Guest Editor's Note

The Israel Defense Forces Medical Corps brings together clinical care, operational medicine, research, and field implementation. Alongside the care of the wounded and sick, military medicine supports the readiness, performance, and safety of service members, and provides commanders and units with professional recommendations grounded in medical knowledge, measurement, data, research, and operational experience.

This role becomes even more important when forces operate in complex military environments, particularly during prolonged combat: under challenging environmental conditions, while carrying heavy equipment, sustaining effort over time, facing evolving threats, and using advanced combat systems. Under these conditions, combatants must maintain operational performance over time and fulfill their missions as safely and effectively as possible. In such settings, military medicine is not limited to post-injury or post-illness response. It also seeks to better understand the limits of human performance, mitigate risks, adapt equipment, and preserve operational readiness.

The current issue of the Journal of Israeli Military Medicine addresses this professional domain. The articles present different aspects of how the warfighter, the field caregiver, the operational environment, technology, and the medical system interact. Some rely on field data collected during the war, while others address knowledge infrastructure and capabilities required for force design and future readiness, based on lessons and insights accumulated over years of combat. Taken together, they reflect an effort to translate data and accumulated field experience into professional learning, and to align research, field practice, and professional decision-making.

This issue features articles dealing with the warfighter's body and performance under operational conditions: anthropometric characteristics of contemporary IDF soldiers and their relevance to equipment design, exertional heat illness during ground maneuvering, and a historical and updated review of heat tolerance testing as a decision-support tool for return to duty after heat injury. Together, these articles show that equipment, heat load, recovery, and readiness are not separate issues, but part of a broader continuum of human performance in military environments.

Alongside these are articles highlighting the importance of the operational and systemic infrastructure of military medicine. The article on temperature control of whole blood on the battlefield demonstrates that an advanced life-saving capability also depends on logistics, protocols, monitoring, and the ability to maintain quality and safety over time. The opinion piece on the paradox of military medical innovation highlights a related point from another angle: a good idea or a successful pilot is not sufficient on its own. Transforming a solution into a systemic capability requires clear ownership, integration, training, procurement, and maintenance.

Two additional articles broaden the perspective to unique domains of military readiness and fitness. The study on bacteriophages against Bacillus anthracis emphasizes the need to build knowledge and capabilities against biological threats before an event occurs. The aerospace medicine study examining the association between Anti-G Straining Maneuver performance and G-induced loss of consciousness highlights the value of physiological measurement for understanding performance, guiding training, and enhancing aircrew safety and readiness in a data-informed manner.

I hope this issue will contribute to the ongoing professional discussion in military medicine and support better alignment between research, clinical practice, and the needs of units, commanders, and service members. This alignment is needed in routine service, during war, and in future force design.

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