

# Low Awareness Among Coaches as a Risk Factor for the Widespread Prevalence of RED-S Among Elite Endurance Athletes

Kapralova E.S.<sup>1</sup>, Volel B.A.<sup>2</sup>, Bezuglov E.N.<sup>2</sup>, Chyogin S.V.<sup>3</sup>, Butovskiy M.S.<sup>1,3</sup>

1 – National Center for Sports Medicine of the Federal Biomedical Agency

2 – Sechenov University

3 – Kazan State Medical University

## Background

The widespread prevalence of Relative Energy Deficiency in Sport (RED-S) represents one of the most pressing challenges in global sports, negatively impacting multiple dimensions of athletic performance. These include elevated injury rates, detrimental impacts on reproductive health, and compromised mental well-being.

Consequently, it is imperative to ensure sufficient awareness and understanding of RED-S among professionals who work directly with athletes, particularly coaches and sports physicians. Prior research has indicated that coaches' knowledge regarding the prevalence and implications of this syndrome is inadequate, highlighting a potential significant concern [1].

The objective of this study was to assess the level of awareness of RED-S among coaches who train elite athletes in short-track speed skating and track and field.

## Materials & Methods

The study involved a total of 100 coaches (mean age  $43.41 \pm 12.68$  years, mean coaching experience  $18.65 \pm 12.58$  years) from track and field ( $n=73$ ) and short-track speed skating ( $n=27$ ). 19% coaches were currently working with high-level athletes (including medalists and participants of Olympic Games and medalists of European Championships) at the time of the survey, while 81% coaches worked with lower-level athletes. All participants completed an online questionnaire in real time, based on the questionnaire used in the study by Kroshus et al. [2].



## Results & Discussion

Among all participants, 61% coaches answered "no" to the question "Have you heard of Relative Energy Deficiency in Sport (RED-S)?" while only 39% answered "yes." There was no statistically significant difference in RED-S awareness between speed skating and track and field coaches (40.7% and 38.4%, respectively;  $p>0.05$ ), indicating similarly low levels of awareness across both disciplines. Additionally, coaches currently working with elite athletes demonstrated higher awareness compared to those working with lower-level athletes (47.4% and 37%, respectively;  $p<0.05$ ). Among the coaches who were aware of RED-S, 51.3% considered their knowledge insufficient (low and very low), and 100% of them believed it was extremely important to implement educational initiatives on RED-S syndrome.

## Conclusions

The study revealed extremely low awareness of RED-S among both coaches working with elite athletes and those working with lower-level athletes. This highlights the need for the implementation of educational programs detailing the diagnosis, treatment, and prevention of RED-S syndrome in practice.

contact: kapralovaeliz@gmail.com