Luteinizing hormone

Luteinizing hormone-releasing hormone causes the pituitary gland to make and secrete the hormones luteinizing hormone (LH) and follicle-stimulating hormone (FSH). In men, these hormones cause the testicles to make testosterone. In women, they cause the ovaries to make estrogen and progesterone.

Luteinizing hormone (LH) is synthesized within the same pituitary cells as FSH and under the same stimulus (GnRH). It is also a heterodimeric glycoprotein consisting of the same 92-amino acid alpha subunit found in FSH and TSH (as well as in chorionic gonadotropin); a beta chain of 121 amino acids that is responsible for its properties.

The effects of LH also depend on sex. LH in females In sexually-mature females,

a surge of LH triggers the completion of meiosis I of the egg and its release (ovulation) in the middle of the menstrual cycle; stimulates the now-empty follicle to develop into the corpus luteum, which secretes progesterone during the latter half of the menstrual cycle.

Women with a severe LH deficiency can now be treated with human LH (Luveris®) produced by recombinant DNA technology. LH in males LH acts on the interstitial cells (also known as Leydig cells) of the testes stimulating them to synthesize and secrete the male sex hormone, testosterone.

LH in males is also known as interstitial cell stimulating hormone (ICSH).