



**Happy New Year to everyone!**

We hope you had a very pleasant holiday season with your family (or not) and that you've recharged your batteries to face this new year, full of hopes and projects. We wish you even more Health and Wisdom.

And to start 2009 off right, we've dedicated this month to women—although men will also be delighted to learn how to handle the mood changes of their wonderful wives!! We'll be talking about menstrual cycles, infertility, hormones, and their relationship with the nervous system.

In our Sweet Tooth Corner on page 4, we suggest a liver and gallbladder cleanse to help eliminate the excesses of Christmas!

Happy reading,

Dr. Kinnison

### The Female Sexual Cycle

The female sexual cycle is a series of events during which a mature egg leaves the ovary and enters the reproductive system every 28–32 days. Within the reproductive system, a series of changes occur that are intended to prepare for fertilization. The hormonal variations observed during the cycle are responsible for these changes, as well as for the possibility of pregnancy.

Some of the parts of the body involved in the menstrual cycle are the **brain, the pituitary gland, the uterus and cervix, the ovaries, the fallopian tubes, and the vagina**. Certain body chemicals called hormones rise and fall throughout the month and cause the menstrual cycle.

The ovaries produce two important female hormones: estrogen and progesterone. Other hormones involved in the menstrual cycle are follicle-stimulating hormone (FSH) and luteinizing

hormone (LH), which are produced by the pituitary gland.

### What Happens During the Menstrual Cycle?

Menstruation is part of the menstrual cycle, which helps a woman's body prepare each month for a possible pregnancy. The cycle begins on the first day of the period. The average menstrual cycle lasts 28 days; however, a cycle can last anywhere from 23 to 35 days.

During the first half of the menstrual cycle, estrogen levels rise and cause the lining of the uterus to grow and thicken. As a result of follicle-stimulating hormone, an egg (ovum) begins to mature in one of the ovaries. Around day 14 of a typical 28-day cycle, a surge in luteinizing hormone causes the egg to leave the ovary. This is called ovulation.



During the second half of the menstrual cycle, the egg begins to travel through the fallopian tube toward the uterus. Progesterone levels rise, which helps prepare the lining of the uterus for pregnancy. If a sperm fertilizes the egg and it attaches to the wall of the uterus, the woman becomes pregnant. If the egg is not fertilized, it dissolves or is absorbed by the body. If pregnancy does not occur, estrogen and progesterone levels decrease, and the thickened lining of the uterus is shed during the menstrual period.

### THE MENSTRUAL CYCLE AND THE NERVOUS SYSTEM

**Anatomically and Physiologically** the female reproductive system can be considered as consisting of three basic elements: the Hypothalamus, the Pituitary gland, and the Ovaries.

The dynamic interrelationship between these three organs makes possible the characteristic periodicity of the normal female sexual cycle.

The morphological and endocrine modifications that take place in each female cycle are, therefore, the natural consequence of the reproductive capacity of the species.

### The Role of the Hypothalamus



### **The Hypothalamus**

The hypothalamus is a gland that forms part of the brain and is located beneath the thalamus. It releases at least nine hormones that act either as inhibitors or stimulators in the secretion of other hormones from the anterior pituitary, which is why it is said to work in coordination with it.

One of the most important functions of the hypothalamus is to create the link between the nervous system and the endocrine system through the pituitary gland.

It is often considered the integrating center of the autonomic (or vegetative) nervous system within the central nervous system. It is also responsible for carrying out functions of **somato-vegetative integration**.

**It regulates the body's homeostasis** together with the pituitary gland, through a negative feedback system. (This includes body temperature, hunger, thirst, fatigue, anger, and the menstrual cycle.)

***Any anomaly that disrupts the normal functioning between the hypothalamus, the pituitary gland, and the ovaries, That is, between the nervous system and the endocrine system, will result in an alteration in hormone secretion and, at the same time, a disorder in fertility.***

### **Menstrual Cycle Anomalies**

#### **Pre-Menstrual Syndrome (PMS):**

A disorder characterized by nervousness, emotional instability, anxiety, depression, and possible headaches, swelling, and breast pain. It occurs during the 7–10 days prior to menstruation and usually disappears a few hours after the onset of menstrual flow.

#### **Amenorrhea:**

**Primary amenorrhea** is the failure of menstruation to begin, accompanied by insufficient growth and

absence of secondary sexual characteristics, or it may also present as delayed puberty.

**Secondary amenorrhea** occurs when women with previously normal menstrual periods stop menstruating for 6 months or more. The cause of the loss of cyclic menstruation may be a disorder of the hypothalamus, the pituitary gland, the ovaries, or other glands.

#### **Menorrhagia:**

This condition is characterized by abnormally heavy or prolonged menstrual bleeding. It may involve excessive blood loss during regular periods or bleeding that lasts longer than usual, often interfering with daily activities. Causes can include hormonal imbalances, uterine fibroids, polyps, endometrial disorders, or other gynecological conditions.

#### **Dysmenorrhea:**

This refers to painful menstruation, usually characterized by cramping in the lower abdomen that may radiate to the lower back and thighs. It is often accompanied by other symptoms such as nausea, vomiting, diarrhea, fatigue, and headaches. Dysmenorrhea can be **primary** (not linked to another condition, typically beginning during adolescence) or **secondary** (caused by underlying disorders such as endometriosis, pelvic inflammatory disease, or fibroids).

### **Chiropractic Care for Women**

Chiropractic care looks after the nervous system. The Doctor of Chiropractic detects and corrects nervous system interferences, or subluxations, in order to reconnect the brain with the rest of the body, thus allowing every organ to function properly. As we have seen above, a woman's menstrual cycle is directly related to the nervous system—since the main controller of the cycle, the *hypothalamus*, is part of the nervous system.

An interference in the nervous system prevents the hypothalamus from sending information to the endocrine system. As a result, hormones cannot be secreted properly, leading to disruptions in the female reproductive cycle.

However, chiropractic care does not cure anyone of anything. What it has shown, time and again, is that restoring optimal neural function through specific chiropractic adjustments contributes to improved homeostasis and physiological adaptation—allowing the body to express a higher level of health.



Source: Journal of Vertebral Subluxation Research, May 2003

## Research

### Chiropractic Care Helps Reduce Menstrual Pain



**45 women** who suffered from severe menstrual discomfort participated in a study that included an experimental group and a placebo (control) group. The results showed significant improvement in the adjusted group compared to the placebo group, with women reporting that they had eliminated the pain and discomfort caused by primary dysmenorrhea.

Sources: Kokjohn K, Schmid DM, Trian JJ, Brennan PC, JMPT 1992, 15 (5): 279

### THE EFFECTS OF CHIROPRACTIC CARE ON SYMPTOMS ASSOCIATED WITH PREMENSTRUAL SYNDROME (PMS)

This study found that **10 to 20% of women suffer from severe premenstrual symptoms**. The research involved spinal adjustments on 25 women during the 10 days before menstruation. To track the progress of their condition, each woman rated the severity of her symptoms on a scale from 0 to 3 before and after the study.

The results showed a **32% to 42% reduction in symptoms**, although only for a short period of time. Longer-term research is needed to draw more concrete conclusions, but these findings support the hypothesis that chiropractic care may reduce symptoms associated with premenstrual syndrome (PMS).

Source: Journal of Manipulative and Physiological Therapeutics – November/December 1999.



### CHIROPRACTIC CARE AND INFERTILITY

The study involved **15 women between the ages of 22 and 65**. Eleven of them had never had a child, two had previously conceived without medical assistance, one had conceived with medical assistance, and one had experienced a miscarriage. Within this same group, nine women had undergone infertility treatment, and four were still under treatment when they began chiropractic care.

Each patient presented with nervous system interferences, but the chiropractic care was tailored individually, as the techniques used and the chiropractors themselves varied for each woman. **However, all treatments focused on the nervous system by removing vertebral subluxations.**

The results of the study showed that although many of these women had been trying to conceive for a long time, **ALL of them became pregnant within 2 to 20 months** after starting