



The Regulation of Human Skeletal Muscle Metabolism by Nutrients across the Lifespan

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Message from the Guest Editors

Skeletal muscle is the body's largest organ by mass, and one which plays a crucial role in locomotion and the regulation of homeostasis, e.g., glycaemic control, thermogenesis, substrate liberation in response to illness/injury. This is reflected by the robust epidemiological links between *low* skeletal muscle mass and *all-cause* morbidity/mortality.

In healthy, weight-bearing individuals, skeletal muscle mass is regulated by nutrition and contractile activity (movement/exercise). As such, the manner by which muscles respond to nutrients—across the human lifespan—are critical determinants of muscle mass maintenance.

Therefore, optimising nutrition (e.g., protein quantity/quality, energy, eating patterns, novel nutraceuticals) to maximise muscle maintenance across the lifespan, both in isolation and in tandem with physical activity, is highly important; as is the identification of mechanisms underlying nutrient mishandling, and propagating a failure in muscle homeostasis, i.e., in ageing and co-morbidities. The purpose of this Special Edition is to help to address these questions via encouraging submission of relevant reviews and clinical studies in humans.





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