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Obese Girls Have Up to Nine Times More Testosterone than Normal Ones

This can provoke, amongst other problems, high body hairiness

We know testosterone is the male sex hormone, responsible for the emergence of male sexual traits, enhancing muscular mass, bone growth, and aggressiveness. But testosterone is found not only in males, but females, too. In females it is secreted not by testes, of course, but by the adrenal glands, because testosterone has a role, also, in non sexual functions, and it is responsible for the sex drive in both men and women (lower testosterone levels in women explain their lower sex drive than that of men). A recent study found that obese girls have significantly higher levels of testosterone before and during puberty (i.e., the peripubertal phase) than their normal counterparts. The investigation team has discovered that mean concentrations of free serum testosterone in obese peripubertal girls were two to nine times higher than in normal weight peripubertal girls. This difference appeared to be higher during the earlier pubertal stages. High testosterone levels in obese girls were also accompanied by higher insulin concentrations, up to three times higher than those of normal weight girls. Higher insulin levels indicate insulin resistance, which makes the girls prone to developing diabetes later in life. The researchers measured, in 30 normal weight girls and 74 obese girls, the Body Mass Index (BMI) standardized for age, in various stages of puberty. The girls' stage of puberty was determined by Tanner breast staging, the standard physical exam measure used by pediatricians. The early pubertal stages (Tanner 1-3) are particularly critical times in a girl's development. "Since this is when the complex interactions governing the menstrual cycle are being established, excess testosterone during this time could impact the future reproductive health of women," said lead author Dr. Christopher R. McCartney. "Though, the long-term implications of elevated testosterone during puberty have yet to be established." The researchers observed that high testosterone levels provoke excessive hair growth, though a few years may pass until these symptoms are noticeable in individuals.