What is Menopause?

Considering all of the media attention being given to menopause these days, I am always surprised by how many of my patients ask me this question. With all of the public hype one would think that the definition would be obvious, but in fact it is not. Menopause is not an item or an event. It is a *process* which is unique for each woman.

The textbook medical definition of menopause is *cessation of menses for 12 months*. I have always found this definition interesting. If you haven't had a period for 11 months are you in menopause? What about those hot flashes and night sweats in those of you who are still having regular periods? How about those irregular and unpredictable menses which vary from barely there to so heavy you can't leave the house? Surely these are all a part of menopause, aren't they??

The Menstrual Cycle

In order to understand menopause it is important to understand what normal menses represent and what their absence tells you about your changing physiology. The lining of the uterus is a hormonally responsive organ known as the **endometrium**. This means that the endometrium changes depending upon which hormones are present. In a normal menstrual cycle the highly coordinated rise and fall of our ovarian hormones **estrogen** and **progesterone** cause the endometrium to grow and shed in an organized fashion. This undulating cycle of hormones usually takes between 21 and 30 days causing a predictable monthly bleed which typically lasts from 3 and 6 days, although bleeding for up to 8 days is considered normal.

Any disruption in the normal hormonal cycle can lead to irregular menses. Declining estrogen levels contribute to hot flashes, night sweats, vaginal dryness and irritation, as well as other more subtle symptoms such as skin changes and "brain fog." Imbalance between the estrogen and progesterone levels contributes to the bloating, breast tenderness, and irritability often referred to as PMS which seem to worsen for many women as menstrual cycles become less predictable.

Therefore, menopause, while defined as the absence of menses is really mediated by a decline in estrogen and progesterone. The lack of menstrual bleeding is a symptom of the hormonal changes and NOT the cause of menopause.

Hormonal Changes in Menopause

While menopause is caused by a change in ovarian hormones, the changes that occur are highly variable and unique to each individual woman. Some women will have a steady slow decline in hormone levels, others will have levels which fluctuate between normal reproductive age levels and barely there, still others will have what seems like an overnight drop from there to gone. Most often, however, the hormone levels fluctuate wildly for months to years creating the symptoms we associate with the **perimenopausal transition.** In general, the majority of the most bothersome symptoms resolve once the hormones reach a new steady state at menopausal levels. Some symptoms, however, such as vaginal dryness and thinning (or **atrophy**) of the vaginal walls persist due to low estrogen levels. The vaginal mucosa is an estrogen sensitive tissue that lines the vagina.

Low levels of estrogen can cause vulvar and vaginal itching as well as pain with intercourse. Some women find that using a lubricant helps with these symptoms, others find that they need the help of estrogen to maintain comfort.

Hot flashes and night sweats are noted by many women to be the most bothersome symptoms associated with menopause. They can interrupt sleep and disrupt concentration during the day. Hot flashes are actually mediated by fluctuations in the level of adrenaline. Estrogen plays a role in regulating how many adrenaline receptors are present in the temperature control center of the brain. When estrogen declines there are more adrenaline receptors and the temperature control center becomes more sensitive to fluctuations in adrenaline levels. Adrenaline fluctuation can be minimized by reducing stress and anxiety, avoiding low blood sugar, exercising appropriately and avoiding sugar, caffeine and alcohol.

Many women are aware of the connection between low estrogen and osteoporosis. Estrogen supports bone strength by promoting the activity of bone building cells known as **osteoblasts** and suppressing the activity of their neighbors the **osteoclasts** which break down bone. Estrogen also helps our GI tract absorb calcium from the foods we eat. When our estrogen is low it is harder to get calcium from our diet into our bones.

Because estrogen and progesterone receptors are located throughout our bodies – in our skin, bones, brain, breasts, heart, blood vessels, kidneys, bladder, etc. The effects of declining ovarian hormones can be widespread. Different women will experience different symptoms as their bodies transition from reproductive to menopausal levels of these hormones. How an individual decides to navigate the transition is a very personal issue.

<u>Hormone Replacement Therapy</u>

The question of whether or not to take hormone replacement therapy is a complex issue and different for each individual. Goals of hormone replacement therapy need to be carefully evaluated (e.g. are you considering HRT to prevent hot flashes, vaginal dryness or osteoporosis?). Other elements of an individuals health history are critical to this decision making process including genetic risk factors, dietary and lifestyle related risk factors and her current state of health. Hormones are available as pills, creams, gels, troches, vaginal rings and injectables. They come in natural and synthetic forms. One can take estrogen alone, daily estrogen and progesterone or cyclic estrogen and progesterone.

With such a wide array of options the question is not simply: should I or shouldn't I? The true questions are: How do I want to approach menopause? What about my life do I want to keep the same? What do I want to see change? What physical changes are bothersome to me and which do I welcome? What are my risk factors as I move into the next phase of my life? How can I best preserve my health for as long as possible while minimizing risk and inconvenience? Exploring these questions with your health care provider will help to steer you toward the most appropriate course of action for you!