Women's health depends on a lifetime of answers—one test at a time.

Women and Puberty and the Menstrual Cycle

www.siemens.com/women-and-puberty
Puberty is the process of physical changes by which a child’s body becomes an adult body capable of reproduction.¹ For females, puberty is marked by the onset of menstruation, an important milestone in their reproductive lives.
What Is the Menstrual Cycle?

Menstruation is when the body sheds the lining of the uterus (womb). Having regular menstrual cycles is a sign that important parts of the body are working normally.²

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Sequence of major changes in a menstrual cycle that is 28 days long.

Source: plannedparenthood.org
Gender Differences
Two of the most significant differences between puberty in girls and boys are the age at which it begins and the major sex steroids involved. Girls attain reproductive maturity about 4 years after the first physical changes of puberty appear. In contrast, boys accelerate more slowly but continue to grow for about 6 years after the first visible pubertal changes.³ Any increase in height beyond the post-pubertal age is uncommon.

In North America, the first sign of puberty for young girls—breasts budding—normally occurs between ages 8 and 13, with an average age of 10 years.⁴

• The average duration of puberty is 4 years but can range from 1.5 to 8 years.⁴
• The first menstrual period for U.S. girls today occurs on average between ages 12 and 13, compared with age 14 for girls in 1900. Regular ovulation is established by about 20 menstrual cycles after the first period.⁴
• A normal menstrual cycle lasts about 28 days but can vary from 21 to 45 days in adolescents.⁴
• In developing countries, abnormal uterine bleeding appears to affect about 5–15% of women of reproductive age.⁵

Abnormal uterine bleeding is a leading indication for hysterectomy, the most common non-obstetric operation in women in both the United States and the United Kingdom.⁵

Related Conditions
Amenorrhea—lack of a menstrual period. This term is used to describe the absence of a period in:²
• Young women who haven’t started menstruating by age 15
• Women and girls who haven’t had a period for 90 days, even if they haven’t been menstruating for long
• Causes include:
  – Pregnancy
  – Breastfeeding
  – Extreme weight loss
  – Eating disorders
  – Stress

Dysmenorrhea—painful periods, including severe cramps. Menstrual cramps in teens are caused by too much of a chemical called prostaglandin.²
## Reproductive endocrinology solutions from Siemens

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* Under development. Not available for sale.

† Not available for sale in the U.S.

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**References**

1. [http://www.princeton.edu/~achaney/tmve/wiki100k/docs/Puberty.html](http://www.princeton.edu/~achaney/tmve/wiki100k/docs/Puberty.html)
4. [http://www.acog.org/~/media/NewsRoom/MediaKit.pdf](http://www.acog.org/~/media/NewsRoom/MediaKit.pdf)
Caring for Women during Puberty

The onset of puberty and menstruation are important milestones. Understanding symptoms, implementing appropriate therapies, and monitoring treatment are important contributions to long-term health. Laboratory diagnostic testing plays an integral role in caring for women throughout the continuum of their reproductive lives.

As an integrated healthcare company, Siemens’ comprehensive solutions, which include multiple imaging modalities, support reproductive care for a lifetime, including accurate diagnosis and monitoring. In addition, our solutions in healthcare IT support the exchange of data for making informed decisions.
Your results. Her lifetime.

Empowering you to advance the health and vitality of women throughout the continuum of life.
Siemens Healthcare Diagnostics, a global leader in clinical diagnostics, provides healthcare professionals in hospital, reference, and physician office laboratories and point-of-care settings with the vital information required to accurately diagnose, treat, and monitor patients. Our innovative portfolio of performance-driven solutions and personalized customer care combine to streamline workflow, enhance operational efficiency, and support improved patient outcomes.

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