WG 4 (Physiological Health)

Insights from the Integration of Female Soldiers into New Combat Roles in the IDF

Amit Assor.
Military Physiology and Medical Innovation Branch, IDF Medical Corps.

In recent years, the IDF has expanded combat roles for female recruits, including positions in infantry and elite units. Given well-documented physiological differences between males and females—such as anthropometric traits, muscle and bone composition, and overall strength—the challenge lies in enabling female soldiers to successfully complete training while minimizing the risk of injuries. As part of the integration process of female soldiers into new infantry units, two pilot programs were initiated. We conducted a scientific study to accompany these pilots, closely monitoring soldiers using smartwatches and other physiological measurements throughout training. Physical and cognitive tests were performed at key time points, and physiological data were continuously tracked. Findings indicate that female soldiers demonstrated significant improvements in strength and fitness over a relatively short period, though they remained at a physical disadvantage compared to their male counterparts. Additionally, excessive marching distances and insufficient sleep appeared to contribute to a high incidence of overuse injuries.
In this talk, we will present the ongoing study, share interim results and key insights, and highlight emerging challenges. We will also explore potential opportunities for collaboration to enhance training methodologies and optimize female soldier integration in combat roles.

WG 4 (Physiological Health)

Chest-Related Complaints and Sports Bra Usage in Female Soldiers: Implications for Health and Operational Performance

Anat Lazikin.
Military Physiology and Medical Innovation Branch, IDF Medical Corps.

Introduction:
Female soldiers increasingly serve in physically demanding roles, yet military-issued equipment, including sports bras, is often designed without considering their specific physiological needs. Improper bra fit has been linked to breast discomfort, musculoskeletal strain, and potential impairment in operational performance. While extensive research exists on sports bra biomechanics in athletes, limited studies have addressed this issue in military populations. This study investigates the relationship between bra fit, breast discomfort, and performance limitations among female soldiers, with the goal of informing military procurement policies for improved support garments. This research aims to (1) assess the prevalence of breast discomfort and improper bra fit among female soldiers, (2) evaluate the impact of bra fit on physical performance and well-being, and (3) explore potential solutions to enhance comfort and readiness through optimized sports bra design.
Methods:
The study utilizes a mixed-methods approach, combining questionnaires assessing bra fit, discomfort levels, and perceived performance impact with anthropometric measurements of reported vs. actual bra sizes. Statistical analyses examine associations between bra fit accuracy, breast-related complaints, and operational performance indicators. Qualitative feedback provides insights into soldiers' experiences and recommendations for improvement.
Results:
Findings on the relationship between bra fit, reported discomfort, and physical performance limitations will be presented. Preliminary data indicate a significant mismatch between reported and measured bra sizes, with many soldiers experiencing avoidable discomfort affecting their daily tasks.