HEALTH BASICS

Normal menstrual cycle

The menstrual cycle is the monthly hormone-driven process that prepares the body for pregnancy.

WHAT IT IS
A hormone-driven cycle involving the ovaries and uterus

WHERE IT COMES UP
Period tracking, pregnancy planning, contraception, and health visits

WHY IT MATTERS
Cycle patterns can provide useful information about reproductive health

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
A primary care clinician or reproductive health service

HOW IT IS CHECKED
Cycle tracking and clinical review when needed

Overview

The menstrual cycle is the repeating process through which the ovaries release hormones and the lining of the uterus changes. If pregnancy does not occur, that lining is shed as a menstrual period.

The cycle is not a disease. It is a normal body process from puberty until menopause, apart from times when periods pause, such as during pregnancy. Breastfeeding, hormonal contraception, illness, stress and other factors can also change the pattern.

Cycle day 1 is the first day of menstrual bleeding, not light spotting before the period. The cycle ends the day before the next period starts.

A 28-day cycle is often used as an example, but it is not a requirement. Many healthy cycles are shorter or longer. Clinical definitions differ somewhat by age and context. In adults, cycles about 24 to 38 days apart are generally considered within the usual range. During the first few years after periods begin, cycles are often less regular.

Bleeding commonly lasts up to about a week. The amount and pattern can differ between people. What matters is whether the pattern is reasonable for your stage of life, whether it changes, and whether bleeding or pain interferes with daily life.

How it works

The cycle is controlled by signals between the brain, ovaries and uterus. Important hormones include estrogen and progesterone, which are made mainly by the ovaries, and follicle-stimulating hormone and luteinizing hormone, which come from the pituitary gland in the brain.

The cycle can be described in four connected stages.

If sperm fertilizes an egg, the resulting early pregnancy may attach to the uterine lining. Hormone signals then help maintain the lining instead of shedding it.

Some people notice changes around ovulation, such as clearer, more slippery cervical mucus. These observations may suggest that ovulation is approaching, but they cannot confirm its exact timing on their own.

- Menstruation: Falling estrogen and progesterone levels cause the uterine lining to shed. Blood and tissue leave through the vagina as a period.
- Follicular phase: Follicle-stimulating hormone helps several fluid-filled sacs in an ovary begin developing. Usually, one follicle becomes dominant and contains the egg that may be released. Rising estrogen helps rebuild the uterine lining.
- Ovulation: A rise in luteinizing hormone triggers the ovary to release an egg. Ovulation does not always happen on day 14; its timing depends on the cycle's length and can shift from one cycle to another.
- Luteal phase: The emptied follicle forms a structure called the corpus luteum. It produces progesterone, which supports the uterine lining. If pregnancy does not begin, hormone levels fall and another period starts.

Why it matters for your health

A menstrual pattern can offer information about hormone function, ovulation and the health of the uterus. A change does not automatically mean something is wrong. Travel, stress, recent illness, weight changes and life stages such as puberty or perimenopause may affect timing.

Cycle information can help when planning or avoiding pregnancy. Pregnancy is most likely during the fertile window around ovulation, but calendar estimates are not exact. Ovulation may occur earlier or later than expected, even in someone whose periods seem regular.

Bleeding also affects iron loss. Repeated heavy or prolonged bleeding can contribute to iron-deficiency anaemia, meaning the body does not have enough healthy red blood cells

because iron stores are low. This may cause tiredness, reduced exercise tolerance, breathlessness or dizziness.

Periods do not need to happen monthly for health reasons when they are safely suppressed by some hormonal contraceptives. Bleeding during the pill-free interval of combined hormonal contraception is usually withdrawal bleeding caused by stopping hormones briefly. It is not the same process as a period after a natural ovulatory cycle.

What can go wrong

Several conditions or situations can change menstrual timing, bleeding or pain. These include:

A single early or late period often does not need medical testing. Arrange a routine appointment if cycles remain noticeably different from your usual pattern, bleeding repeatedly lasts longer than about a week, periods regularly interfere with daily activities, or pain is difficult to manage.

Also seek routine assessment if periods stop for three months when pregnancy, breastfeeding, menopause and menstrual-suppressing treatment do not explain it. A pregnancy test is a useful first step when pregnancy is possible.

Get prompt medical advice for new severe pelvic pain, bleeding during a possible pregnancy, or bleeding that is much heavier than usual.

Seek emergency care for heavy bleeding with fainting, marked dizziness, chest pain or difficulty breathing. Possible pregnancy with severe one-sided pelvic pain, shoulder pain, weakness or fainting also needs emergency assessment because these can occur with an ectopic pregnancy.

- Pregnancy, including pregnancy outside the uterus, called ectopic pregnancy
- Polycystic ovary syndrome, which can interfere with regular ovulation
- Thyroid disorders or high levels of the hormone prolactin
- Fibroids, adenomyosis or uterine polyps
- Endometriosis, which may cause significant pain
- Bleeding disorders, including von Willebrand disease
- Perimenopause, the transition leading up to menopause
- Low energy intake, major weight change or intensive exercise
- Stress, illness, medicines and hormonal contraception

What you can do

You do not need to monitor every cycle if your periods are manageable and you have no concerns. If you want a useful record, note:

A paper calendar is enough. If you use an app, review its privacy policy before entering sensitive health information.

If your pattern changes, useful questions to ask include whether a pregnancy test is appropriate, whether a medicine or contraceptive could explain the change, and whether blood tests or an ultrasound are needed. Tests are chosen according to the concern. They may include a pregnancy test, blood count, iron tests, thyroid testing or a pelvic ultrasound.

Tracking alone cannot prove that ovulation occurred, identify the cause of unusual bleeding or reliably rule out pregnancy.

- The first day of each period
- How many days bleeding lasts
- Whether flow is light, moderate or heavy for you
- Bleeding or spotting between periods
- Pain and its effect on sleep, work, school or usual activities
- Relevant changes in contraception, medicines, stress or health

Common questions

Does a normal cycle have to last 28 days?

No. Twenty-eight days is an average often used for teaching. Healthy cycles can be shorter or longer, and small changes from month to month are common.

Does having regular periods prove that I ovulate?

No. Regular bleeding makes regular ovulation more likely, but bleeding can sometimes occur without ovulation. Clinical tests may be needed when confirming ovulation matters.

Can pregnancy happen after sex during a period?

Yes. Ovulation can occur earlier than expected, and sperm can remain capable of fertilization for several days. Menstrual timing should not be used as the only form of contraception.

Is spotting part of a period?

Light spotting just before or after a period may occur, but cycle day 1 is usually counted from

the first day of proper menstrual flow. Repeated bleeding between periods or after sex is worth discussing at a routine appointment.

Are irregular cycles normal in teenagers?

Some irregularity is common in the first few years after menstruation begins because the hormone system is still maturing. Very long gaps, persistent heavy bleeding or a major effect on daily life should still be assessed.

Is it harmful not to bleed while using hormonal contraception?

Not necessarily. Some hormonal methods safely reduce or stop bleeding, and blood does not build up inside the uterus. Ask the prescribing clinician what bleeding pattern is expected with your method.

Sources

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