

Males more considerate than imagined

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Male worms plug females after copulation as a form of 'gift', rather than to prevent them from mating again, as had previously been thought. Researchers writing in BioMed Central's open access journal *Frontiers in Zoology* found that plugged females mated just as often and were just as attractive as those who were unplugged, and that plugging ultimately improved female fitness.

Nadine Timmermeyer worked with a team of researchers from the University of Tuebingen, Germany, to investigate the effects of copulatory plugs in the [nematode worm](#) *Caenorhabditis remanei*. She said, "Our results indicate that plugging neither affects the likelihood that a female is located by males, nor whether or not mating ensues. However, we found that plugging has a significant positive effect on egg production, suggesting that plugs may represent a beneficial act of a male towards its female partner rather than a competitive act between males".

Mating plugs have been documented for a broad range of animal groups, including insects, arachnids, [reptiles](#), and rodents. In the worms studied, plugs consist of gelatinous mass deposited by the male onto the female's vulva at the end of copulation, which then hardens like glue. Speaking about possible ways that such a seal may benefit both males and females, Timmermeyer said "A plug may act as a seal, keeping sperm inside the female and preventing the entry of [harmful pathogens](#). It may also contain substances that stimulate the female, or that have nutritious or antimicrobial properties".

More information: The function of copulatory plugs in *Caenorhabditis remanei*: hints for female benefits, Nadine Timmermeyer, Tobias Gerlach, Christian Guempel, Johanna Knoche, Jens F Pfann, Daniel Schliessmann and Nico K Michiels, *Frontiers in Zoology* (in press), www.frontiersinzoology.com/

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