



Fact Sheet

As the only federal agency mandated to conduct research to prevent injuries and illnesses in the workplace, the National Institute for Occupational Safety and Health (NIOSH) has an expanding research program to address the occupational safety and health needs of working women. This fact sheet contains information on working women, the hazards they may face, and NIOSH research in areas of particular concern to women.

QUICK FACTS ABOUT WOMEN IN THE WORKFORCE

- ♀ Women currently comprise 46% of the 137 million workers in the United States, with their share of the labor force projected to reach 48% by 2008.
- ♀ In 1999, 75% (46 million) of employed women worked full-time, while 25% (16 million) worked part-time.
- ♀ In 1999, 3.7 million women held multiple jobs.
- ♀ Sixty percent of women age 16 and over were either employed or looking for work in 1999.
- ♀ Of employed women, 40% held technical, sales, and administrative support positions; 32% worked in managerial and professional specialties; and 17% worked in service occupations in 1999.

MUSCULOSKELETAL DISORDERS

Sprains and strains, carpal tunnel syndrome, tendonitis, and other musculoskeletal disorders account for more than half (52%) of the injuries and illnesses suffered by female workers, as compared to 45% for male workers.

Further research is needed to determine the factors that place women at greater risk for musculoskeletal disorders. Research will examine if physical differences between men and women, or differences in the jobs they hold, contribute to this increased risk for women.

NIOSH is conducting research on musculoskeletal disorders among women in the telecommunication, health care, service, and data entry industries.

In a study relating to musculoskeletal disorders, NIOSH worked with the Internal Revenue Service (IRS) to examine interventions for reducing discomfort among IRS data transcribers—an occupation comprised primarily of female workers. They found that periodic rest breaks throughout the work shift reduced musculoskeletal discomfort, while allowing workers to maintain job performance.

JOB STRESS

Stress at work is a growing problem for all workers, including women. In one survey 60% of employed women cited stress as their number one problem at work. Furthermore, levels of stress-related illness are nearly twice as high for women as for men.

Many job conditions contribute to stress among women. Such job conditions include heavy workload demands; little control over work; role ambiguity and conflict; job insecurity; poor relationships with coworkers and supervisors; and work that is narrow, repetitive, and monotonous. Other factors, such as sexual harassment and work and family balance issues, may also be stressors for women in the workplace.

Job stress has been linked with cardiovascular disease, musculoskeletal disorders, depression, and burnout. NIOSH is conducting studies to identify workplace factors that are particularly stressful to women, and potential prevention measures.

REPRODUCTIVE HAZARDS

Three-quarters of women of reproductive age are in the workforce. Over half of the children born in the United States are born to working mothers. NIOSH conducts both basic research and population-based studies to learn whether women may be at risk for reproductive health hazards related to their work environment.

The following are examples of NIOSH research on reproductive hazards:

- ♀ NIOSH found no association between *video display terminals (VDTs)* and miscarriages, low birth-weights in newborns, or pre-term deliveries.
- ♀ NIOSH is working with the Federal Aviation Administration (FAA) to determine if exposure to *cosmic ionizing radiation* or circadian rhythm disruption increases the risk for adverse reproductive outcomes among female flight attendants.
- ♀ NIOSH and the University of Cincinnati are assessing the effects of *jet fuel exposure* on the reproductive health of female Air Force personnel.

VIOLENCE IN THE WORKPLACE

Homicide

Homicide is the leading cause of injury death for women in the workplace. Homicide accounts for 40% of all workplace death among female workers. Workplace homicides are primarily robbery-related, and often occur in grocery/convenience stores, eating and drinking establishments, and gasoline service stations.

Over 25% of female victims of workplace homicide are assaulted by people they know (coworkers, customers, spouses, or friends). Domestic violence incidents that spill into the workplace account for 16% of female victims of job-related homicides.

Nonfatal Assault

Female workers are also at risk for nonfatal violence. Women were the victims in nearly two-thirds of the injuries resulting from workplace assaults. Most of these assaults (70%) were directed at women employed in service occupations, such as health care, while an additional 20% of these incidents occurred in retail locations, such as restaurants and grocery stores.

WOMEN IN NON-TRADITIONAL EMPLOYMENT

Women in non-traditional employment may face health and safety risks due to the equipment and clothing provided to them at their workplace. Personal protective equipment (PPE) and clothing (PPC) are often designed for average-sized men. The protective function of PPE/PPC (such as respirators, work gloves, and work boots) may be reduced when they do not fit female workers properly.

Women who work in nontraditional employment settings may also face specific types of stressors. For instance, they may be exposed to sexual harassment and gender-based discrimination.

CANCER

An estimated 180,000 new cases of breast cancer and 12,000 new cases of cervical cancer will be diagnosed in 2000. Workplace exposures to hazardous substances may play a role in the development of these types of cancer. NIOSH is studying several hazardous substances to determine whether there is a link to cancers that affect women, such as cervical and breast cancer.

NIOSH is conducting studies of women exposed to the following hazardous substances:

- ♀ **Ethylene oxide:** Ethylene oxide (ETO) is used to sterilize medical supplies. More than 100,000 women are exposed to ETO in the workplace. Hospital workers and workers involved in sterilization of medical supplies may be at risk of exposure to ETO.

- ♀ **PCBs:** Polychlorinated biphenyl compounds (PCBs) were produced commercially for use in the electrical industry until 1977. Banned in 1977, products made with PCBs remain in the workplace and the environment. NIOSH is investigating a potential link between PCB exposure and breast cancer.

- ♀ **Perchloroethylene:** Studies of working women exposed to perchloroethylene (PERC), the main solvent used in the drycleaning industry, will help evaluate its connection with cervical cancer. An estimated half of drycleaning workers in the United States are women.

HEALTH CARE WORKERS

Ninety-two percent of the 4.3 million nurses and nursing aides in the U.S. are female. In addition to being at risk for incidents of musculoskeletal disorders, workplace violence, and exposure to hazardous substances, health care workers face other hazards including latex allergy and needlestick injuries. NIOSH has established a new initiative to study the health and safety of health care workers.

Needlestick Injuries:

Between 600,000-800,000 needlestick injuries occur annually in health care settings, mostly involving nurses. These injuries pose both physical and emotional threats to health care workers, as serious infections from bloodborne pathogens (such as hepatitis B virus, hepatitis C virus, and human immunodeficiency virus [HIV]) may result.

Latex Allergy:

Health care workers may have an increased risk for developing latex allergy due to their use of latex gloves. Among health care workers who experience frequent latex exposure, 8-12% develop sensitivity to latex. Latex sensitivity may lead to symptoms of latex allergy, such as skin rashes; hives; nasal, eye, or sinus symptoms;

asthma; and (rarely) shock.

PUBLICATIONS

NIOSH has published numerous documents that are relevant to the health and safety of women in the workplace. To request any of these publications, call NIOSH at [1-800-356-4674](tel:1-800-356-4674), or send your request via e-mail to pubstaft@cdc.gov or via fax to (513) 533-8573.

NIOSH Alert: Preventing Needlestick Injuries in Health Care Settings (Pub. No. 2000-108)

What Every Worker Should Know—How to Protect Yourself From Needlestick Injuries (Pub. No. 2000-135)

Providing Safety and Health Protection for a Diverse Construction Workforce: Issues and Ideas (Pub. No. 99-140)

The Effects of Workplace Hazards on Female Reproductive Health (Pub. No. 99-104)

Stress at Work (Pub. No. 99-101)

Latex Allergy: A Prevention Guide (Pub. No. 98-113)

Control of Exposure to Perchloroethylene in Commercial Drycleaning (Pub. No. 97-154)

Alternative Keyboards (Pub. No. 97-148)

Plain Language about Shiftwork (Pub. No. 97-145)

Musculoskeletal Disorders and Workplace Factors (Pub. No. 97-141)

NIOSH Alert: Preventing Allergic Reactions to Natural Rubber Latex in the Workplace (Pub. No. 97-135)

Elements of Ergonomics Programs: A Primer Based On Workplace Evaluations of Musculoskeletal Disorders (Pub. No. 97-117)

Violence in the Workplace: Risk Factors and Prevention Strategies [Current Intelligence Bulletin #57] (Pub. No. 96-100)

NIOSH Alert: Preventing Homicide in the Workplace (Pub. No. 93-109)

Guidelines for Protecting the Safety and Health of Health Care Workers (Pub. No. 88-119)

For information about occupational safety and health topics contact NIOSH at:

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DHHS (NIOSH) Publication Number 2001-123

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