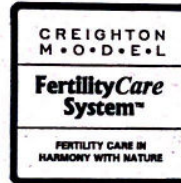


achievement of pregnancy. In the first case, it is important to have regular menstrual periods and exposure to the hormones estrogen and progesterone on a regular basis in order to prevent thinning of the bones. This can be accomplished in a variety of different ways and would need to be worked out with your doctor.

In **hypothalamic amenorrhea**, which occurs in women with **infertility** problems, the treatment is aimed at trying to help the woman ovulate and thus achieve pregnancy. This can also be accomplished in a variety of different ways. One of the first treatments includes the use of a medicine called **Naltrexone** which is a Beta-Endorphin blocking agent. The Beta-Endorphin hormone is involved in these cases in blocking the function of the FSH hormone (Follicle Stimulating Hormone). By blocking the Beta-Endorphins with Naltrexone, it releases the FSH to work more effectively. This carries with it the probable success rate of **80 to 90 percent**.

If these do not work then drugs such as **Clomid**, **Pergonal** or **Metrodin** can also be used. One treatment program which is especially effective is the use of a **battery operated artificial hypothalamus**. With the use of a hormone called **GnRH (Gonadatropin Releasing Hormone)** given in a pulsatile fashion (every 60, 90 or 120 minutes) over the entire course of the menstrual cycle, ovulation can usually be induced. In the experience of the **Pope Paul VI Institute** with the artificial hypothalamus, approximately **80 percent** of patients have successfully achieved pregnancy.

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The symbol on the front cover symbolizes the creation of a new human person. It represents the equation $1 + 1 + 1 = 1$. A man, a woman and God all come together to create the new child.

**FOR MORE INFORMATION,
PLEASE CONTACT:**

AMENORRHEA
(THE ABSENCE
OF MENSTRUAL PERIODS)



**A
FERTILITYCare
EDUCATION
BROCHURE**

Thomas W. Hilgers, M.D.

AMENORRHEA

(THE ABSENCE OF MENSTRUAL PERIODS)

Amenorrhea (generally defined as the absence of menstrual periods for at least one year) can be either **primary** or **secondary**. In **primary amenorrhea**, the young girl growing to adulthood never has menstrual periods. If a young girl reaches the age of 18 without having menstrual periods, then the diagnosis of primary amenorrhea can be made.

In **secondary amenorrhea**, the woman has established menstrual periods but then stops having them over a period of time.

Another term that is helpful in understanding this is **oligomenorrhea** (the infrequent occurrence of menstrual periods). Usually in a woman who has oligomenorrhea, her periods occur every three to six months and are long and irregular.

The hallmark of amenorrhea and oligomenorrhea is either the absence of menstruation (in the case of amenorrhea) or **the irregular occurrence of** (in the case of oligomenorrhea) **ovulation**. The corresponding terms are **anovulation** and **oligoovulation**.

The most common form of amenorrhea is one which is **stress induced** and is commonly observed in younger women who are undergoing some type of a stressful event. For example, it is not at all uncommon for college students, studying for final examinations or under the stress of

college work to stop menstruation. Other stressful events such as a death in the family, a series of outside stressful events, can also lead to the cessation of menstruation. When this occurs for one year or more in time it becomes of concern medically and should be evaluated.

The evaluation for this type of amenorrhea should include seeing a physician who is an expert in the function of the female hormones. After taking a careful history, a thorough physical examination should be completed. A pelvic ultrasound examination should be accomplished and a hormonal profile, sometimes referred to as an amenorrhea profile, should be done.

The evaluation for this type of amenorrhea should include seeing a physician who is an **expert in the function of the female hormones**. After taking a **careful history**, a **thorough physical examination** should be completed. A pelvic ultrasound examination should be accomplished and a hormonal profile, sometimes referred to as an **amenorrhea profile**, should be done. In the amenorrhea profile, the following evaluation is completed: an **androgen profile** (male hormone profile) is completed; this would include the measurement of **Androstenedione, DHEAs, Testosterone and Free Testosterone**; the pituitary hormones **LH and FSH** should be measured; the ovarian steroids **Progesterone and Estradiol-17 Beta**, the milk producing hormone **Prolactin**; **Thyroid Function Studies** and **Beta-Endorphin** should also be measured.

In some cases of amenorrhea, the cessation of menstruation is due to an **increased production** of the milk producing hormone **Prolactin**. This can occur as the result of a tumor in the pituitary gland called an **adenoma**. This tumor produces, in high concentrations, the Prolactin hormone and this causes the cessation of menstruation. It should be pointed out that these tumors are **extremely rare** and not a common cause of this condition.

Most common causes of amenorrhea are referred to as **hypothalamic amenorrhea**. These are due to a dysfunction of the hormones produced in the hypothalamus (the center in the brain that controls the pituitary gland) and the pituitary gland itself (which produces the hormones that control ovulation and menstruation, FSH and LH). This diagnosis is usually one that is made by subtraction. That is to say, **if all of the other tests are normal then the diagnosis of hypothalamic amenorrhea can be made.**

Oligomenorrhea is most commonly caused by a condition called **polycystic ovarian disease**. This is a condition in which the ovaries are somewhat enlarged and have multiple cysts under the surface of the capsule of the ovary. For reasons that are related to a complex hormonal dysfunction, this creates a defect in ovulation function and with it the irregular occurrence of menstruation.

The **treatment** of amenorrhea revolves around **two basic principles**. The **first** has to do with the prevention of **osteoporosis** (the thinning of the bones) and the **second** has to do with the