

Devin Walker

February 5, 2020

### Female Fertility and Male Cooperative Behavior: Could EST be the link?

“Women's fertility cues affect cooperative behavior: Evidence for the role of the human putative chemosignal estratetraenol,” authored by Chen Oren and Simone G. Shamay-Tsoory and published in *Psychoneuroendocrinology*, describes the relationship between female high-fertility chemosignals and male mating strategies. The 2019 study investigates the impact of such scents on male cooperative behavior: a proposed mating strategy. The sixty-five heterosexual, male subjects involved were either exposed to a control scent or female high-fertility scent (collected from the t-shirts of ovulating women) while playing the Social Orientation Paradigm (SOP) game. The SOP, a digital, monetary game, categorizes its player's actions against an “opposing player” as individualistic, aggressive or cooperative. The “other player” in the SOP is computer-programmed, but each subject is told it is another (unknown) man. Fascinatingly, although the number of aggressive actions applied in the SOP remained constant across both exposure conditions, the males demonstrated more cooperative actions and fewer individualistic actions when exposed to female high fertility chemosignals. Furthermore, Oren and Shamay-Tsoory's study explores the theory that estratetraenol (EST), a compound known to be present in females' late-pregnancy urine, may facilitate this curious effect on male behavior. In a second experiment, upon exposing the male subjects to EST (with the same SOP experimental procedure), more cooperative actions and fewer individualistic actions were observed compared to a control exposure.

In conclusion, this study demonstrates that EST may be the principle chemosignal that communicates female fertility to surrounding males and encourages their cooperative behavior.

## Reference

Oren, C. & Shamay-Tsoory, S. (2019). Women's fertility cues affect cooperative behavior: Evidence for the role of the human putative chemosignal estratetraenol. *Psychoneuroendocrinology*, *101*, 50-59. <https://doi.org/10.1016/j.psyneuen.2018.10.028>