

Why is testosterone regarded as the male hormone?



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Testosterone is considered a male hormone despite females also producing testosterone. Therefore, the purpose of this essay is to determine why it is regarded as a male hormone. It will define the biological processes in the brain and the stimulations of testosterone that may explain why. It will then evaluate the consequences of the higher testosterone levels in males on an evolutionary psychology and biological arguments. Because of the pressure of appearing masculine, the essay will give some thought why men may go to extreme length in building a more masculine figure and what the advantages of more testosterone and disadvantages are. To conclude the essay, it will be evaluated on all the key aspects.

During pregnancy, the human brain starts developing as a female brain (Carruth et al. 2002; Vawter et al. 2004, cited in Ellis 2011), but within the deoxyribonucleic acid (DNA), the sex chromosome plays a crucial role to determine the embryo's gender - sex hormones are steroids that are required to develop the gender from a chemical reaction of cholesterol to produce hormones, such as testosterone in males and estrogens in females - both genders share the same sex hormone which is developed round about six weeks of a pregnancy in the embryo's gonads, this is when the gonads are either developed into testes or ovaries depending on the sex chromosome (Bear, Connors and Paradiso, 2001).). If Y is presented in the sex chromosome then the embryo will develop testes; if Y is absent it will then develop ovaries (MacLusky and Naftolin, 1981; Wilson, George, and Griffin, 1981).

These early changes allows an understanding why testosterone is thought as a male hormone, as the testes are responsible for producing testosterone

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and sperm, hormones such as luteinizing hormone (LH) and follicle-stimulating hormone (FSH) that are secreted by the anterior pituitary gland (i. e located in the brain), and these hormones play a role in the stimulation of testosterone and sperm maturation; female's also have these hormones, but they cause a secretion of estrogens in the ovaries (Bear, Connors and Paradiso, 2001). Furthermore, Y chromosome plays a crucial role in development, it allows testosterone to cross the blood-brain barrier to convert the would-be feminine brain into a masculinised one (Morris et al. 2004; Vawter et al. 2004; Wu et al. 2009, cited in Ellis 2011), thus, allowing males to produce roughly ten times as much testosterone than females (Badcock, 2000).

A consequence of higher testosterone levels in men, challenges a man in keeping up a masculine appearance. Evolutionary psychology argue that human males are no different from animals in terms of hierarchy's dominance (Buss & Schmitt, 1993; Geary, 2010; Puts, 2010; Schmitt, Shackelford, & Buss, 2001). This means that men are willing to compete against other men for a higher rank to gain mating opportunities, because unlike womanhood, manhood is seen to be easily replaced, therefore, to gain attention from females, males must use their size and strength to gain mating opportunities in defeating other males (Vandello and Bosson, 2013a), thus, through reproducing it increases the survival of their kin, by passing their fitter, stronger traits onto offspring's (Buss 2007; Gangestad and Simpson 2000). In addition, men's sperm is plentiful and can reproduce at a fast rate with many partners if chosen - females on the other hand invest a

great deal of time and energy in their sexual encounter which makes them very selective of whom they chose to mate with (Peterson and Hyde, 2011).

As a heterosexual male, it is regarded as the norms to uphold a masculine figure (Vandello & Bosson, 2013b) and to gain several sexual partners its considered to be a real man amongst other men and failing to do so could question their heterosexual status (Toomey, Card, & Casper, 2014). Herek (1986) also pressed that for straight men to be acknowledged a man, they must be homophobic and opposed of gay men. Homosexual males may also feel pressed because of homophobic slurs from straight men who criticise their feminised figure, they may feel embarrassed and ashamed (Kim et al., 2007; Tharinger, 2008). A study amongst one hundred and eighty bodybuilding gyms in Iran, with nine-hundred and twenty participants returning the questionnaires, asking why they use androgen anabolic steroids; fifty-eight percent (534 people) said they take it to change their physical appearances and physical attractions, although this may vary in western societies (Saeidinejat et al, 2017).

Nevertheless, if individuals lack in masculinity, they may seek taking androgenic anabolic steroids and some may go to extreme length despite the negative consequences they may cause. By consuming large doses of androgenic anabolic steroids leads to a decrease the concentrations of two main hormones, luteinizing hormone (LH) and follicle-stimulating hormone (FSH), leading to testes shrinkage and lower fertility rate (Friedl, 1993, cited in fields, 2006). However, these level resume back to normal between six and twelve weeks after discontinuing (Friedl, 1993, cited in fields, 2006).

Cardiovascular causes are likely to increase by a two-fold, often many years
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after discontinuing (Thiblin, I, Garmo, H, Garle, M, et al, 2015). Only 4.7 percent of participants knew of the negative side effects, such as acne, hair loss, infertility, growth disorder and even death. (Saeidinejat et al, 2017). However, benefits of use are the effectiveness of building large muscle growth at a rapid rate and rapid recovery in short periods (Bhasin, 2001). Bhasin (1996) randomised study of thirty-five men in groups of five, all men had taken 600mg of testosterone enanthate per week for twenty weeks. After ten weeks, a group who had taken the anabolic steroid and did not exercise had gained more muscle mass than those who did exercise without the use of testosterone enanthate.

CONCLUSION

The biological changes based on the sex chromosome evaluates why it is a male hormone. It cannot be undone through development of testes. It explains why males are more masculine than females by the testes stimulation to produce higher levels of testosterone. Evolution arguments could be true, and the traits have been passed onto a modern society of males needing strength and size, however, human being's cognition is far more advanced, and their reasons may be down to sexual status. TBC

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