, a consulting firm in New York. "Stress at home plus stress at work doesn't equal two units" of stress, he said. "It equals five."

Dr. Almeida is now starting a second round of surveys, with an additional biological dimension: the interviews about daily stress levels will be augmented with a twice-a-day self-administered test for levels of a stress hormone, cortisol.

The physiological changes associated with stress are part of a complex system that once saved the lives of human ancestors, warning them of danger, said Dr. Bruce S. McEwen, director of the neuroendocrinology laboratory at Rockefeller University. The quick flood of hormones like adrenaline and cortisol pump up the body for fight or flight.

"We wouldn't do very well without our stress hormones," he said.

But human physiology, Dr. McEwen said, was not intended to handle the chronic stress that is an inescapable accompaniment of modern life. The wear and tear of long hours, ringing phones, uncertain working conditions and family demands lead to what he calls "allostatic load," a stress switch stuck in the half-on position. The result: fatigue, frustration, anger and burnout.

Dr. McEwen and other stress researchers have linked persistent stress to a variety of conditions, including obesity, impaired memory, suppressed immune function and hardening of the arteries.

What is more, chronic stress contributes to behavior that makes it harder to recover, he said. For example, sleep deprivation may increase hunger, causing a stressed-out worker to seek comfort in a midnight bowl of pasta or a nightcap, which can lead to further weight gain or cardiovascular troubles.

Researchers are also finding links between stress and disease at the molecular level. At Ohio State University, for example, Dr. Ronald Glaser, a viral immunologist, and his wife, Dr. Janice Kiecolt-Glaser, a psychologist, are reaching across disciplines to understand how stress causes illness.

Working with other researchers at Ohio State, they have studied the immune response of people who live with an enormous burden of stress: people who care for a spouse who is suffering from Alzheimer's disease, and who are, on average, 70 years old. The immune systems of the caregivers are clearly compromised, they found.

"What we know about stress is that it's probably even worse than we thought," Dr. Kiecolt-Glaser said.

Their most recent work focuses on cytokines, molecules produced by white blood cells, and in particular interleukin 6, which plays a beneficial role in cell communication. Like cortisol and adrenaline, interleukin 6 can damage the body in large and persistent doses, slowing the return to normal after stressful events. It has been linked to conditions that include arthritis, cardiovascular disease, delayed healing and cancer, Dr. Glaser said.

The immune systems of the highly stressed subjects, Dr. Glaser said, "had the levels of Il-6 that we saw in the controls that were 90 years old," which suggests that their experiences "seemed to be aging the immune system" drastically.

These results might be especially important for older workers.

"If you're 50 years old and you hate your job, you're going to be stressed; that probably translates into immune changes," he said.

Stressful working conditions can have more indirect effects, worsening illnesses that are already present.

Libbi Lepow, who lives in Kensington, Calif., worked at a dot-com that epitomized the 24/7 lifestyle. Her days, she said, were dominated by "action junkies," who she said lived on adrenaline.

"There has to be a crisis, or these folks feel that they aren't doing anything," she said.

Before long, Ms. Lepow said she was gaining weight and getting by on junk food and soda.

By March 2001, the combination of stress, lack of sleep and poor nutrition apparently contributed to a flare-up of multiple sclerosis, a condition that she had lived with at a low level for years.

The company, she said, was "very kind to me," and allowed her to continue working from home, but work continued to affect her.

"I never took a nap without the two phones in the room," she said, and people called constantly. "It was still exhausting," she said. She resigned in June 2002 and now lives on disability.

### **The Benefits of Slowing Down**

Recognizing workplace stress might be as simple as counting the broken pencils on a desk, but doing something about it is harder.

"We cannot stop change," Dr. Westerlund said, although it may be possible to "help the people cope with the environment."

The advice that most experts offer is deceptively simple: Dr. McEwen, for example, recommends getting enough sleep, avoiding cigarettes and alcohol, eating sensibly and exercising.

Emotional support can also make a difference, Dr. Kiecolt-Glaser said.

By "overworking, not spending time with family and friends, you're limiting the things that are most likely to do you good," she said.

Career consultants tell clients to examine the degree to which they themselves are the ones cracking the whip.

"Consider the possibility that you are colluding in your own demise," said Rayona Sharpnack, founder of the Institute for Women's Leadership in Redwood City, Calif. "Suffering," she said, "is optional."

Ms. Lepow, whose work stress contributed to her disability, calls her illness "a kind of gift," because without it, she said, "I could have lived my whole life without stopping."

She recalled striding across her deck to her home office without ever taking in the view.

"It took something like this disease to make me stop and slow down," she said.