



The National Institute for Occupational Safety and Health (NIOSH)

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Providing Safety and Health Protection for a Diverse Construction Workforce: Issues and Ideas

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Health & Safety Issues

Construction work appeals to many people. It offers varied assignments, a chance to work outdoors, good pay and a sense of accomplishment. Over the next 10-15 years, the 'face' of the construction industry will change. Its workforce will become more diverse. It will include more women workers and workers with different backgrounds and experiences. Read on to learn about health and safety issues found in such a diverse workforce.*

* Most of these data were collected from interviews and surveys with 475 tradeswomen across the United States.

Health & Safety Training

Availability of Training

- Many women think that their male co-worker are more adept due to the benefits they receive from mentoring, coaching, and general acceptance by their male colleagues. "[The men] had a lot of little tricks that made the job easier. But no one ever showed me those tricks." "I'm almost a third year apprentice, and I should be more advanced."
- Lack of Support for workplace training
- In many instances productivity comes before safety. "Many [workers] don't want to go to safety meetings . . . there's always the contractor or boss breathing down your neck, saying, 'how come this [work] wasn't done?' The boss doesn't say, 'You'd better go to that safety meeting because I don't want my Workers' Comp. bill going up this year.'"

Personal Protective Equipment & Clothing (PPE/PPC)

- PPE/PPC (respirators, gloves, work boots) are mostly designed to fit average sized men.
- When PPE/PPC don't fit, the protection offered is reduced. "They gave me gloves so humongous, I couldn't even pick anything up." "You can be hurt . . . that glove could get wrapped up in a fan belt."

Sanitary Facilities

- Most construction workers have encountered worksites with dirty toilets or no toilets.
- Holding urine in the bladder for long periods of time leads to a higher incidence of urinary tract infections.
- The lack of water for washing up is also a problem. "Today I used a portable toilet without a hood. They can see your head. I felt like the whole world was watching." "I think the guys have problems also, but they take it for granted. They

accept the conditions as part of this rough world that they function in.”

Workplace Culture

Hostile Workplace

- Working in a hostile workplace can cause a worker to become distracted. Distractions while working can lead to overlooking proper safety precautions, resulting in on-the-job injuries. “Sometimes they drop things on you, hammers and wrenches—dangerous things like that, supposedly by accident. . . .” . . . every morning [they] came in, punched the time clock and then spat on the floor in front of me.”

Sexual Harassment

- A majority of the respondents reported sexual harassment.
- Many had experienced uninvited sexually suggestive looks, comments, joking, or gestures from their supervisors.
- Many reported being touched or being asked for sex. “The sexual harassment was low level, but it was constant. They were always eyeballing me. . . . The problem is that you can’t really put a finger on the low-level stuff. And, if it had gotten to a higher level, if you reported it, there would have been problems with even the more normal guys.”

Impact of Isolation on Safety and Health

- Isolation can add to fear of harassment and assault. “When you have more than one woman working with you, you have a better chance. You don’t want to be alone. The stress is incredible.”

Hazard Reporting and the Link to Job Security

- A majority of women interviewed felt insecure about getting and keeping their jobs. “We just have to bite our lip and deal with it if we want to keep our job and if we want to get along with fellow workers.” “When I complained that there was no toilet they transferred me to another job site. They took me away from a really good partner and good overtime.”

Ergonomics

- Tools and equipment, like clothing, are often designed (although maybe not ergonomically) to be used by average-sized men. Not all construction workers are of average size.
- For workers with less upper body strength the workload should be transferred downward, to rely less on the strength of hands and arms. “They do not make hand tools for women, and women come in all sizes, just like men.” “[Some workers] will . . . grunt and groan and struggle . . . and I’ll sit down, put my feet on one side [of the wrench], and pull on the other.”

Injury and Illness Data and Research

- In 1994, there were 4,400 non-fatal occupational injuries and illnesses to women in the construction industry involving days away from work.
- While gender-based safety and health data are collected by the Bureau of Labor Statistics, they are typically not analyzed or reported.

Reproductive Hazards

- There are many more work site exposures known to affect male sperm development than known to produce birth defects. Both men and women need accurate information on the hazards posed by toxic chemicals.
- During the later stages of pregnancy, medical advice may restrict some women in the more strenuous construction activities such as climbing and lifting.

- Some employers deny job opportunities to women without determining if a hazard exists or if exposure poses risk. "When I asked for a job in the fabrication shop . . . the safety director told me he had a problem with me working at all since I was pregnant."

Health & Safety Ideas

As the workforce becomes more diverse, construction industry employers, labor unions, training programs, manufacturers and employees may need to revise traditional practices in order to provide safe, healthy and fair conditions for all. Here are some ideas for meeting this new challenge.

Health & Safety Training

- Employers and unions should make skills training courses available and encourage all workers to take advantage of them.
- Journeymen should establish mentoring relationships with new workers to provide informal skills and safety training.
- Supervisors need to emphasize safety as well as productivity on the job site.
- Employers should emphasize that safety training is as important as skills training.

Personal Protective Equipment & Clothing(PPE/PPC)

- The design of PPE and PPC for women should be based on female measurements.
- Manufacturers of PPE and PPC should be encouraged by the construction industry to collect information on all sizes and use it to expand the range of sizes offered in both clothing and equipment.
- Union apprenticeship programs should provide tradeswomen with resources on where to find equipment and clothing that fits.
- Employers should make sure that all workers, of all sizes have well-fitting PPE and PPC for safe and efficient performance.

Sanitary Facilities

- Gender-separate sanitary facilities should be provided on worksites. They should have inside and outside locking mechanisms.
- Where change rooms are provided on construction sites, they should also be gender separated and provided with inside and outside locking mechanisms.
- Employees should be allowed to use sanitary or hand washing facilities as needed.
- Toilet facilities should be kept clean and in good repair with clean toilet paper within reach.
- Hand washing facilities should exist within close proximity to toilet facilities.

Workplace Culture

- Employers, apprenticeship programs, and unions (where responsible) should review all communication materials to ensure that they are gender neutral, and include positive images of the different 'faces' or workers in all visual materials (videos, posters, pictures, etc.).
- Employers, apprenticeship programs, and unions (where responsible) should when possible and when the situation calls for it, assign female workers in pairs (at least). This is especially important for those new to the trades.
- Employers, unions, and apprenticeship programs should provide training and guidelines on the safety, health and equal treatment of all workers, members, or trainees to their supervisory personnel, teachers and representatives.

Ergonomics

- It should be accepted that some workers need to use different lifting and material handling techniques.
- Employers, unions, apprenticeship programs, and other training entities should review skills training programs to see whether alternative methods are included for getting work accomplished by workers of different sizes or strengths. All programs should emphasize the importance of safe lifting.
- Workers need to hear from employers and unions, that it's acceptable to ask for help and to explore alternative ways to lift and carry.
- All workers should be trained in the proper ways to lift and bend.
- Manufacturers should design tools and equipment with ergonomic considerations in mind.

Injury and Illness Data and Research

- Collecting accurate data to measure safety and health concerns is the only way to keep track of problems and progress.
- Employers should try to collect data by gender and pay attention to differences in reporting by men and women.
- Unions should try to keep track of complaints by men and women with respect to health and safety concerns.

Reproductive Hazards

- Employers should post Material Safety Data Sheets for each chemical present on the work site.
- Workers should read all Material Safety Data Sheets and share the information with their physicians, if they are pregnant or planning to start a family.
- All workers should educate themselves about the potential reproductive risks from exposure to certain chemicals.
- Employers should make reasonable accommodations for workers in later stages of pregnancy, rather than forcing them out of the workplace.
- During the later stages of pregnancy women should consult with their physician about strenuous physical activities on the job.