

# Decision Processes Colloquia

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**Monday, September 19, 2016**

Where: 360 JMHH

When: 12:00 – 1:15 pm

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## **Single Dose Testosterone Administration Impairs Cognitive Reflection in Men**

**ABSTRACT:** The sex steroid testosterone regulates reproductive behaviors such as intra-male fighting and mating in non-humans. Correlational studies have linked testosterone with aggression and disorders associated with poor impulse control, but the neuropsychological processes at work are poorly understood. Building on a dual-process framework, we identified an underlying mechanism for testosterone's behavioral effects in humans: reducing cognitive reflection. In the largest behavioral testosterone administration study to date, 243 men received either testosterone or placebo and took the Cognitive Reflection Test (CRT), that estimated their capacity to override incorrect intuitive judgments with deliberate correct responses. Testosterone administration reduced CRT scores. The effect was robust to controlling for age, mood, math skills, treatment expectancy and 14 other hormones. Our findings suggest a unified mechanism underlying testosterone's varied behavioral effects in humans, and provide novel, clear and testable predictions.