Understanding the female menstrual cycle:
Most women experience their first menstrual cycle between the ages of 12-14 and continue to have monthly cyclic activity until menopause (usually between the ages of 45-55 years). Although the average menstrual cycle lasts 28 days, it is not uncommon for a woman to experience a shorter or longer cycle. In order to gain a better understanding of the female menstrual cycle, it is important to be aware of its three phases.

Menstrual Phase
The period in which menstrual bleeding occurs. During this 5-7 day period, the uterus lining (endometrium) sheds and is expelled from the body. A woman loses a small amount of blood and tissue during this phase.

Proliferative Phase
This phase begins on, or around, the conclusion of the menstrual phase and usually lasts for 10 days. During this time period, the follicle-stimulating hormone (FSH) circulates in the bloodstream and the ovarian follicles become mature. These follicles release the hormone estrogen and as a result the mucous membrane lining of the uterus (endometrium) thickens. Increased estrogen levels cause a decrease in FSH, thus the hormone called luteinizing hormone (LH) which is required for ovulation is produced. Ovulation occurs 14 days prior to the first day of menstruation.

Secretory Phase
During this phase the hormone progesterone is secreted. If a woman does not become pregnant, the production of the hormone LH is ceased and the levels of both estrogen and progesterone decrease. As a result the menstrual phase begins.

What are menstrual disorders?
Menstrual disorders are defined as anything that interferes with the normal menstrual cycle. Symptoms such as pain, unusually heavy or light bleeding, or missed periods could be signs of a menstrual disorder. Common disorders include, menorrhagia, dysmenorrhea, and amenorrhea.

What is menorrhagia?
A menstrual disorder characterized by heavy and prolonged bleeding. It is most common among adolescents and women approaching menopause.

There are a number of conditions that may cause heavy and prolonged bleeding including:
- Endometrial cancer
- Inflammation or infection of the vagina
- Polyps (small growths on the cervical or uterine walls)
- Fluid retention (may raise blood pressure)
- Thyroid conditions
- Liver, kidney, or blood diseases
- Use of blood thinning drugs

However, the most common cause of this disorder is an imbalance of progesterone and estrogen, the hormones that regulate the buildup of the endometrium and uterine fibroids (growths in the uterus).

What is dysmenorrhea?
Dysmenorrhea is the medical term used to describe painful periods and muscular cramps.

Primary dysmenorrhea
This affects women in their teens and early twenties. Common symptoms include backache, diarrhea, dizziness, headache, nausea, vomiting, and a feeling of tenseness. Symptoms usually last 1-2 days and may be mild to severe. Although no medical cause is associated with this condition, it is thought that higher levels of prostaglandin (a natural hormone manufactured by the cells of the uterine lining) produced in the second half of the menstrual cycle is responsible for this pain and discomfort.
Secondary dysmenorrhea
Usually affects older women and symptoms are similar to those of primary dysmenorrhea. However, unlike primary dysmenorrhea, secondary dysmenorrhea may develop after years of normal menstruation and is usually the result of an underlying physical condition. Endometriosis, the condition resulting from the uterine tissue growing outside the uterus, in the ovaries and in other locations is the most common cause of secondary dysmenorrhea. However, the following conditions may also be responsible for:
- Adenomyosis (uterine tissue growing into the uterine wall)
- Endometrial polyps (growths in the uterine lining)
- Fibroids (growths in the uterus)
- Narrowing of the cervix or entrance to the uterus
- Pelvic Inflammatory Disease (PID)
- Use of an intrauterine device (IUD) as a method of contraceptive (copper specifically)

Primary amenorrhea
Diagnosed when a female, 16 years or older, has not begun to menstruate. The delay in menstruation is the only symptom of this disorder. Common causes of this disorder include the following:
- Low body weight
- Excessive exercise
- Turner’s Syndrome (birth defect related to the reproductive system)
- Ovarian problems

Secondary amenorrhea
Commonly affects women who have previously had normal periods. The most common symptom of this disorder is the absence of menstruation for a minimum of three consecutive months. The most common cause of this disorder is low levels of the gonadotropin-releasing hormone (GnRH), which is responsible for controlling a woman's menstrual cycle and ovulation. Other causes may include the following:
- Sudden weight loss or gain
- Endocrine disorders (affecting the thyroid, pituitary, or adrenal glands) or other medical conditions
- Pregnancy and/or breast-feeding
- Use of certain birth control
- Ovarian problems (including cysts, tumors, and surgery)

References
- Gynecologic Health Center Women’s Health Interactive
- WebMD
- National Women’s Health Resource Center

Primary amenorrhea
Because every woman is different, it is important for every female to be aware and in touch with her own body. When a woman’s normal menstrual cycle is disrupted or when she experiences unusual symptoms, such as extreme pain or unusually heavy or light bleeding, advice and treatment from a health care professional is recommended. Although treatment for some menstrual disorders may include monitoring of the condition or the use of over-the-counter drugs, some conditions may need advanced care. Underlying problems can cause some menstrual disorders; therefore it is crucial to seek professional help so the appropriate treatment can be provided.

What is amenorrhea?
Amenorrhea is the absence of menstruation and is most commonly caused by problems with the hormones that regulate the menstrual cycle.

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What is amenorrhea?
- Backache
- Bloating
- Fatigue
- Headache
- Sore or tender breasts
- Feelings of depression
- Difficulty concentrating
- Difficulty handling stress
- Irritability
- Anxiety

If you experience one or more of the above symptoms during the second half of your menstrual cycle (after ovulation) you are not alone. Although many women experience Premenstrual Syndrome (PMS), symptoms are often mild and cause no serious disruption to daily living. However, when symptoms are severe and interfere with a woman’s lifestyle and personal relationships, she may be suffering from Premenstrual Dysphoric Disorder (PMDD).

At the present time, medical professionals have not reached an agreement regarding the cause of PMS. However, most would agree that an imbalance of hormones responsible for the reproductive system play a key role in this condition. Although the physical and emotional symptoms associated with PMS are usually most intense during the seven days before menstruation, relief is usually experienced once menses begins.

Unfortunately there is no cure for PMS. However, the following self-help measures may ease symptoms:
- Increase amount of whole grains (e.g., 100% whole wheat bread), fruits, and vegetables in regular diet
- Avoid/limit caffeine intake
- Reduce sodium intake
- Participate in regular physical activity
- Participate in relaxation techniques
- Take Ibuprofen (Advil, Motrin), Naproxen (Aleve) or Aspirin (Bayer)

If symptoms persist and are severe, contact a health care provider. Your doctor may recommend starting a hormonal birth control, prescription diuretic, or an antidepressant to help relieve symptoms.