Impact of exercise on aging: Highlighting muscle biomarkers

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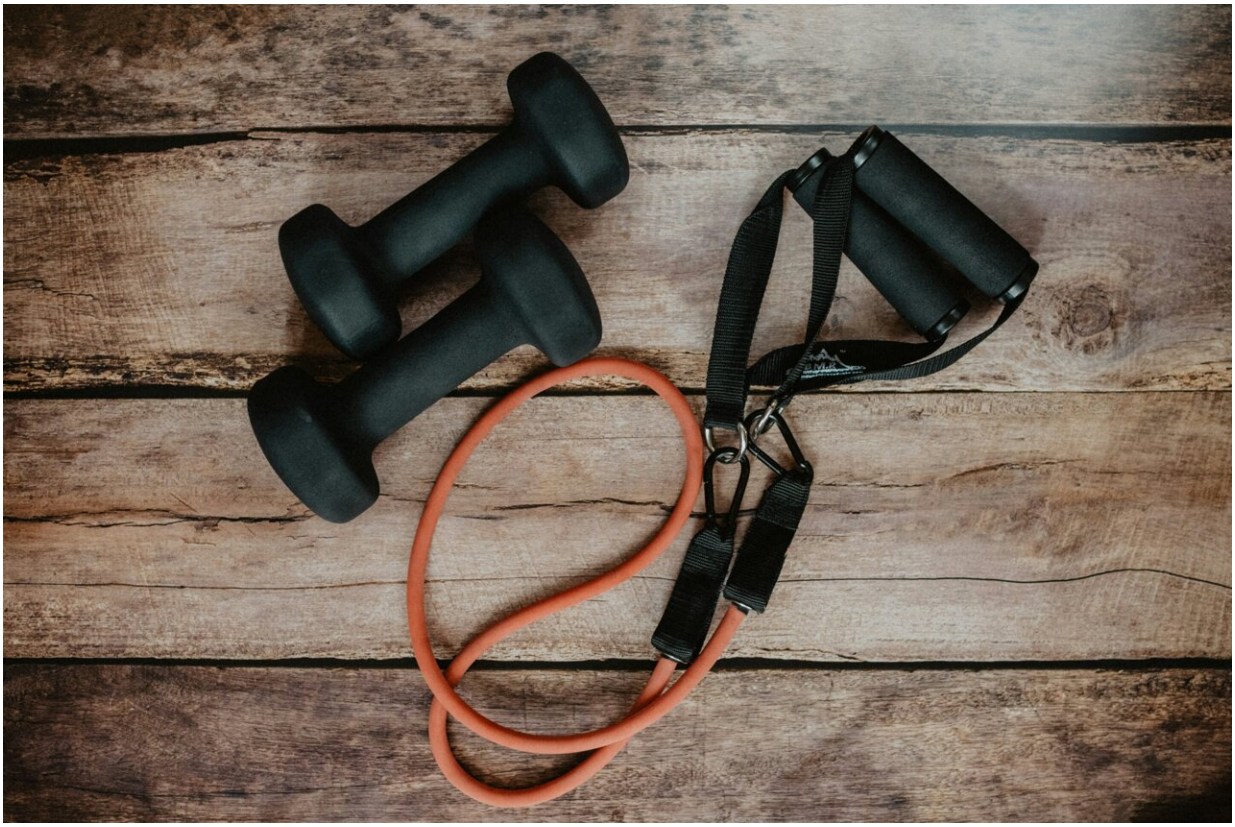

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A new editorial was published in *Aging*, titled "The benefits of exercise on aging: focus on muscle biomarkers."

The focus on maintaining health and vitality (e.g., good health span) in later life has become increasingly important as the world's population ages. Over the past few decades, groundbreaking research in the field of aging has deepened our understanding of the molecular basis of this process. In the last decade, advances in aging research have identified biomarkers such as DNA methylation (DNAm) and gene expression, offering insights into both chronological and biological aging.

Researchers Robin Grolaux, Bernadette Jones-Freeman, Macsue Jacques, and Nir Eynon from the Australian Regenerative Medicine Institute at Monash University in Melbourne, explore the impact of exercise on these biomarkers in human skeletal muscle—a critical tissue for metabolism, thermogenesis, and movement—revealing its potential to foster healthier aging.

This study represents the first quantitative and qualitative analysis of the effects of exercise on age-related biomarkers in human skeletal tissues. Future research could explore the global effects of exercise on various molecular pathways and differentiate between exercise types to develop more effective personalized therapies.

"We have the opportunity to uncover functional therapies that effectively impact aging," the researchers said.

More information: The benefits of exercise on aging: focus on muscle biomarkers, *Aging* (2024). DOI: 10.18632/aging.206064, www.aging-us.com/article/206064/text

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