

12.2.2.1 PROLACTIN

Prolactin is a hormone produced by the anterior pituitary gland in both men and women. It is known as a gonadotrophic hormone as it affects the gonads (testes and ovaries). It also has an effect on other organs in the body, however, only the effects on the reproductive organs will be discussed here.

In males, prolactin influences the production of testosterone and affects sperm production. In conditions where prolactin secretion is increased (hyperprolactinaemia), testosterone levels drop and sperm production is reduced or absent, resulting in male infertility.

The main action of prolactin in females is the induction and maintenance of lactation (breastfeeding). Prolactin levels build up during pregnancy but milk secretion does not begin until after birth. As an infant suckles, prolactin is released into the mother's blood stream, causing the milk glands to produce more milk. Prolactin and other hormones are responsible for the development of mammary glands during pregnancy. Prolactin also affects the ovaries. The main target area is the corpus luteum, the secretory organ formed from the ruptured ovarian follicle after ovulation. High prolactin levels lead to reduced progesterone function. The result of hyperprolactinaemia can be the non-appearance of menarche (beginning of menstruation at puberty), amenorrhoea (absence of menstruation in a woman after puberty) and anovulatory menstrual cycles (absence of ovulation i.e. no mature eggs produced). These effects can be the basis of female infertility.

There are many causes of increased prolactin secretion. In some cases the condition can be effectively treated using drugs such as bromocriptine, which inhibits the release of prolactin.