

# ASSP TR-Z590.6-2023

Technical Report: Guidance of Personal Protective Equipment for Women

A Technical Report prepared by ASSP and registered with ANSI



AMERICAN SOCIETY OF  
**SAFETY PROFESSIONALS**

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**ASSP Technical Report**  
**Guidance of**  
**Personal Protective Equipment**  
**for Women**

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**Park Ridge, Illinois 60068**  
**(847) 699-2929 • [www.assp.org](http://www.assp.org)**

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## Foreword

The objective of this technical report is to provide guidance for the selection, fit, and use of personal protective equipment (PPE) for women.

This technical report introduces the state of available PPE in women's sizing, anthropometric data based on women's bodies, the consequences of ill-fitting PPE, and the benefits of properly selected and fit PPE.

Currently there is a disconnect between much of the design and fit of PPE marketed to women. According to the National Institute of Occupational Safety and Health (NIOSH), the use of anthropometric data is important to ensure PPE fit, however, there is a lack of such data related to the current general worker population. This leaves manufacturers basing their PPE size charts on anthropometric data based on men in the military in the 1950s and 1960s. PPE manufacturers market products to women in sizes based on height and weight without any detailed consideration of anthropometric data. Complicating women's PPE sizing further, women's clothing sizes are based on outdated clothing measurement systems that lean towards vanity sizing for women, which are not inclusive.

When PPE is ill-fitting, it can cause negative physical and psychological effects impacting a woman's ability to do their job safely and productively. Though women only make up about 10% of the construction workforce and about 30% of the manufacturing workforce, they are the majority in the healthcare industry and growing in all industry sectors. As women continue to enter non-traditional roles and industries, meeting their PPE sizing needs is critical to prevention of injuries, illnesses, and fatalities.

This report is scalable with data that can be used for varied types of PPE, industries, and occupations. Safety professionals are keenly aware of the OSHA requirements this document is designed to support, including OSHA's PPE requirements and incorporated voluntary consensus standards. Those responsible for procurement of PPE can use this report to develop a tailored program for their organization. Elements of this report establish a foundation for an organization to adjust and modify their existing PPE program. End users of PPE are encouraged to leverage this report with their employers, PPE suppliers, and other decision makers.

Publication of this technical report that has been registered with ANSI has been approved by the Accredited Standards Developer, American Society of Safety Professionals (ASSP), 520 N. Northwest Highway, Park Ridge, Illinois 60068. This document is registered as a technical report according to the "Procedures for the Registration of Technical Reports" with ANSI. This document is not an American National Standard and the material contained herein is not normative in nature. Comments on the content of this document should be sent to ASSP, 520 N. Northwest Highway, Park Ridge, Illinois 60068.

This document is registered as a technical report in the Z590 series of publications according to the "Procedures for the Registration of ANSI Technical Reports" and the ANSI/ASSP "Safety Operating Procedures."

This technical report was processed and approved for submittal to ANSI by the Z590 American National Standards Committee. Approval of the technical report does not necessarily imply (nor is it required) that all canvass members voted for its approval. At the time this technical report was registered, the Z590.6 had the following members:

Kathleen Dobson, CSP, CHST, STS.C, Chair  
Abby Ferri, CSP, Vice Chair  
Lauren Bauerschmidt, MS Engr, CSP, STS, Secretary  
Jennie Dalesandro, Secretary Support

**Organization Represented**

**Name of Representative(s)**

Alberici Constructors

Kathleen Dobson, CSP, CHST, STS.C

Corey Hayes

Corporate Governance Advisory Services

Ajay Sachdeva, CPEA, AcSAP

Draeger Safety, Inc.

Mark Heuchert

International Safety Equipment Association

Diana Jones

Nicole Randall

National Safety Apparel

Dionne Murray

Procter & Gamble

Karen LaRue, OHST

Safety4her Inc.

Melissa Gaglione

Seraphina Safety Apparel

Kelly Franko

SFM Mutual Insurance Company

Sara Cooper, MEHS, CSP

Stony Brook University Hospital

Leo DeBobes, CSP, CPEA, CIT

W.W. Grainger, Inc.

Sally Smart

Matt Law, MPH, CSP, REHS

Xena Workwear Inc.

Anastasia Kraft

**Individual Members**

Wyatt Bradbury, CSP, CHST, CIT

Raghuvaran Chakkravarthy, GSP, CHST, STSC

Kalyn Chism, TSP

Abby Ferri, CSP

James Harrald

Kimberly Henry

Maryann Hoff, CSP, ARM, MEHS

Shameka Lewis, MS, GSP

Anna Page

Joanna Pina, CSP

**Z590.6 Drafting Committee**

Wyatt Bradbury, MEng, CSP, CHST, CIT

Holly Burgess, CSP

Kalyn Chism, TSP

Kathleen Dobson, CSP, SMS, CIT, CHST, STS.C

Abby Ferri, CSP

Anastasia Kraft

Karen LaRue, OHST

Shameka Lewis, MS, GSP

Nicole Randall

Sally Smart

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# ASSP TECHNICAL REPORT TR-Z590.6 GUIDANCE OF PERSONAL PROTECTIVE EQUIPMENT FOR WOMEN

## 1. Scope and Purpose

### 1.1 Scope

This ANSI registered technical report provides guidance on personal protective equipment (PPE) fit, selection, and implementation for women. This report provides background on the state of available PPE in women's sizing, anthropometric data, and the impacts of PPE fit. Through the application of the guidance in this technical report, occupational safety and health hazards, risks, and exposures related to PPE issues can be identified, avoided, reduced, and/or eliminated. This report does not include design specifications, unincorporated voluntary consensus standards (i.e., ANSI/ASSP Z359), or fashion-related topics. This ANSI registered technical report provides guidance on PPE intended for use by women in occupational safety and health settings. This guidance addresses fit issues, selection, assessment, and use of such equipment.

### 1.2 Purpose

This technical report provides guidance for the selection, fit, and use of personal protective equipment (PPE) for women.

## 2. Definitions

**Anthropometry.** The study of human body measurements, especially on a comparative basis. Related to fit, anthropometry describes the relationship of the size of the garment compared with the size of the wearer.

**Female (women/woman).** One who identifies as a woman and selects apparel and footwear in women's sizes.

**Personal Protective Equipment (PPE).** Per [OSHA's Safety and Health Topic page on PPE](#), "Personal protective equipment, commonly referred to as "PPE", is equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses. These injuries and illnesses may result from contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards. Personal protective equipment may include items such as gloves, safety glasses and shoes, earplugs or muffs, hard hats, respirators, or coveralls, vests and full body suits."

**Psychosocial Hazards.** Factors in the design or management of work that increase the risk of work-related stress and can lead to psychological or physical harm.

## 3. State of Available PPE

### 3.1 Women in the Workforce

Per the March 2022 Bureau of Labor Statistics' BLS Reports [Women in the Labor Force: A Databook](#), in 2020 56.2% of all U.S. women of working age participated in the labor force. Women accounted for more than half of all workers within several sectors in 2020: education and health services (74.6 percent), other services (52.6 percent), financial activities (51.9 percent), and leisure and hospitality (50.4 percent). Other services include repair and maintenance services, personal and laundry services, membership associations and organizations, and private households. Women also accounted for 29.5% in manufacturing,