Effects of Previous Sexual Experience Are Evident During 30-Minute Tests of Paced Mating Behavior

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Introduction

Within a single mating interaction, contact-return latencies to intromissions and ejaculations progressively lengthen; however, between mating interactions paced mating behavior is not thought to change.

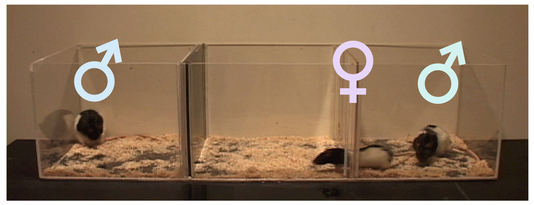
Recently, our lab observed that sexually experienced rats return to the male more slowly after receipt of ejaculation during a 30-minute test.

The present series of experiments investigated the effect of various types of sexual experience on the display of paced mating behavior under different test parameters.

Paced Mating Behavior

Two paradigms for testing:

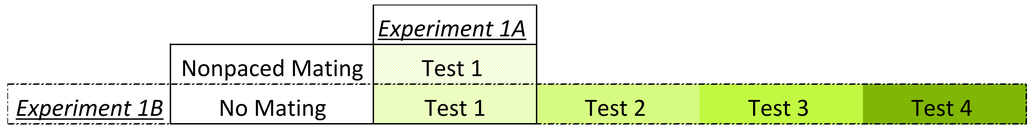
- 30-minute tests (single male)
- 15-intromission tests (multiple males)



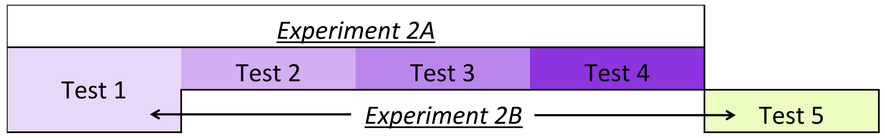
Contact-return latency: the time it takes the female rat to return to the male rat's compartment following each stimulation.

Experimental Timeline

Experiment 1A & B: Does previous sexual experience affect paced mating behavior?



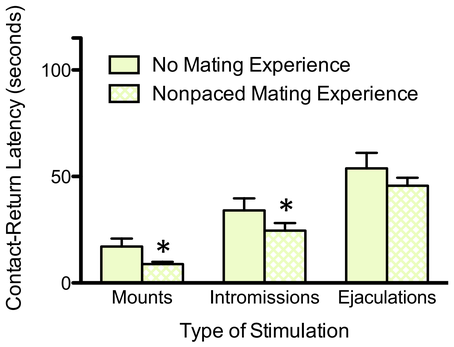
Experiment 2A: Will paced mating behavior change across 15-intromission tests as it does across 30-minute tests?



Experiment 2B: Are the effects of sexual experience received during 15-intromission tests evident in a 30-minutes test?

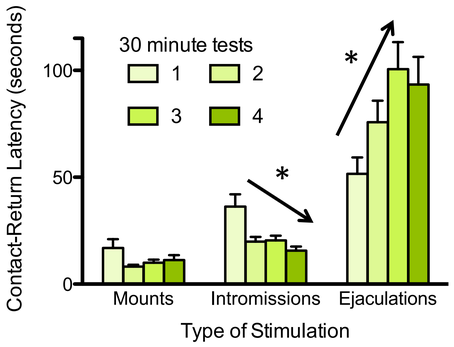
Experiment 1A

Female rats with nonpaced mating experience returned to male rats faster following mounts and intromissions compared to rats with no mating experience.



Experiment 1B

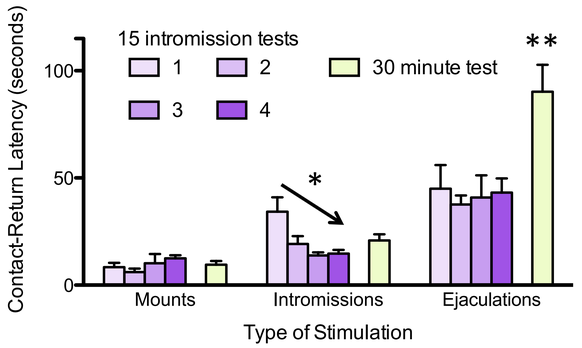
Across the four tests, female rats showed a shortening of contact-return latencies following intromissions and lengthening following ejaculations.



* p < 0.05, linear function across Tests 1–4

Experiment 2A & B

Across the four 15-intromission tests, contact-return latencies were shorter following intromissions, however, significantly longer contact-return latencies following ejaculation were observed only during the 30-minute test.



* p < 0.05 linear function across Tests 1–4 ** p < 0.05 vs Test 1

Conclusions

Sexual experience leads to shortened contact-return latencies to intromissions, versus sexually naïve rats in both 30-minute and 15-intromission tests.

Longer contact-return latencies to ejaculation are observed only during 30-minute tests in sexually experienced rats.

Future studies are needed to determine what about 30-minute tests allows for the detection of the longer contact-return latency to ejaculation .

Acknowledgements

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