### **Menopause Indicators**

Menopause is unique to each woman. Historically, menopausal symptoms were thought to be associated solely with fluctuating hormone levels. Neurotransmitter imbalances may also contribute to the symptoms some women experience. These imbalances may explain why some women have few symptoms at menopause, while others are more seriously affected. During perimenopause and menopause, hormone and neurotransmitter imbalances may cause any of the following complaints.



Check any complaints below that you are experiencing.

Changes in menstrual flow (heavier, lighter, clots)	<ul><li>□ Dizziness</li><li>□ Hair loss or thinning</li></ul>
<ul> <li>Changes in menstrual frequency (longer, shorter, or irregular cycles)</li> </ul>	☐ Problems with memory
☐ Weight gain	Difficulty concentrating
☐ Hot flashes (flushes) and/or	Achy joints or muscles
night sweats	☐ Vaginal dryness
☐ Sleep disturbances (awakening at	Loss of bone density
night, trouble falling asleep)	☐ Worsening allergies
■ Mood swings, tearfulness	☐ Changes in sense of taste or smell
☐ Nervousness	$\square$ Changes in breath and body odor
☐ Panic attacks, anxiety	☐ Gastrointestinal complaints (gas,
☐ Irritability	bloating, nausea, diarrhea,
☐ Headaches	constipation)
Changes in the skin (itchiness, thinning, dryness)	Urinary incontinence (especially with laughing or sneezing)
☐ Fatique	Heart palpitations, irregular heartbeat
PMS-type symptoms	<ul><li>Tinnitus (ringing or other sounds in the ears)</li></ul>
☐ Breast tenderness	☐ Changes in sexual desire or function
☐ Foggy thinking	$\square$ Weakening of fingernails

If you checked any of the above, discuss these concerns with your health care provider. Since there are a broad host of complaints women may experience around menopause, your healthcare provider may want to rule out other contributing health factors.

### **Take Charge of Your Health**

If you are struggling with menopause or other mood disorders, ask your healthcare provider about all of your treatment options. This could be your first step toward a happier and healthier tomorrow.

# Menopause

What is the connection between menopause and your nervous system?



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## Recognizing Signs of Menopause

In the course of a woman's lifecycle, she experiences transitions that are characterized by a shifting and readjustment of the hormones associated with reproduction. During menopause, a woman's ovaries gradually make less of the hormones estrogen, progesterone, and later testosterone. Menopause is the transition that signals the end of menstruation, and with it, reproduction.

A woman has reached menopause when she has not had a period for 12 months in a row. The average age of menopause for a woman in the USA is 51, but menopause can occur earlier or later. Menopause may be premature (occurring prior to age 40) or artificial due to such circumstances as radiation exposure, chemotherapeutic drugs, or surgery. Early onset of menopause may also be initiated due to smoking, poor nutrition or a co-existing medical condition.

**Menopause symptoms** may include irregular periods, decreased fertility, vaginal and urinary changes, hot flashes, sleep disturbances, night sweats, emotional and cognitive changes, and changes in

appearance. Some women
experience very few or no
symptoms, while others
experience multiple
physical and emotional
symptoms. The
extent and
severity varies
significantly
among women.

### **Facts About Menopause**

**Menopause** is only one of several stages in a women's reproductive life. There are actually four main stages\*, known as:

- **Premenopause** refers to the time from a woman's first to her last regular menstrual period. This time is referred to as the "normal" reproductive stage for a woman.
- **Perimenopause** refers to a transitional stage of two to ten years before a woman stops experiencing her menstrual period. It is characterized by hormone fluctuations in which women can experience typical menopause symptoms such as hot flashes.
- **Menopause** refers to time in which the ovaries produce less estrogen and progesterone and stop producing eggs. At this time a woman can no longer become pregnant naturally.
- **Postmenopause** refers to the time after menopause has occurred. Generally, this stage begins when 12 full months have passed since the last menstrual period. This stage will continue for the rest of the woman's life.

\*Data adapted from the U.S. Department of Health and Human Services.

#### **Menopause & Neurotransmitters**

**Menopausal symptoms** can be the result of imbalances in the nervous and endocrine system, particularly imbalances in hormones as well as brain chemicals called neurotransmitters.

Like hormones, neurotransmitters act as messengers in the body. Neurotransmitters are chemicals that relay signals between nerve cells, called "neurons." They are present throughout the body and are required for proper brain and body functions, including interacting with the endocrine system to

facilitate hormone release. The ovaries are an important site for the production of estrogen, progesterone, and testosterone. As the ovaries age, they can become less responsive to the signals from the brain that guide their function. A proper balance of neurotransmitters is important in helping the body adapt to the changing levels of hormones.

**Every neurotransmitter** behaves differently. Some neurotransmitters are inhibitory and tend to calm, while others are excitatory and

stimulate the brain. Healthcare professionals conclude that specific neurotransmitter imbalances are more likely to underlie certain conditions. Deficiencies involving the central nervous system's neurotransmitters— serotonin and

norepinephrine— appear to be involved in the development of menopausal symptoms.

Environmental and biological factors—including stress, poor diet, neurotoxins, or genetics— can cause imbalances in the levels of neurotransmitter chemicals in the brain. These imbalances can trigger or exacerbate hormone imbalances. Often, addressing neurotransmitter imbalances can reduce hormonal imbalances through optimized communication between the brain and the hormone-producing glands.

### **Improving Treatment**

Many prescription drugs used to alter hormone levels either imitate hormones in the body (synthetic) or are identical to human hormones (bio-identical). These medications provide relief by elevating hormone activity through substitution or replacement. When using any type of hormone supplementation, it is important to monitor body levels in order to reduce the likelihood of creating an imbalance between the various hormones. Because of the risks due to longterm supplementation of some hormone preparations, there is a greater tendency for physicians to use reduced levels of hormones. or non-hormonal prescriptions to address hormone issues. Some prescriptions do not address the hormone levels at all, but merely treat specific symptoms of hormone imbalances. Often these medications have limited effectiveness as they fail to address the underlying cause of the symptoms.

Neurotransmitter function can also be supported with nutrient-based programs. Neurotransmitters are made from various components of food in a normal, healthy diet. Increasing the amounts of these dietary constituents can help maintain normal neurotransmitter levels.

While no program can guarantee success for everyone, it is worthwhile to effectively match a drug-based and/or nutrient-based program to the specific needs of the individual.

