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Study may improve bone and muscle health monitoring during spaceflight

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Bed rest is often used to simulate the effects of microgravity, such as during space flight, on the body's bones and muscles. New research published in *The FASEB Journal* examined the effects of 10 days of bed

rest on various markers of musculoskeletal health in 10 young male volunteers.

"During space flight, changes occur over a period of weeks to months, first in the muscle and then in the bone," the authors wrote. Their experiments over just 10 days suggested a possible early involvement of the molecule irisin in muscle and bone adaptation to microgravity-simulated conditions.

Results indicated that irisin may help to prevent the onset of atrophy and aging of skeletal muscle, and that low irisin blood levels could represent an early prognostic marker of muscle atrophy in microgravity environments.

More information: Impact of 10-day Bed Rest on Serum Levels of Irisin and markers of Musculoskeletal metabolism, *The FASEB Journal* (2022). DOI: 10.1096/fj.202201005RR

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