

Accepted Manuscript

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PII: S0306-4530(17)30879-X
DOI: <https://doi.org/10.1016/j.psyneuen.2017.12.025>
Reference: PNEC 3803

To appear in:

Received date: 12-7-2017
Revised date: 22-12-2017
Accepted date: 28-12-2017

Please cite this article as: Wagner, Benjamin A., Braddick, Valerie C., Batson, Christopher G., Cullen, Brendan H., Miller, L. Erin, Spritzer, Mark D., Effects of testosterone dose on spatial memory among castrated adult male rats. *Psychoneuroendocrinology* <https://doi.org/10.1016/j.psyneuen.2017.12.025>

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Effects of testosterone dose on spatial memory among castrated adult male rats.

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Research Highlights

- Testosterone replacement restored spatial working memory in castrated male rats.
- Testosterone replacement had no effect on reference memory in castrated male rats.
- Testosterone replacement improved long-term memory in castrated male rats.
- High and low physiological doses of testosterone had positive effects on memory.
- A supra-physiological dose of testosterone had some positive effects on memory.

Abstract

Previous research on activational effects of testosterone on spatial memory has produced mixed results, possibly because the effects of testosterone on memory are dose-dependent effects. We tested a wide range of testosterone doses using two spatial memory tasks: a working-reference memory version of the radial-arm maze (RAM) and an object location memory task (OLMT). Adult male Sprague-Dawley rats were castrated or sham-castrated and given daily injections of drug vehicle (Oil Sham and Oil GDX) or

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