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<http://www.healthier.qld.gov.au/conditions-treatments/amenorrhoea>

## Amenorrhoea

Category: [Womens Health](#) [1]

Topic: [Menstrual Problems](#) [2]

Amenorrhoea means the absence of a menstrual period in females. Amenorrhoea can be either primary or secondary. Primary amenorrhoea refers to the failure of a period to start by the age of 16, in the presence of otherwise normal growth and development of secondary sexual characteristics (breast development, pubic hair) or, the failure of onset of puberty by the age of 13. Secondary amenorrhoea refers to the cessation of periods for six months or more after normal puberty and menstruation has occurred.

### What is menstruation?

Menstruation is the cyclical loss (known as sloughing) of the inner layer of the uterus (called the endometrium) which occurs as a result of a complex interaction between hormones in the brain (hypothalamus and pituitary gland) and the ovaries. The normal menstrual cycle is approximately 28 days and starts on the first day of menses (also known as the period). During the first 14 days of this cycle (known as the follicular phase), the hypothalamus releases a hormone called gonadotropin-releasing hormone (GnRH), which stimulates the release of two hormones (follicle-stimulating hormone (FSH) and luteinizing hormone (LH)) from the anterior pituitary gland. These two hormones have multiple effects, one of which is to act on the ovaries to stimulate the production of oestrogen. Oestrogen causes the endometrium to thicken.

In the middle of this cycle (day 14), the ovary is stimulated to release an egg in a process called ovulation. This marks the end of the follicular phase and the beginning of a phase called the luteal phase. The main hormone responsible during this phase is progesterone. Progesterone is released from the part of the ovary from which the egg came (now called the corpus luteum) and makes the uterus more receptive to implantation of an embryo, which is necessary for pregnancy.

If implantation fails to occur after 12 to 15 days, the corpus luteum degenerates and stops producing hormones. This loss of hormones leads to changes in the uterus, which ultimately leads to sloughing of the endometrium and menses.

### Cause:

#### How does Amenorrhoea occur?

Amenorrhoea may occur as a result of dysfunction at any of these levels. The hypothalamus, the pituitary gland or the ovary may be responsible for the amenorrhoea as a result of abnormal hormonal secretion. In addition to this, abnormalities in the uterus and outflow tract (vagina, cervix) may also be responsible for amenorrhoea.

Other abnormalities that may occur in a menstrual cycle include oligomenorrhoea (periods which occur at intervals longer than 35 days); menorrhagia (prolonged periods lasting more than seven days or associated with greater than 80mL blood loss per period, compared to the average 40mL loss) and metrorrhagia (irregular bleeding at more frequent intervals).

## Causes of Amenorrhoea

### Hypothalamus:

- eating disorders
- excessive exercise
- high levels of prolonged physical or mental stress
- brain tumour
- following brain surgery or injury

### Anterior pituitary

- pituitary tumour (eg prolactinoma)
- following brain surgery or injury
- metabolic diseases such as haemochromatosis

### Ovary

- genetic abnormality preventing normal ovarian function
- premature ovarian failure, when the ovary goes into 'menopause' at an early age (may affect 1 in 10 000 women by the age of 20)
- polycystic ovarian syndrome

### Uterus

- pregnancy
- abnormal uterus
- lack of uterus

### Abnormalities of the outflow tract

- imperforate hymen causes an outflow obstruction
- transverse vaginal septum can be anywhere along the tract between the hymenal ring and cervix
- vaginal or cervical abnormality.

## Treatment:

Determining the cause of your amenorrhoea is necessary in order to begin appropriate management. Your doctor will need to ask for detailed information regarding your general health, sexual and physical development, diet and exercise habits as well as inquire about any family history of similar problems. Your doctor may also need to perform a physical examination, which may

include the breasts (to check for normal development) and the pelvis (to look for any obvious abnormalities). In addition to this, you may be required to have a blood test, to look at hormone levels in the blood (including pregnancy hormones, FSH, LH, testosterone, prolactin and thyroid), and imaging studies such as an ultrasound of the pelvis or a scan of the head or pelvis.

Treatment will depend on the underlying cause and may involve a combination of medical therapy (such as hormone therapy, nutritional advice or other medication) or surgery. Counselling may also be required, such as from a psychiatrist, psychologist or social worker. Depending on the cause of the amenorrhea, referral to a fertility clinic may also be offered.

**Health Outcome:**

Regular follow up by a specialist physician or your GP may be required.

Loss of menstrual regularity has been associated with an increased risk of wrist and hip fractures related to decreased bone density. However, this is unlikely to be significant if amenorrhoea is short term or managed in the longer term using hormone replacement therapy. Ensuring adequate nutrition, including vitamin D and calcium intake (1200-1500 milligrams per day), exercise (20-30 minutes of weight-bearing exercise per day) and cessation of smoking will help optimise your health.

**Other resources:**

[Amenorrhoea E-medicine Health](#) [3]

[Jean Hailes Foundation for Women's Health](#) [4]

**Related Factsheets**

[Dysmenorrhoea](#) [5]

[Polycystic Ovarian Syndrome](#) [6]

**Help and Assistance:**

If you have any symptoms of or concerns about amenorrhoea:

- consult your usual general practitioner (GP)
- contact 13 HEALTH by phoning 13 43 25 84 and speak to a registered nurse.

**Links:**

[1] <http://www.healthier.qld.gov.au/category/topic/womens-health>

[2] <http://www.healthier.qld.gov.au/category/category/menstrual-problems>

[3] [http://www.emedicinehealth.com/amenorrhea/article\\_em.htm](http://www.emedicinehealth.com/amenorrhea/article_em.htm)

[4] <http://www.earlymenopause.org.au/>

[5] <http://www.healthier.qld.gov.au/conditions-treatments/dysmenorrhoea>

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[6] <http://www.healthier.qld.gov.au/conditions-treatments/polycystic-ovarian-syndrome>