

Standard PPE May Leave Women Workers at Risk of Injury



As an OHS coordinator, you no doubt feel a responsibility to look after each and every one of your workers. Unfortunately, the safety equipment and PPE that you select may be furnishing ample protection to only some of those workers. Stated baldly, most PPE used in the workplace today is engineered for men. That's why a new [CSA study](#) finds that only 6% of Canadian women feel as if the PPE they use at work is designed for them. And when PPE doesn't fit right or feels uncomfortable, workers may seek to alter it with scissors, duct tape, safety pins, rubber bands, string and other makeshift 'solutions.' They may also use it in ways that go against their training and instructions. And in some cases, they may not use their PPE at all.

End result: Too many female workers aren't getting adequate protection against the hazards their PPE is supposed to shield them from. Worse, because it's unsuitable, their PPE may actually become a **danger** to them. Thus, 40% of the women cited in the CSA study reported that something about their PPE caused them to experience an injury or incident at work.

A 2006 [IAPA study](#) cites examples of how women workers can get hurt as a result of having unsuitable PPE:

- A woman with a small face wears goggles that leave gaps at her temples, allowing flying debris from her machine to enter her eyes;
- A female worker in a sawmill can only get small men's gloves. Because the fingers are too long and too wide, she risks getting her glove caught in machinery; and
- A woman who wears men's-sized work boots complains of tripping while walking and climbing stairs or ladders. She suffers from blisters and burning on the soles of her feet. Also, because her boots are too large, her toes aren't protected by the steel cap.

The Disconnect between PPE & Women

The best way to control a workplace hazard is at the source such as by eliminating it via the use of safer alternatives or use of engineering controls. The next level of preference is to leave the hazard in place but impose barriers so that it never reaches the worker. With PPE, the hazard is actually allowed to reach the worker's space. That's why it's generally considered the protection of last resort. Workers who wear PPE to guard against hazards are essentially in the same position as 12th century knights who donned armor to ward off swords, arrows, spears and other projectiles hurled by their enemies.

As with armor, PPE must be fitted to and designed around the proportions, measurements and contours of the human body. Of course, human bodies come in two models: male and female. The problem is that most PPE is designed for males. While there's also plenty of female PPE on the market, most of these products are just items designed for men that are shrunk down to women's sizes.

But women aren't just smaller versions of men. As the CSA

study notes, men and women have completely different anthropometry, a term that refers to a branch of ergonomics that studies the measurement of variability in the human body to design equipment that's suitable for workers of different ages, sexes, occupations and geographic locations. Examples of anthropometry metrics best capturing the differences between men and women include:

- Weight;
- Waist back length;
- Bust point breadth;
- Hip breadth;
- Ankle circumference;
- Chest circumference;
- Chest girth;
- Neck base circumference;
- Shoulder breadth;
- Waist circumference;
- Knee height; and
- Sitting height.

Design of PPE based on male anthropometry data for these factors won't be suitable for men and vice-versa. **Example:** Despite being generally smaller than men, women are proportionally larger in the hips. Thus, coveralls and lower-body garments designed for male weight, shoulder and hip breadth, chest circumference and girth and waist circumference not only won't work for women but can't be made to fit women simply by scaling down proportions in a linear manner. To work for women, the coveralls must be designed for female anthropometry.

What the OHS Laws Say

OHS laws require employers to ensure workers use PPE that's appropriate to protect them from hazards. However, none of

these laws say anything about the differences between male and female PPE. Some jurisdictions arguably address this crucial indirectly. Thus, as the CSA study notes:

- Seven jurisdictions (AB, MB, NL, NS, NT, NU, SK) require employers to ensure that PPE is suitable and a proper fit for the worker required to use it;
- One province (Manitoba) says employers must ensure that PPE fits the worker correctly and can be used without adverse impact on the worker's health and safety;
- Four jurisdictions (SK, MB, NT, NU) require employers to make alternate arrangements if PPE doesn't effectively protect the worker and/or exposes the worker to hazard or discomfort; and
- Six jurisdictions (FED, MB, NT, NU, SK, YK) require employers to immediately repair or replace PPE that's returned due to defects or failure to provide the intended protection.

Compliance Strategy: Don't Treat PPE as One-Size-Fits-All

The starting point for [OHS coordinators seeking to protect their women workers](#) is to recognize that PPE designed for men doesn't work for women and that shrinking equipment down to smaller sizes won't solve the problem. **Strategies:**

- Assess the PPE you supply and/or require your workers to use and determine whether it's suitable for both women and men;
- If you determine that men and women need different kinds of PPE, provide the same range of sizes for both;
- Ensure that women try on several sizes or types of PPE before using it to verify that it's the best fit;
- Seek out PPE suppliers that provide a range of sizes for both men and women;
- Ensure that PPE suppliers have properly assessed the

appropriateness of their equipment for both men and women;

- If you can't get hardhats that are small enough for female workers, consider adding a chin strap to provide a better fit;
- Look for safety goggles with an adjustable strap to ensure a snug fit and eliminate potentially dangerous gaps;
- Keep in mind that women generally have smaller ear canals than men and that disposable, foam ear plugs may fit them better and more comfortably than pre-moulded types;
- Make sure women workers wear safety footwear designed for the anatomy of the female foot;
- Provide platforms or stools so smaller female workers can easily reach equipment controls without having to strain or stretch and run the risk of musculoskeletal injuries;
- Provide women workers smaller hand tools;
- Establish mechanisms that workers can use to provide feedback on the suitability of their PPE either directly to you or the workplace JHSC.