



# Insights into Managing the Well-Being of Elite Match Officials

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Over the past two decades, UEFA, as Europe's governing body for football, has invested resources into new technologies to better support match officials, much like the support provided to players.

The goals are to optimize their health, prevent injuries, and ultimately improve their performance during matches.

## Impact on the Human

Technologies implemented in refereeing over the past two decades include global and local positioning systems (GPS and LPS), accelerometers, heart rate monitors, cloud-based databases, athlete management systems, video tracking, and video match officials, along with various biological and physiological measurements such as hormonal and immune parameters, hydration status, muscle damage, and sleep tracking. These technologies have contributed to a 'data tsunami' for technical, medical, and other support staff in professional team sports.



The key questions surrounding these advancements are: What technologies have been introduced in refereeing in recent years? To what extent have they been useful in improving well-being and overall performance? Are there any threats to referees' health and well-being due to these technologies? And, is technology the sole factor in improving football? This presentation will explore practical and multidisciplinary insights regarding the contribution of refereeing to professional football.

## Take home messages

**1** Elite referees face demanding physical and mental challenges during matches.



**2** Sports nutrition and sleep tracking play a crucial role in optimizing performance.

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**3** Human factor comes first prioritise your mind, eyes and ears before relying on data.



**References**  
Amatori, S., Helsen, W.F., Baldari, C., Serra, T., Belli, A., Guidetti, L., Rocchi, M.B.L., Sisti, D., & F. Parroni (2024). High-Speed Efforts of Elite Association Football Referees in National and International Matches. Journal of Strength and Conditioning Research, 38 (8), e417-e422. doi: 10.1519/JSC.00000000000004821  
Carvalho, V., Esteves, P.T., Nunes, C., Helsen, W.F., & B. Travassos (2023). The assessment of the match performance of association football referees: Identification of key variables. PLOS ONE, 18 (9), Art.No. ARTN e0291917. doi: 10.1371/journal.pone.0291917 Open Access  
Helsen, W.F., Spitz, J. & G. Ziv (2022). The acquisition of perceptual-cognitive expertise in officiating in association football – state of the art. Asian Journal of Sport and Exercise Psychology, 3, 39-46. https://doi.org/10.1016/j.ajsep.2022.09.007

