

# Two-faced testosterone can make you nasty or nice

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Is aggression always the best response to a challenge? Testosterone may not necessarily cause aggression but behavior can drive testosterone secretion.

In an evaluation for Faculty of 1000, Robert Sapolsky highlights a study published in *Nature* which assessed how testosterone affects human behavior in a 'pro-social' situation - an environment where it is beneficial for a person to help someone else.

In an 'Ultimatum Game', a 'proposer' is given power to decide how a sum of money is divided between him/herself and another player, 'the decider'. The decider can either accept the offer, and possibly receive less than a fair share, or reject it, in which case both players get nothing. The participants in the game were all women.

Women who were given testosterone unknowingly made fairer offers (a pro-social decision) than women who received a placebo. Interestingly, women who believed that testosterone has anti-social, aggression-causing effects and who thought they'd received testosterone made offers that were less fair, even when they had received a [placebo](#).

When given to the subject in a blind trial, testosterone can encourage pro-social as well as anti-social behaviour. However, as the authors note, "biology seems to exert less control over [human behavior](#) [than in other animals]," since awareness of having received testosterone drastically altered behavior.

So, not only can our own behavior be confounded by our prejudices but the effects of [testosterone](#) may be far more complex than previously thought. As Sapolsky says, "Despite the seeming power of the proposer, the decider ultimately has the most power, and the proposer seriously loses status if the decider rejects their offer."

**More information:** -- The full text of the evaluation of is available free for 90 days at: [www.f1000biology.com/article/2...f6mqncc4s/id/2127958](http://www.f1000biology.com/article/2...f6mqncc4s/id/2127958)

-- The free full text of the original paper by Eisenegger et al., Prejudice and truth about the effect of testosterone on human bargaining behavior, is available at: [www.nature.com/nature/journal/...ull/nature08711.html](http://www.nature.com/nature/journal/...ull/nature08711.html)

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