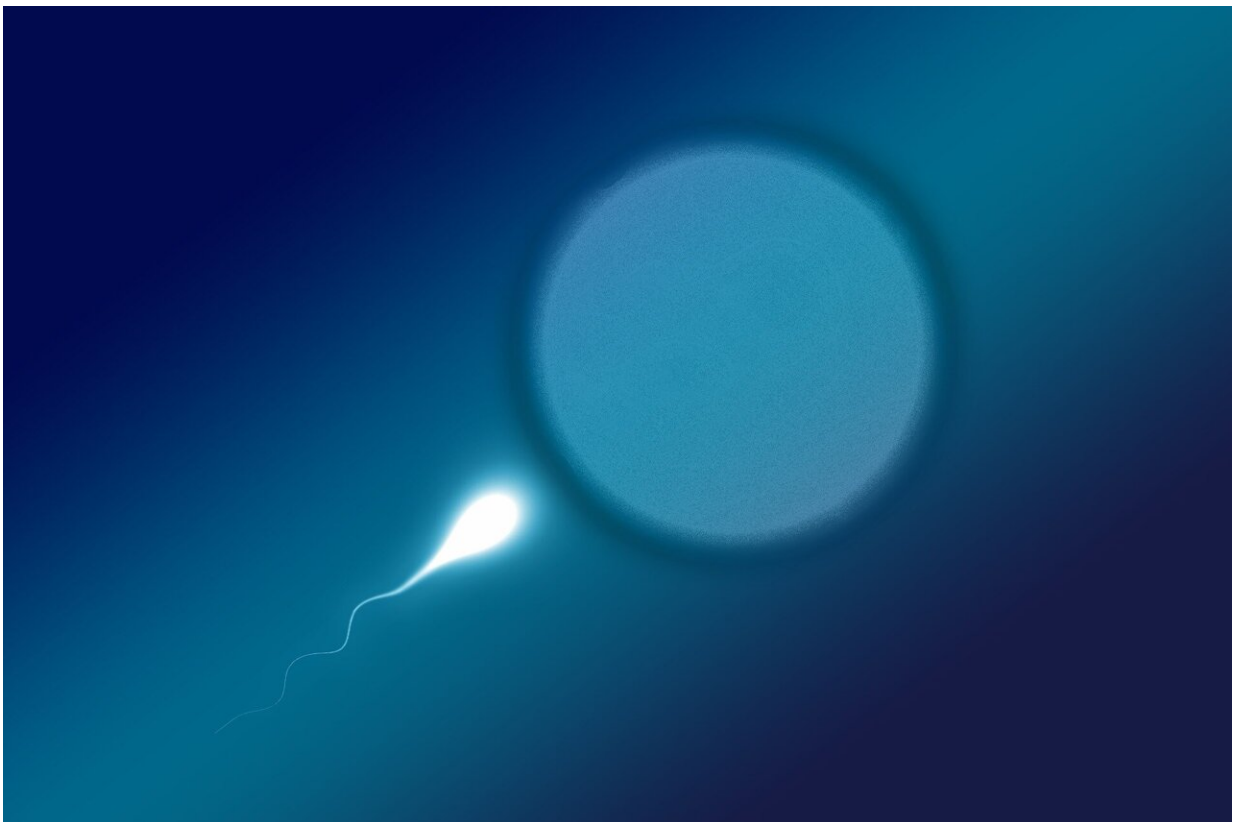


Researchers identify compounds that could lead to an on-demand, short-term contraceptive for men

February 14 2023



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In a mouse study, researchers have identified a potential non-hormonal contraceptive that men could take shortly before sexual activity and have

fertility restored the next day.

Researchers gave male mice a compound that temporarily disables soluble adenylyl cyclase, the enzyme essential for activating a sperm cell's ability to swim and mature so that it can travel through the [female reproductive tract](#) and fertilize an egg.

In several tests, the researchers showed that the compound TDI-11861 rendered mouse sperm cells immobile and prevented them from maturing. The compounds did not interfere with the animals' sexual functioning. Although [male mice](#) mated with females, no pregnancies were observed. Sperm recovered from female mice remained incapacitated. The authors did not observe any [side effects](#) in the male or female mice. The compound wore off three hours later, and males recovered their fertility.

The study was conducted by Melanie Balbach, Ph.D., a postdoctoral fellow in the laboratories of co-authors Jochen Buck, Ph.D., and Lonnie Levin, Ph.D., at Weill Cornell Medical College, New York City, and colleagues. It appears in *Nature Communications*.

The researchers say their work provides proof of concept that soluble adenylyl cyclase inhibitors have the potential to provide a safe, on-demand, non-hormonal and reversible oral contraceptive for men.

The article "On-demand male contraception via acute inhibition of soluble adenylyl cyclase" is published in *Nature Communications* on February 14, 2023.

More information: Jochen Buck, On-demand male contraception via acute inhibition of soluble adenylyl cyclase, *Nature Communications* (2023). [DOI: 10.1038/s41467-023-36119-6](https://doi.org/10.1038/s41467-023-36119-6).
www.nature.com/articles/s41467-023-36119-6

Provided by NIH/Eunice Kennedy Shriver National Institute of Child Health and Human Development

Citation: Researchers identify compounds that could lead to an on-demand, short-term contraceptive for men (2023, February 14) retrieved 4 May 2024 from <https://medicalxpress.com/news/2023-02-compounds-on-demand-short-term-contraceptive-men.html>

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