

# Repetitive Motion, Cumulative Pain

by Barbara Goldoftas

Shortly after Maria finished college in Manila, she took a job helping catalogue the work of one of the Philippines' national artists. For two months she did nothing but type on a computer all day long, entering into a data base descriptions of thousands of drawings. At first it was interesting, she says, because she likes the artist's work. But after a while, she grew tired of reading about the countless, similar nudes.

Worse yet, after several months, she couldn't type as well or as fast or as long. "My hands would stiffen and my first finger and pinky wouldn't work right," says the 26-year-old officeworker. "I was slower and I'd make mistakes." She no longer could bend her wrist as easily, and one day she noticed a large, soft bump on the top of her left wrist. It grew bigger, like a huge boil, and sometimes it made her wrist hurt.

"I never told anyone," she said. Her boss was sympathetic about the tedium of her work. "She would tell me to get up and rest or stretch. I chose my working hours, made my own schedule. So I figured it was my fault really."

Today, Maria knows that it was the continuous typing that caused the bump and stiffness. Although she has never been diagnosed by a doctor, she suspects that these problems belong to a group of disorders that damage nerves and tendons in the hands, and she's trying to prevent them from developing again. She now works in a small

office where her work is more varied and, she adds, compared with reading about nudes, much more interesting.

"I never have to type that many hours in a row," she says. "And when I do type, I'm careful to take breaks." She can bend her wrists again and the bump is much smaller, but she remains careful of how much she uses her hands.

Maria doesn't know anyone else in Metro Manila who has had problems with their hands, but she is far from alone. In industrialized countries including Australia, parts of Europe, and the United States, these nerve and tendon conditions are widespread. Sometimes collectively called cumulative trauma disorders (CTDS), they are caused by fast, repetitive work that strains the hands and arms. Some of the disorders may just bring temporary pain, but others, such as carpal tunnel syndrome, can cause permanent damage.

In Australia in the mid-1980s, these ailments, known there as repetitive strain injury, or RSI, are said to have reached epidemic proportions in some white-collar industries. In the United States, CTDs now account for about half of all occupational illnesses reported to the Bureau of Labor Statistics. Rates of CTDs tripled in the 1980s, and surgery to relieve the pain of carpal tunnel syndrome is the second most common operation performed there.

In developing countries including the Philippines, where organized labor is weak and positive government intervention tends to be nonexistent,



CTDs remain virtually invisible. Dr. Maria Victoria Guevarra, services coordinator at the Institute for Occupational Health and Safety Development, says that while she suspects many people suffer from CTDs, legally they're not even considered occupational diseases.

Unemployment in the Philippines is high, so while working conditions in some industries are grueling, many workers will opt for an unsafe or unhealthy job over no job at all. This isn't likely to change in the near future. In the international division of labor, the country attracts employers precisely because it offers rock-bottom wages and few regulations that might raise production costs but that would keep workplaces safe and workers healthy.

## THE VITAL MACHINE

Bernardino Ramazzini, an Italian physician who founded occupational medicine, first described cumulative trauma disorders in 1717. In *The Diseases of Workers*, he wrote of the "harvest of diseases reaped by certain workers." Some people suffer from the "harmful character of the materials they handle." Others are injured by "certain violent and irregular motions and unnatural postures of the body...[that impair] the natural structure of the vital machine."

Historically, some CTDs cropped up so often that they took their

names from the jobs that caused them: "telegraphist's cramp," "bricklayer's shoulder," "stitcher's wrist," and "cotton-twister's hand." In the 1930s and early 1940s, Margaret Thompson Mettert of the U.S. Department of Labor's Women's Bureau reported that repetitive work--"packing, wrapping packages, folding, typing, and so forth"--accounted for one-tenth to one-third of all occupational diseases among women.

Today these disorders remain somewhat of a medical mystery. They still have no single name and are lumped together as "cumulative-trauma disorders," "repetitive-motion injuries," and "occupational-overuse syndrome." And because they include such a wide range of afflictions, there is no consistent diagnosis or treatment.

One thing is clear, though: They are consistently caused by work, work that might not seem harmful. Thomas Armstrong, Barbara Silverstein, and others at the University of Michigan's Center for Ergonomics say that small injuries or physical stresses can in fact bring lasting damage. In a landmark study of jobs performed by nearly 600 employees in six industries, this team concluded that tasks combining force and repetition create the highest risk of hand and wrist disorders. Temperature and vibration also play a role, and any one "risk factor" can magnify the effect of others. Continuously typing in an awkward position, cutting meat with a dull knife, and weaving or sewing at industrial machines can all eventually cause permanent disability.

The pace of work is also important. Epidemiologist and ergonomist Laura Punnett, of the University of Lowell in Massachusetts, has studied industries ranging from meatpacking to hospital and clerical work. "One reason these disorders tend to develop is that there's not adequate rest time," says Punnett. "I don't mean 15 minutes in the morning and 15 minutes in the afternoon. I mean little microperiods throughout the day when someone's tendons and nerves can relax."

### PAINFUL KEYSTROKES

In the United States, where unions, government, and health workers have been investigating CTDs for about a decade, studies are starting to shed some light on the disorders. Blue-collar workers, both male and female, have long suffered from CTDs, particularly in the meatpacking, poultry, and auto industries. Recent government research found that half the employees at a John Morrell meatpacking plant in South Dakota had symptoms of CTDs, as did 31% of the workers at a Cargill chicken slaughterhouse in Georgia, where some jobs require making the same forceful cuts tens of thousands of times a day.

CTDs now also afflict white-collar workers who use computers and other keyboard equipment. Rates have soared in postal work, data entry, and journalism, for example, where CTDs were uncommon before. In four offices of *Newsday*, a large New York paper, 40% of reporters and other employees surveyed had repetitive-motion injuries. When the major union in the telecommunications industry, the Communications Workers of America (CWA), polled its members, it found that some 63% of 2,000 telephone operators suffered pain in their hands or wrists, while 20% had been diagnosed with carpal tunnel syndrome or tendinitis. Says CWA health and safety officer Marcia Love, "They're our most widespread problem."



In part this is thought to be the case because new technologies and changes in the basic design of work have transformed these jobs. Industrialists have long chopped factory jobs into smaller and smaller tasks, but in both white- and blue-collar workplaces, automation has taken that even further, simplifying jobs and leaving people with work that often requires small motions and lots of repetition.

Computers in particular have spawned jobs that can overwork and damage workers' bodies, turning once-varied tasks into sustained, discrete keystrokes that can be counted and sped up. A clerical worker who once sat at an electric typewriter would stop every few minutes to change paper, shuffle stationery with carbon sets, dab on white-out, and wait for it to dry. Today's office workers may sit at computers and simply type. The rapid, continual motion of hitting keys tens of thousands of times an hour can overwork the arm's muscles and tendons.

In countries where CTDs are widespread and widely recognized, workers suffering from them may be able to gain a little relief. In the United States as elsewhere, physicians typically tend to be poorly trained in occupational medicine and unfamiliar with repetitive-motion injuries, while workers and managers may not link health problems to a job. But in automaking, textiles, meatpacking, and poultry, where rates have long been high, unions and worker advocacy groups are publicizing the risks with greater urgency. And with CTDs accounting for at least one-third of workers compensation payments--which can hike employers' insurance rates--the U.S. Occupational Safety and Health Administration (OSHA) has seen reason to target CTDs as the "occupational disease of the 1990s." The agency is even considering regulating the pace and design of work.

After its years of inactivity during the Reagan Administration, OSHA has fined a number of companies that

exposed their workers to the risk of CTDs. In 1986, for example, it fined Union Carbide \$1.3 million for covering up injuries--many of them caused by repetitive work--at a West Virginia plant. Since then, the agency has levied other major citations against large corporations, thereby encouraging workers to report such injuries.

Where CTDs are less visible, though, compensation for the work-related injuries may be hard to come by. It also may be difficult to even get information about them. Aida Santos, a 40-year-old writer and researcher in Metro Manila, has suffered what she believes to be some form of CTD for about six years. She initially developed the problems in 1985 when she was working in Australia. It was the first time she had used a computer for her work.

"I felt a heaviness and numbness in my arms," she says. "Then one day I couldn't open a jar of Nescafe. I couldn't lift a cup of coffee. It was terrible. I didn't know what it was."

Aida's symptoms have come and gone over the years. Sometimes only her knuckles hurt, but the numbness can reach as high as her shoulders. Although she learned about RSI in Australia, she has never seen a medical doctor about it, never been diagnosed. Because, like Maria, she doesn't know anyone else with a similar problem, she sometimes finds herself questioning her own symptoms. "People here don't talk about it as an occupational problem," she says. "When no one's talking about it, you start to feel like you're the only one."

IOHSAD's Guevarra believes that, although largely unrecognized,

CTDs are widespread in many industries in the Philippines, ranging from small-scale work in ceramics and sewing to textiles, hospital work, mining, and the assembly work that is so common here. "People complain about numbness in their arms and legs," says Guevarra, "but they're told that it's arthritis or rheumatism, that it's not work related." In fact, CTDs are not even included as an occupational disease in the Philippine safety and health code. "People just say that the pain is part of their life," says Guevarra.

In fact, in the Philippines these problems are generally said to just be "pasma"--a catch-all term describing arthritis, tendinitis, and similar ailments. Labeling the pain as "pasma" can be a way of dismissing it, but the effects of CTDs can be permanent--and disabling.

Aida finds that the pain and numbness she feels limit the amount of time she can work, or even use her hands. "I used to be able to write in my journals for five pages," she says. "I'd feel a little numbness in my hand and arm, but not much. Now, if I write for two pages, my hand gets numb and I can hardly open it."

"I worry that if I continue to have this problem I won't be able to work as long at the computer either," she says. "If I can't type, I won't be able to write as much. But I'm a writer, this is my livelihood. It's as simple as that."

### FIRST THINGS FIRST

Although on paper the Philippines regulates workplace health and safety, the rules are not widely en-

forced. The window dressing of the labor code offers an illusion of worker rights, but multinational corporations continue to locate factories here because, in addition to low wages, the country presents few labor regulations that corporations find constraining.

Nonetheless, the Employment Compensation Commission, which dispenses workers compensation, recently took its first action on a case involving CTDs. It approved compensation for a 38-year-old man who developed carpal tunnel syndrome in his right arm after about nine years of working as a welder. Although the pain was originally diagnosed as arthritis, a doctor later determined that it was work related: The welder improved when he was given easier tasks to do, but when he started his usual job, the symptoms quickly returned. He was awarded temporary, total disability, which translates to several months off work to rest, and retraining when he returns.

While Guevarra applauds this action, she cautions that, although unions and labor groups may be targeting CTDs in parts of the industrialized world, CTDs shouldn't necessarily become a high priority elsewhere. "Other countries may be focusing on RSI," she says, "but they already have research and regulatory institutions in place looking at hazards and exposures that workers face."

"In the Philippines, we need to organize labor first, need to recognize occupational health as a basic right. Once we have groups that can fight for labor's rights, then we can deal with RSI as well as other, more life-threatening problems."

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