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REVIEW ARTICLES

Considerations for protein intake in managing weight loss in athletes

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Abstract

A large body of evidence now shows that higher protein intakes (2–3 times the protein Recommended Dietary Allowance (RDA) of 0.8 g/kg/d) during periods of energy restriction can enhance fat-free mass (FFM) preservation, particularly when combined with exercise. The mechanisms underpinning the FFM-sparing effect of higher protein diets remain to be fully elucidated but may relate to the maintenance of the anabolic sensitivity of skeletal muscle to protein ingestion. From a practical point of view, athletes aiming to reduce fat mass and preserve FFM should be advised to consume protein intakes in the range of ~1.8–2.7 g kg^{-1} d^{-1} (or ~2.3–3.1 g

within this recommended range requires consideration of a number of case-specific factors including the athlete's body composition, habitual protein intake and broader nutrition goals. Athletes should focus on consuming high-quality protein sources, aiming to consume protein feedings evenly spaced throughout the day. Post-exercise consumption of 0.25–0.3 g protein meal^{-1} from protein sources with high leucine content and rapid digestion kinetics (i.e. whey protein) is recommended to optimise exercise-induced muscle protein synthesis. When protein is consumed as part of a mixed macronutrient meal and/or before bed slightly higher protein doses may be optimal.

Keywords: Protein, weight loss, body composition, nutrition

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