COMPLIANCE BRIEF

PPE IN WOMEN'S SIZES - Creating a viable solution for increased safety, efficiency, comfort, and affordability

PERSONAL PROTECTIVE EQUIPMENT (PPE) IS WORN TO MINIMIZE WORKERS' EXPOSURE TO WORKPLACE HAZARDS THAT CAN CAUSE SERIOUS INJURIES AND ILLNESSES.

These injuries and illnesses may result from contact with chemical, physical, radiological, electrical, mechanical, or other workplace hazards. PPE includes items such as hard hats, safety glasses, gloves, protective footwear, ear protection, respirators, or high-visibility or protective clothing.

When engineering, work practice and administrative controls are not feasible or do not provide sufficient protection, employers must provide PPE to their employees and ensure its proper use. It is important to note that the payment provisions in OSHA's general rule on PPE require that employers pay for the PPE that is used by employees to comply with OSHA standards.

WHO SHOULD CONSIDER PROPER PPE IN WOMEN'S SIZES?

PPE is an essential requirement for employees across a wide range of industries, including transportation, manufacturing, and construction.

In 2021 the Bureau of Labor Statistics reported women comprised nearly half of the U.S. workforce overall.

Providing PPE in sizes designed for women ensures appropriate fit as the number of women in these industries continues to increase, and as they encounter the workplace hazards present in these environments.

WOMEN COMPRISE

7.9% of truck drivers,

10.9% of construction industry workers, and

29% of manufacturing industry workers

(2021 BLS)

OSHA'S PROPER FIT REQUIREMENTS

Prior to 1994, PPE standards did not specify proper fit. However, in response to increasing numbers of female workers and receiving comments about the importance of well-fitting PPE for all employees, OSHA updated the general industry standard 1910.132(d) to include fit as a selection criterion. In the final rule OSHA stated, *"Since females constitute a larger percentage of the workforce than ever before, it is imperative that they (as well as male employees) be provided with PPE that fits properly."*

However, it took until 2025 for OSHA to revise the construction standard 1926.95 to require properly fitted PPE for each worker, aligning it with the general industry standard.

The good news is this most recent update has reignited the drive to ensure proper fit for all workers, whether male or female, large or small, short or tall. In other words, no matter the size or shape, PPE must properly fit to ensure the integrity of its protection for the worker.

1971

The general industry PPE standard, 29 CFR 1910.132, was established to provide protective equipment whenever the hazards of processes or the environment required it. At the time, OSHA did not address proper fit.

1994

A general industry update was proposed that suggested OSHA require PPE to fit properly, stating that employers must "select PPE that properly fits each affected employee."

Present day

Effective January 13, 2025, OSHA revised the construction industry standard 1926.95 to require that PPE be properly fitted to each worker. This change also brought the construction PPE requirements for fit in line with those already in place for general industry.

PHYSICAL DIFFERENCES AND PROPER FIT

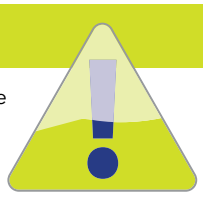
PPE is the last line of defense between workers and the hazards they face on the job, and of the many considerations surrounding the selection of PPE, proper fit is one of the most important. While the DNA of men and women is generally said to be about 98.5% similar, comparing the average male and female physique will show a variety of physical differences.

- Women are **typically shorter** than men by about 10% [1]
- Women **tend to have a smaller waist to hip ratio** than men [2]
- Women **commonly weigh less** than men [3]
- Women **generally have a smaller face** than men [4]

When you limit employees' ability to select well-fitting PPE, you pass the burden and the risk on to the employee.

HAZARDS OF IMPROPER FIT

Ill-fitting PPE will result in either the employee not wearing the PPE when necessary, or the employee attempting to wear the poorly fitting PPE, which potentially introduces new hazards.



HEAD AND FACE

(e.g., hard hats, face shields, safety glasses/goggles):

Ill-fitting PPE can cause pinch points, headaches, and neck and shoulder strain. It can create gaps in coverage which can allow dust and debris to enter the eyes. It also allows safety glasses to fog more easily.

TORSO

(e.g., full body harness, FR shirt and pants, coveralls):

Oversized PPE introduces excess material, which can get caught in machinery. Excess material can also cause the employee to overheat in warmer conditions.

HANDS

(e.g., gloves):

Oversized gloves can cause loss of dexterity. If too small, there is risk of undue pressure being placed on the hands along with increased perspiration, which can lead to fatigue and injury.

FEET

(e.g., shoes and boots):

Poorly-fitted foot protection can be a tripping hazard. It can also result in repetitive strain injury, poor posture, plantar fasciitis, fallen arches and flat feet. Secondary injuries can occur to the knees, hips, and spine.

Employers should also be aware of the psychological trauma of ill-fitting PPE, which can cause the wearer to feel unprotected. This, in turn, may affect their productivity and can also potentially expose them to increased hazards. Findings from a collaborative study, presented by the Safety and Health Empowerment for Women in Trades, identified women as more likely than men to report PPE not fitting properly; however, they are also more likely to refrain from reporting due to "fear of being labeled a complainer by coworkers" or "fear of layoff." [5]

CONSIDERATIONS WHEN CHOOSING PPE

EYE PROTECTION: [6]

- Should have the ability to protect against specific workplace hazards.
- Should fit properly and be reasonably comfortable to wear.
- Should provide unrestricted vision and movement.
- Should be durable and cleanable.
- Should allow unrestricted functioning of any other required PPE.

HEAD PROTECTION: [7]

- Should fit appropriately on the body and for the head size of each person.
- Should allow sufficient clearance between the shell and the suspension system for ventilation and distribution of an impact.
- Hats should not bind, slip, fall off or irritate the skin.
- Protective headgear accessories (earmuffs, safety glasses, face shields and mounted lights, brims, and rainwater channels) should not compromise the safety elements of the equipment.

CONSIDERATIONS WHEN CHOOSING PPE *continued*

FOOT AND LEG PROTECTION: [8]

- Footwear should meet ANSI minimum compression and impact performance standards.
- Footwear should be electrically conductive (or non-conductive), depending on the work being performed.
- Leggings should include safety snaps to allow for quick removal.

HAND AND ARM PROTECTION: [9]

- Should factor in work-specific grip requirements (dry, wet, oily).
- Should provide protection for the specific type of chemical(s) handled.
- Should cover the body depending on the nature of contact (total immersion, splash, etc.).
- Should provide adequate thermal protection.
- Should consider proper size and comfort (e.g., thick gloves may impair grip and dexterity).
- Should meet requirements for abrasion/resistance.

BODY PROTECTION: [10]

- Should only wear PPE on the parts of the body exposed to possible injury.
- Should ensure proper fit for each employee and must function appropriately for the purpose of which it is intended.

HEARING PROTECTION:

- Must reduce an employee's noise exposure to within the acceptable limits of 29 CFR 1910.95.
- Should provide variety to ensure proper fit and comfort (discomfort in sensitive areas like the ears will lead to inconsistent use or workers not using them at all).

RAY CHISHTI has 15 years of EH&S experience in a variety of industries, including EPC projects, construction, railway, fossil fuel power plants, gas distribution and transmission, electrical transmission, and retail. His experience includes working knowledge in OSHA safety, environmental, HR, workers' compensation, and DOT topics. His degrees include a Bachelor of Arts (BA) in Law Enforcement, a Master of Business Administration (MBA), and a Juris Doctor (JD) – with a certificate in Occupational Safety and Health. His training in environmental, health, safety, and DOT topics includes certifications as a construction and general industry OSHA Outreach Instructor, in root cause analysis (Sologic), basic first aid, CPR, and AED use.

Data sources:

[1] Robert-McComb, Jacalyn; Norman, Reid L.; Zumwalt, Mimi (2014). The Active Female: Health Issues Throughout the Lifespan. Springer Science & Business Media. pp. 223-238. ISBN 978-1461488842.
[2] https://en.wikipedia.org/wiki/Waist%E2%80%93hip_ratio
[3] Robert-McComb, Jacalyn; Norman, Reid L.; Zumwalt, Mimi (2014). The Active Female: Health Issues Throughout the Lifespan. Springer Science & Business Media. pp. 223-238. ISBN 978-1461488842.
[4] Burns, Karen Ramey (2015). Forensic Anthropology Training Manual. Routledge. p. 198. ISBN 9781317348290.
[5] https://deohs.washington.edu/sites/default/files/research/SHEWT_fact_sheet_3.pdf
[6] Personal Protective Equipment (osha.gov) pg. 11
[7] Personal Protective Equipment (osha.gov) pg. 19
[8] Personal Protective Equipment (osha.gov) pg. 19
[9] Personal Protective Equipment (osha.gov) pg. 23
[10] Personal Protective Equipment (osha.gov) pg. 30