MENSTRUAL CYCLE DISORDERS

Menstrual Disturbance

An abnormal condition in a woman’s menstrual cycle.

Diagnosis

Female

Related Diagnoses:

- Anorexia Nervosa
- Obesity
- Polycystic ovary syndrome
- Anovulation
- Endometriosis
- Adenomyosis
- Premature ovarian failure
- Pelvic Inflammatory Disease
- Amenorrhoea
- Uterine fibroids
- Tubal ligation
- Ovarian cysts

About Menstrual cycle disorders

Menstrual problems are the most common gynecologic complaints. Menstrual disorders include menstrual irregularity, menorrhagia, dysmenorrhoea and other related symptoms. The prevalence is highest in the 20 to 24-year-old age group and decreases progressively thereafter. They affect not only the woman, but also family, social and national economics as well. There is a wide spectrum of differences in how women experience menstruation. There are several ways that someone’s menstrual cycle can differ from the norm, any of which should be discussed with a doctor to identify the underlying cause.

Disorders of ovulation

Disorders of ovulation include oligoovulation and anovulation:

- **Oligoovulation** is infrequent or irregular ovulation (usually defined as cycles of ≥ 36 days or < 8 cycles a year). Oligoovulation is seen in women with asymmetrical cycles, or very long cycles (more then 50 days).

- **Anovulation** is absence of ovulation when it would be normally expected (in a post-menarchal, premenopausal woman). Anovulation usually manifests itself as irregularity of menstrual periods, that is, unpredictable variability of intervals, duration, or bleeding. Anovulation can also cause cessation of periods (secondary amenorrhea) or excessive bleeding (dysfunctional uterine bleeding).

Disorders of cycle length:

- **Polymenorrhea** is the medical term for cycles with intervals of 21 days or fewer. Irregular menstruation is where there is variation in menstrual cycle length of more than approximately eight days for a woman. The term metrorrhagia is often used for irregular menstruation that occurs between the expected menstrual periods.

- **Irregular menstruation** is where there is variation in menstrual cycle length of more than approximately eight days for a woman. The term metrorrhagia is often used for irregular menstruation that occurs between the expected menstrual periods.

- **Oligomenorrhea** is the medical term for infrequent, often light menstrual periods (intervals exceeding 35 days).
**Amenorrhea** is the absence of a menstrual period in a woman of reproductive age. Physiologic states of amenorrhoea are seen during pregnancy and lactation (breastfeeding). Outside of the reproductive years there is absence of menses during childhood and after menopause.

**Disorders of flow:**

**Hypomenorrhea** is abnormally light menstrual periods, substantially less than 30 ml per menstrual cycle.

**Menorrhagia** is an abnormally heavy and prolonged menstrual period (more than 80 ml per menstrual cycle). If there is excessive menstrual and uterine bleeding other than that caused by menstruation, menometrorrhagia may be diagnosed. Causes may be due to abnormal blood clotting, disruption of normal hormonal regulation of periods or disorders of the endometrial lining of the uterus. Depending upon the cause, it may be associated with abnormally painful periods.

**Dysmenorrhea**

Dysmenorrhea (or dysmenorrhoea), cramps or painful menstruation, involves menstrual periods that are accompanied by either sharp, intermittent pain or dull, aching pain, usually in the pelvis or lower abdomen.

**Associated diseases**
- Premenstrual syndrome (PMS)
- Polycystic Ovarian Syndrome
- Pelvic inflammatory disease
- Adenomyosis
- Fibroids
- Ovarian cysts
- Endometriosis
- POF (premature ovarian failure)

**Complications**
- Anemia
- Osteoporosis
- Infertility

**Risk factors**
- underweight
- pregnancy history
- smoking
- stress
- family history

**Impact on fertility**

Some conditions associated with heavy bleeding, such as ovulation abnormalities, fibroids, or endometriosis, are important contributors to infertility.

Many conditions that cause absence of a menstrual period (amenorrhoea), such as ovulation abnormalities and PCOS (Polycystic Ovarian Syndrome), can also cause infertility. Asymmetrical periods from any cause may make it more difficult to conceive.

Sometimes treating the underlying condition can resume fertility. In other cases, specific fertility treatments that use ART may be helpful.

**Prevention**

A detailed picture of your overall health is a good step for the prevention of menstrual disorders.
Symptoms

- infrequent periods
- short or extremely light periods
- too-frequent periods (defined as more frequently than every 21 days)
- extremely heavy or long periods (one guideline is soaking a sanitary napkin or tampon every hour or so, or menstruating for longer than 7 days)
- extremely painful periods
- breakthrough bleeding (also called spotting) between periods; normal in many females
- absent periods

Therapies

Self therapy

Acupuncture

Acupuncture is a kind of non-drug therapy originated from traditional Chinese medicine. It is a safe treatment with few side effects. Now it has been already widely used all over the world. Previous studies have shown that acupuncture can inhibit androgen secretion, regulate gonadotropin secretion and enhance ovulation and menstruation.

Yoga

The hormones liberated from the hypothalamus, pituitary and ovary are interdependent. A well-coordinated axis is formed called hypothalamic pituitary ovarian axis. The secretion of hormones is modified through feedback mechanism operating through this axis. The axis is modified by many factors like stress, hormones liberated from thyroid and adrenal glands. Breathing yoga exercises not only calms the mind but also improves the blood supply to vital and endocrine organs of the body. Yoga corrects the imbalance of autonomic nervous system and controls the over activity of sympathetic nervous system. It corrects the uterine hyperactivity and dysrhythmic uterine contractions which otherwise are responsible for dysmenorrhea.

Conventional medicine

Pharmacotherapy

There are a number of different medicines prescribed for menstrual disorders:

Nonsteroidal anti-inflammatory drugs (NSAIDs)

These medications are commonly used in different fields of reproductive medicine, for pain management after operative procedures and to relieve dysmenorrhea. In addition to their analgesic effect, NSAIDs are helpful in the management of menorrhagia by decreasing menstrual blood loss.

Progestins

Progestins are synthetic progestogens that have progestogenic effects similar to those of progesterone. The two most common uses of progestins are for hormonal contraception (either alone or with an estrogen), and to prevent endometrial hyperplasia from unopposed estrogen in hormone replacement therapy. Progestins are also used to treat secondary amenorrhea, dysfunctional uterine bleeding and endometriosis, and as palliative treatment of endometrial cancer, renal cell carcinoma, breast cancer, and prostate cancer.

Danazol

Danazol is a derivative of the synthetic steroid ethisterone that suppresses the production of gonadotropins and has some weak androgenic effects. Although effective for endometriosis, its use
is limited by its masculinizing side-effects. Its role as a treatment for endometriosis has been largely replaced by the GnRH agonists.

**Surgical therapy**

**Endometrial ablation**

Endometrial ablation is a medical procedure that is used to remove (ablate) or destroy the endometrial lining of a uterus. This technique is most often employed for people who suffer from excessive or prolonged bleeding during their menstrual cycle but cannot or do not wish to undergo a hysterectomy. The procedure is most commonly done on an outpatient basis. Placenta accretamay occur if the patient becomes pregnant after endometrial ablation, so birth control is recommended. However, heavy menstrual bleeding is most commonly due to dysfunctional uterine bleeding or adenomyosis. Approximately 80% of those who undergo this procedure will have reduced menstrual bleeding. Of those, approximately 45% will stop having periods altogether. However, a second procedure or a hysterectomy will be required in approximately 22% of cases.

**Hysterectomy**

Hysterectomy is the preferred strategy for the first intervention for heavy menstrual bleeding. Hysterectomy is the surgical removal of the uterus. It may also involve removal of the cervix, ovaries, fallopian tubes and other surrounding structures. Usually performed by a gynecologist, hysterectomy may be total (removing the body, fundus, and cervix of the uterus; often called "complete") or partial (removal of the uterine body while leaving the cervix intact; also called "supracervical"). It is the most commonly performed gynecological surgical procedure.

**Other therapies**

**Intrauterine device (IUD)**

While copper IUDs may increase menstrual bleeding and result in more painful cramps hormonal IUDs may reduce menstrual bleeding or stop menstruation altogether. Cramping can be treated with NSAIDs. Other potential complications include expulsion (2–5%) and rarely perforation of the uterus (less than 0.7%). A previous model of the intrauterine device (the Dalkon shield) was associated with an increased risk of pelvic inflammatory disease.

**Assisted reproduction**

IVF with own or donated gametes is a major treatment in infertility when other methods of achieving conception have failed. With egg donation, women who are past their reproductive years or menopause can still become pregnant.

**Find more about related issues**

**Diagnoses**

**Anorexia Nervosa**

An eating disorder characterized by the maintenance of a body weight below average, fear of gaining weight, and a distorted body image.

Learn more at: [www.fertilitypedia.org/therapy/diag/anorexia-nervosa](http://www.fertilitypedia.org/therapy/diag/anorexia-nervosa)

**Obesity**

A disease of excess body fat that can have a negative effect on health, leading to reduced life expectancy and other health problems.

Learn more at: [www.fertilitypedia.org/therapy/diag/obesity](http://www.fertilitypedia.org/therapy/diag/obesity)
Polycystic ovary syndrome
A condition in which a woman has an imbalance of female sex hormones. This may lead to changes in the menstrual cycle, cysts in the ovaries, trouble g
Learn more at: www.fertilitypedia.org/therapy/diag/polycystic-ovary-syndrome

Anovulation
Failure of the ovaries to release an oocyte over a period of time generally exceeding 3 months.
Learn more at: www.fertilitypedia.org/therapy/diag/anovulation

Endometriosis
A state in which pieces of the tissue alike to the lining of the uterus (endometrium) grow in other parts of the body.
Learn more at: www.fertilitypedia.org/therapy/diag/endometriosis

Adenomyosis
Medical condition characterized by the presence of ectopic endometrial tissue within the myometrium.
Learn more at: www.fertilitypedia.org/therapy/diag/adenomyosis

Premature ovarian failure
The loss of function of the ovaries before age 40.
Learn more at: www.fertilitypedia.org/therapy/diag/premature-ovarian-failure

Pelvic Inflammatory Disease
Infection of the upper part of the female reproductive system and a common complication of some sexually transmitted diseases.
Learn more at: www.fertilitypedia.org/therapy/diag/pelvic-inflammmatory-disease-do-rf

Amenorrhoea
The absence of a menstrual period in women of reproductive age.
Learn more at: www.fertilitypedia.org/therapy/diag/amenorrhoea

Uterine fibroids
The most common benign smooth muscle tumors of the uterus encountered in women of reproductive age.
Learn more at: www.fertilitypedia.org/therapy/diag/uterine-fibroids

Tubal ligation
A permanent form of female sterilization, in which the fallopian tubes are severed and sealed or “pinched shut”, in order to prevent fertilization.
Learn more at: www.fertilitypedia.org/therapy/diag/tubal-ligation

Ovarian cysts
Abnormal sacs filled with liquid or semi-solid matter found in the ovary, which can have negative impact on female fertility.
Learn more at: www.fertilitypedia.org/therapy/diag/ovarian-cysts

Organs

Hypothalamus
A region of the forebrain that regulates body temperature, some metabolic processes and governs the autonomic nervous system.
Learn more at: www.fertilitypedia.org/edu/organs/hypothalamus

Ovary
The ovum-producing organs of the internal female reproductive system
Learn more at: www.fertilitypedia.org/edu/organs/ovary
**Pituitary gland**
An endocrine gland, about the size of a pea, whose secretions control the other endocrine glands and influence growth, metabolism, and maturation.
Learn more at: [www.fertilitypedia.org/edu/organisms/pituitary-gland](http://www.fertilitypedia.org/edu/organisms/pituitary-gland)

**Uterus**
The uterus is the largest and major organ of the female reproductive tract that is the site of fetal growth and is hormonally responsive
Learn more at: [www.fertilitypedia.org/edu/organisms/uterus](http://www.fertilitypedia.org/edu/organisms/uterus)

**Reproductive cells**

- **Endometrium**
The innermost layer of uterus forming the uterine lumen where the implantation of an oocyte happens.
Learn more at: [www.fertilitypedia.org/edu/reproductive-cells/endometrium](http://www.fertilitypedia.org/edu/reproductive-cells/endometrium)

- **Oocyte**
A female germ cell involved in reproduction.
Learn more at: [www.fertilitypedia.org/edu/reproductive-cells/oocyte](http://www.fertilitypedia.org/edu/reproductive-cells/oocyte)

**Biological control**

- **Estradiol**
A steroid and estrogen sex hormone produced in the ovaries of females.
Learn more at: [www.fertilitypedia.org/edu/biological-control/estradiol](http://www.fertilitypedia.org/edu/biological-control/estradiol)

- **Follicle-stimulating hormone**
FSH is a hormone secreted by the anterior pituitary gland. It regulates the development, growth, pubertal matur and reproductive functions of the body
Learn more at: [www.fertilitypedia.org/edu/biological-control/follicle-stimulating-hormone](http://www.fertilitypedia.org/edu/biological-control/follicle-stimulating-hormone)

- **Human chorionic gonadotropin**
A hormone that supports the normal development of an egg in a woman's ovary, and stimulates the release of the egg during ovulation.
Learn more at: [www.fertilitypedia.org/edu/biological-control/human-chorionic-gonadotropin](http://www.fertilitypedia.org/edu/biological-control/human-chorionic-gonadotropin)

**Reproductive functions**

- **Endometrial receptivity**
Period when the womb is receptive for implantation of the free-lying blastocyst.
Learn more at: [www.fertilitypedia.org/edu/reproductive-functions/endometrial-receptivity](http://www.fertilitypedia.org/edu/reproductive-functions/endometrial-receptivity)

- **Fertilization**
The fusion of an ovum with a sperm to initiate the development of a new individual organism.
Learn more at: [www.fertilitypedia.org/edu/reproductive-functions/fertilization](http://www.fertilitypedia.org/edu/reproductive-functions/fertilization)

- **Folliculogenesis**
Development of ovarian follicles from primordial to tertiary under the stimulation of gonadotropins.
Learn more at: [www.fertilitypedia.org/edu/reproductive-functions/folliculogenesis](http://www.fertilitypedia.org/edu/reproductive-functions/folliculogenesis)

- **Implantation**
The very early stage of pregnancy at which the embryo adheres to the wall of the uterus.
Learn more at: [www.fertilitypedia.org/edu/reproductive-functions/implantation](http://www.fertilitypedia.org/edu/reproductive-functions/implantation)
Ovulation
The release of egg(s) from the ovaries.
Learn more at: www.fertilitypedia.org/edu/reproductive-functions/ovulation

⚠️ Risk factors

Anemia
A decrease in the amount of red blood cells or hemoglobin in the blood.
Learn more at: www.fertilitypedia.org/therapy/rf/anemia

Drug use
A patterned use of a drug in which the user consumes the substance in amounts or with methods which are harmful to themselves or others.
Learn more at: www.fertilitypedia.org/therapy/rf/drug-use-1

Early onset of menses
Occurrence of menstruation in 11 years or less.
Learn more at: www.fertilitypedia.org/therapy/rf/early-onset-of-menses

Eating disorder
A mental disorder defined by abnormal eating habits that negatively affect a person’s physical or mental health.
Learn more at: www.fertilitypedia.org/therapy/rf/eating-disorder

Ectopic pregnancy
A complication of pregnancy in which the embryo attaches outside the uterus.
Learn more at: www.fertilitypedia.org/therapy/rf/ectopic-pregnancy

Emotional stress
Learn more at: www.fertilitypedia.org/therapy/rf/emotional-stress

Extreme weight loss
A loss of significantly greater amount of weight compared to usual weight loss rates.
Learn more at: www.fertilitypedia.org/therapy/rf/extreme-weight-loss

Miscarriage
Pregnancy loss is the natural death of an embryo or fetus before it is able to survive independently
Learn more at: www.fertilitypedia.org/therapy/rf/miscarriage

Obesity
A medical condition of excess body fat that can have a negative effect on health, leading to reduced life expectancy and other health problems.
Learn more at: www.fertilitypedia.org/therapy/rf/obesity

Poor dietary habits
Eating habits are one of the few factors within our control that impact not only our chances of falling pregnant.
Learn more at: www.fertilitypedia.org/therapy/rf/poor-dietary-habits

Smoking
Long-lasting inhalation of the smoke of burning tobacco.
Learn more at: www.fertilitypedia.org/therapy/rf/smoking-1

Surgical termination of pregnancy
The termination of pregnancy by removing a fetus or embryo before it can survive outside the uterus that is performed by surgery.
Learn more at: www.fertilitypedia.org/therapy/rf/surgical-termination-of-pregnancy
Underweight
Underweight is a term describing a person whose body weight is considered too low to be healthy.
Learn more at: www.fertilitypedia.org/therapy/rf/underweight

Symptoms

Absence of menstrual periods
The absence of a menstrual period in a woman of reproductive age.
Learn more at: www.fertilitypedia.org/edu/symptoms/absence-of-menstrual-periods-1

Absence of ovulation
An anovulatory cycle is a menstrual cycle during which the ovaries do not release an oocyte.
Learn more at: www.fertilitypedia.org/edu/symptoms/absence-of-ovulation-1

Early puberty for girls
The onset of puberty before the average age in girls (8 years).
Learn more at: www.fertilitypedia.org/edu/symptoms/early-puberty-for-girls

Heavy or prolonged bleeding in menstrual period
Abnormally heavy or prolonged bleeding in menstrual periods.
Learn more at: www.fertilitypedia.org/edu/symptoms/heavy-or-prolonged-bleeding-in-menstrual-period-1

Hypomenorrhea
Short or scanty periods with extremely light menstrual blood flow.
Learn more at: www.fertilitypedia.org/edu/symptoms/hypomenorrhea

Infertility
The failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse.
Learn more at: www.fertilitypedia.org/edu/symptoms/infertility

Infrequent menstruation
The medical term for infrequent, often light menstrual periods (intervals exceeding 35 days).
Learn more at: www.fertilitypedia.org/edu/symptoms/infrequent-menstruation-1

Irregular menstruation
Irregular menstruation is a menstrual disorder whose manifestations include irregular cycle lengths as well as metrorrhagia.
Learn more at: www.fertilitypedia.org/edu/symptoms/irregular-menstruation

Osteoporosis
A chronic condition characterized by low bone mass and increased risk of fracture.
Learn more at: www.fertilitypedia.org/edu/symptoms/osteoporosis

Overweight
Body weight that's greater than what is considered healthy for a certain height.
Learn more at: www.fertilitypedia.org/edu/symptoms/overweight

Painful menstruation
Dysmenorrhea is a pain during menstruation. It is the most common menstrual disorder.
Learn more at: www.fertilitypedia.org/edu/symptoms/painful-menstruation

Polymenorrhea
The medical term for cycles with intervals of 21 days or fewer.
Learn more at: www.fertilitypedia.org/edu/symptoms/polymenorrhea
Premenstrual syndrome
A combination of physical and emotional disturbances that occur after a woman ovulates and ends with menstruation.
Learn more at: www.fertilitypedia.org/edu/symptoms/premenstrual-syndrome

Underweight
A term describing a person whose body weight is considered too low to be healthy.
Learn more at: www.fertilitypedia.org/edu/symptoms/underweight

Therapies

Acupuncture
A form of alternative medicine and a key component of traditional Chinese medicine involving thin needles inserted into the body at acupuncture points
Learn more at: www.fertilitypedia.org/edu/therapies/acupuncture

Diet therapy of Anorexia nervosa
A treatment by food, including nutritional restoration and weight normalization.
Learn more at: www.fertilitypedia.org/edu/therapies/diet-therapy-of-anorexia-nervosa-1

Egg donation
Process by which a woman donates eggs for purposes of assisted reproduction or biomedical research.
Learn more at: www.fertilitypedia.org/edu/therapies/egg-donation

Endometrial ablation
An outpatient medical procedure that is used to remove or destroy the endometrial lining of the uterus in women.
Learn more at: www.fertilitypedia.org/edu/therapies/endometrial-ablation

ICSI
A micromanipulative fertilization technique in which a single sperm is injected directly into an egg.
Learn more at: www.fertilitypedia.org/edu/therapies/icsi

Lifestyle change
The way a person lives.
Learn more at: www.fertilitypedia.org/edu/therapies/lifestyle-change

Medical nutrition therapy
It is a therapeutic approach to treating medical conditions and their associated symptoms via the use of a specifically tailored diet.
Learn more at: www.fertilitypedia.org/edu/therapies/medical-nutrition-therapy

Ovarian drilling
A surgical treatment that can trigger ovulation in women with polycystic ovary syndrome (PCOS).
Learn more at: www.fertilitypedia.org/edu/therapies/ovarian-drilling

Pharmacotherapy of amenorrhea
Learn more at: www.fertilitypedia.org/edu/therapies/pharmacotherapy-of-amenorrhea

Pharmacotherapy of anovulation
Learn more at: www.fertilitypedia.org/edu/therapies/pharmacotherapy-of-anovulation

Pharmacotherapy of menstrual disorders
Drugs, which are used as a therapy of menstrual disorders.
Learn more at: www.fertilitypedia.org/edu/therapies/pharmacotherapy-of-menstrual-disorders
Physical exercise
Physical exercise is any bodily activity that enhances or maintains physical fitness and overall health and wellness.
Learn more at: www.fertilitypedia.org/edu/therapies/physical-exercise-1

Sperm donation
The procedure in which a man (sperm donor) provides his sperm for fertility treatment.
Learn more at: www.fertilitypedia.org/edu/therapies/sperm-donation

Standard IVF
A process in which an egg is fertilised by sperm outside the body: in vitro. Own or donated gametes may be used.
Learn more at: www.fertilitypedia.org/edu/therapies/standard-ivf

Traditional Chinese medicine
A broad range of medicine practices sharing common concepts which have been developed in China and are based on a tradition of more than 2000 years.
Learn more at: www.fertilitypedia.org/edu/therapies/traditional-chinese-medicine

Yoga
A physical, mental, and spiritual practice or discipline which originated in India.
Learn more at: www.fertilitypedia.org/edu/therapies/yoga

Sources

"Menstruation (https://upload.wikimedia.org/wikipedia/commons/thumb/2/2a/MenstrualCycle2_en.svg/1000px-MenstrualCycle2_en.svg.png)" —sourced from Wikipedia licensed under CC BY-SA 3.0

"Menstrual problems and associated factors among students of Bahir Dar University, Amhara National Regional State, Ethiopia: A cross-sectional survey (http://www.panafrican-med-journal.com/content/article/17/246/full/#_VrtAvl|bDIW)" —by Shiferaw et al. licensed under CC BY 2.0

"Menstrual disorder (https://en.wikipedia.org/wiki/Menstrual_disorder)" —sourced from Wikipedia licensed under CC BY-SA 3.0

"Human Physiology/Pregnancy and birth (https://en.wikibooks.org/wiki/Human_Physiology/Pregnancy_and_birth)" —sourced from Wikibooks licensed under CC BY-SA 3.0

"Egg donation (https://en.wikipedia.org/wiki/Egg_donation)" —sourced from Wikipedia licensed under CC BY-SA 3.0

"Total_laparoscopical_hysterectomy (https://en.wikipedia.org/wiki/Hysterectomy/media/File:Total_laparoscopical_hysterectomy.jpg)" —by Hic et nunc licensed under CC BY-SA 3.0

"Role of Non-Steroidal Anti-Inflammatory Drugs in Gynecology (http://www.mdpi.com/1424-8247/3/7/2082)" —by Livshits and Seidman licensed under CC BY 3.0

"Progestin (https://en.wikipedia.org/wiki/Progestin)" —sourced from Wikipedia licensed under CC BY-SA 3.0

"Danazol (https://en.wikipedia.org/wiki/Danazol)" —sourced from Wikipedia licensed under CC BY-SA 3.0

"Endometrial ablation (https://en.wikipedia.org/wiki/Endometrial_ablation)" —sourced from Wikipedia licensed under CC BY-SA 3.0

"Hysterectomy, endometrial ablation, and levonorgestrel releasing intrauterine system (Mirena) for treatment of heavy menstrual bleeding: cost effectiveness analysis (http://www.bmj.com/content/342/bmj.d2202)" —by Roberts et al. licensed under CC BY-NC 2.0

"Intrauterine device (https://en.wikipedia.org/wiki/Intrauterine_device)" —sourced from Wikipedia licensed under CC BY-SA 3.0

"Effects of Yoga in Menstrual Disorders (http://www.scopemed.org/?mno=179155)" —by Tejwani and Tejwani licensed under CC BY-NC 3.0