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Does stress causes infertility?

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Stress impairs reproductive function and fertility in both men and women and may be clinically overt or occult. Common clinical presentations of stress-related infertility include the spectrum of hypothalamic hypogonadism (oligoamenorrhea, luteal insufficiency, oligoasthenozoospermia) and sexual dysfunction (low libido, dyspareunia, and erectile dysfunction). Couples with unexplained infertility may have stressors as cause or contributor. Sustained stress often leads to more clinically evident hypogonadism such as severe oligoasthenozoospermia or functional hypothalamic amenorrhea while intermittent and mild stress is more difficult to detect yet may impair fertility. Further, stress may foster obesity which is an independent factor that compromises oocyte quality and has other deleterious effects on fertility. A common stressor associated with unexplained infertility is poverty, which is a well-recognized social determinant of many health conditions. Reduced fertility during famine and war is adaptive for both individuals and society. In less extreme circumstances, however, chronic reproductive compromise typically is associated with high psychosocial burden. The pathogenesis is straightforward. Behaviors that chronically activate the limbic-hypothalamic-pituitary-adrenal (LHPA) axis concomitantly suppress thyroidal and gonadal functioning at the hypothalamic level. However, the behavioral antecedents that activate the HPA and suppress the HPG differ from person to person and there appears to be gender- and sex-specific sensitivities to metabolic (nutritional, energetic) and psychogenic stressors. In women, hypothalamic hypogonadism can be overt and present as amenorrhea or irregular menses or it may be occult, with preserved menstrual interval but reduced ovarian secretion of estradiol and progesterone that render implantation unlikely. In men, reduced hypothalamic drive is often occult, but it may present as oligoathenozoospermia during an infertility evaluation and, in severe cases, as diminished libido, muscle mass, and hair growth.

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