

Reproductive life of male mice is increased by living with females

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Living with a female of its species can extend the reproductive life of a male mouse by a dramatic 20 percent, according to a study reported at the online site of the journal *Biology of Reproduction*.

In the research, conducted by a team at the University of Pennsylvania School of Veterinary Medicine, male mice were housed with or without female mice for 16 to 32 months. Each male was placed with two novel females at 2-month intervals to test its ability to impregnate the females.

The team, headed by Dr. Ralph Brinster, found that males housed with females did not show a drop in fertility until 32 months of age - a 6-month increase in fertility over males housed alone.

The study also concluded that once fertility began to decrease, the rate of decrease was the same for both groups of males. The decline in fertility appeared to be due in part to defects in the sperm production process.

The researchers postulate that a female housed with a male mouse delays reproductive aging by affecting the cells surrounding the stem cells that produce spermatozoa in the testes.

The effect on the environment of the spermatogonial stem cells likely occurs through the male's endocrine and nervous systems, the scientists theorize.

"Whether this female influence occurs in other species is not known,"

Dr. Brinster notes.

If the effect is found to extend to other species, however, the authors point out that a 20 percent increase in male fertility could mean an extension of the male reproductive life span of years for various livestock animals and even decades for some large endangered species.

Source: Society for the Study of Reproduction

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