

**Higher Human Biology**

**Physiology and Health: Gamete production, fertilisation and hormonal control (Key Area 2.1 & 2.2)**

By the end of this topic I will be able to:

**Key area 1: Gamete production and fertilisation**

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| 1. Explain the process of sperm production in the testes, including the roles of the seminiferous tubules and the role of accessory glands.
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| 1. Explain the process of ova production in the ovaries, including the maturation of the ova and the development of the follicle.
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| 1. State that the site of fertilisation is in the oviduct.
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| 1. Define the term zygote and describe the formation of a zygote.
2. Describe the implantation of the blastocyst.

**Key area 2: Hormonal control** |  |  |
| 1. Explain the role of hormones on the onset of puberty.
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| 1. State that the pituitary gland releases several hormones during the onset of puberty and is stimulated by a releaser hormone produced in the hypothalamus.
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| 1. State that the hormones released from the pituitary gland during the onset of puberty are Follicle Stimulating Hormone (FSH), Luteinising Hormone (LH) and Interstitial Cell Stimulating Hormone (ICSH).
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| 1. Describe the roles of FSH in promoting sperm production.
2. Describe the role of ICSH in the production of testosterone.
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| 1. State that testosterone stimulates sperm production and activates the prostate gland and seminal vesicles.
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| 1. Describe the negative feedback control of testosterone by FSH and ICSH.
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| 1. Explain the roles of FSH, LH, oestrogen and progesterone in controlling the menstrual cycle.
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| 1. Describe the development of a follicle, the corpus luteum and the endometrium through the menstrual Cycle.
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| 1. Explain the events of the follicular and luteal phases of the menstrual cycle.
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| 1. Describe the negative feedback control of FSH and LH by high levels of progesterone and oestrogen.
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| 1. Understand that this negative feedback control leads to menstruation.
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