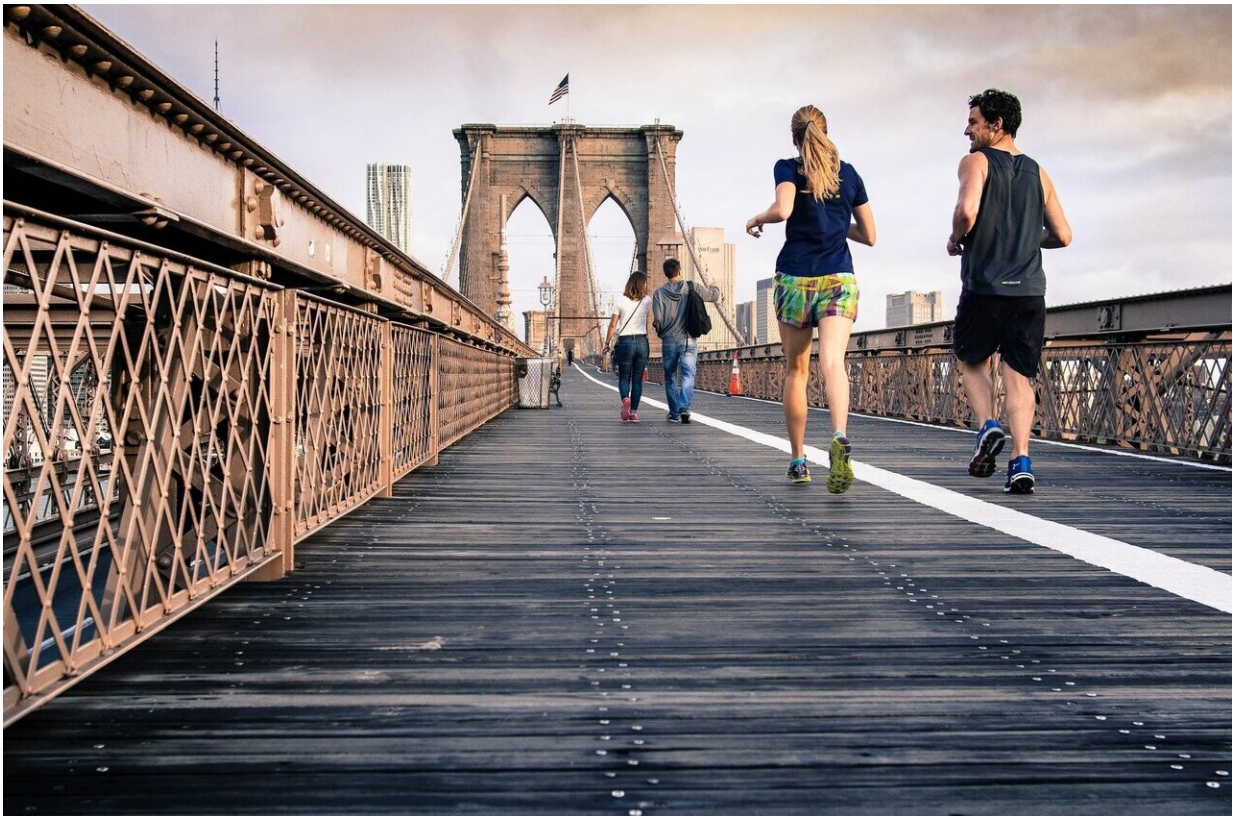


What time you exercise doesn't affect muscle force or reduce blood sugar, study shows

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The ability of skeletal muscle to produce force (contractile function) and contraction-stimulated glucose uptake (increase in clearing sugar from bloodstream) do not differ by time of day, regardless of sex or muscle

type.

The first-of-its-kind study directly investigated intrinsic contractile function or [glucose metabolism](#) in skeletal muscle over a 24-hour circadian cycle. The findings are [published](#) in the journal *Function*.

A growing body of research suggests that these two factors vary by time of day, while chronobiological effects on intrinsic [skeletal muscle](#) properties are thought to be the underlying mediator.

To test their theory, researchers measured intrinsic contractile function and endurance, as well as contraction-stimulated glucose uptake in mice four times per day.

"Overall, these results suggest that time-of-day variation in [exercise performance](#) and the glycemia-reducing benefits of exercise are not due to chronobiological effects on intrinsic muscle function or contraction-stimulated glucose uptake," the research team wrote.

More information: Liam S Fitzgerald et al, Intrinsic Skeletal Muscle Function and Contraction-stimulated Glucose Uptake Do Not Vary by Time-of-day in Mice, *Function* (2024). [DOI: 10.1093/function/zqae035](https://doi.org/10.1093/function/zqae035)

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