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Yogic Therapy for Perimenopause & Menopause

By Kaja Debek Dec. 1st 2010

1. DESCRIPTION OF MENOPAUSE.

Menopause is a natural phase of the female reproductive cycle. It is not a disease. Technically, menopause is the moment when a woman has had no menstrual period for 12 consecutive months. Perimenopause is the time period leading up to this milestone. Menopause typically (but not always) occurs in women in midlife, during their late 40s or early 50s, and signals the end of the fertile phase of a woman's life.

The transition from reproductive to non-reproductive is the result of a major reduction in female hormonal production by the ovaries. This transition is normally not sudden or abrupt, tends to occur over a period of years, and is a natural consequence of aging. However, for some women, the accompanying signs and effects that can occur during the menopause transition years can significantly disrupt their daily activities and their sense of well-being. In addition, women who have some sort of functional disorder affecting the reproductive system (i.e. endometriosis, polycystic ovary syndrome, cancer of the reproductive organs) can go into menopause at a younger age than the normal timeframe; the functional disorders often significantly speed up the menopausal process and create more significant health problems, both physical and emotional, for the affected woman.

The word "menopause" literally means the "end of monthly cycles" from the Greek word pausis (cessation) and the root men- (month), because the word "menopause" was created to describe this change, where the end of fertility is traditionally indicated by the permanent stopping of monthly menstruation or menses.

The date of menopause is formally medically defined as the time of the last menstrual period (or menstrual flow of any amount, however small), in those women who have not had a hysterectomy. Women who have their uterus removed but retain their ovaries do not immediately go into menopause, even though their periods cease. Adult women, who have their ovaries removed however, go immediately into surgical menopause, no matter how young they are.

Menopause is an unavoidable change that every woman will experience, assuming she reaches middle age and beyond. It is helpful if women are able to learn what to expect and what options are available to assist the transition, if that becomes necessary. Menopause has a wide starting range, but can usually be expected in the age range of 42–58 (Bucher, et al. 1930). An early menopause can be related to cigarette smoking, higher body mass index, racial/ethnic factors, illnesses, chemotherapy, radiation and the surgical removal of the uterus and/or both ovaries (Bucher, et al. 1930).

Menopause can be officially declared (in an adult woman who is not pregnant, is not lactating, and who has an intact uterus) when there has been amenorrhea (absence of any menstruation) for one complete year. However, during Perimenopause there are many signs and effects that lead up to menopause, many of which may extend well beyond it too. Most women experience the physical and emotional signs and effects of Perimenopause in their late 40s or early 50s.

These signs and effects include:

- irregular menses
- vasomotor instability (hot flashes and night sweats)
- atrophy of genitourinary tissue
- increased stress
- breast tenderness
- vaginal dryness
- Forgetfulness
- mood changes

- in certain cases osteoporosis and/ or heart disease

These effects are related to the hormonal changes a woman's body is going through, and they affect each woman to a different extent. The only sign or effect that all women universally have in common is that by the end of the menopause transition every woman will have a complete cessation of menses.

THE MENSTRUAL CYCLE

In order to understand menopause the menstrual cycle and the hormones involved need to be studied.

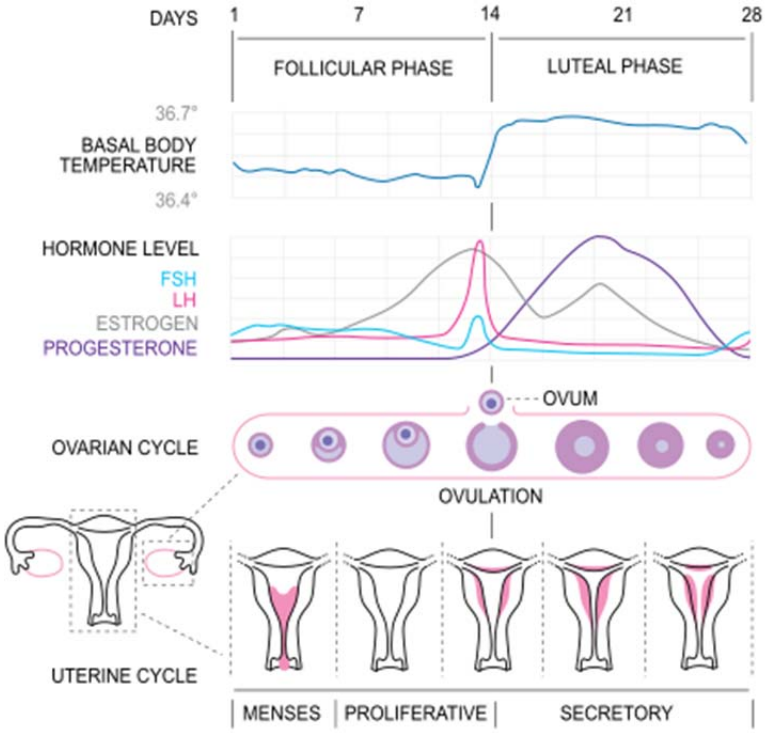


Figure 1 Menstral cycle and phases

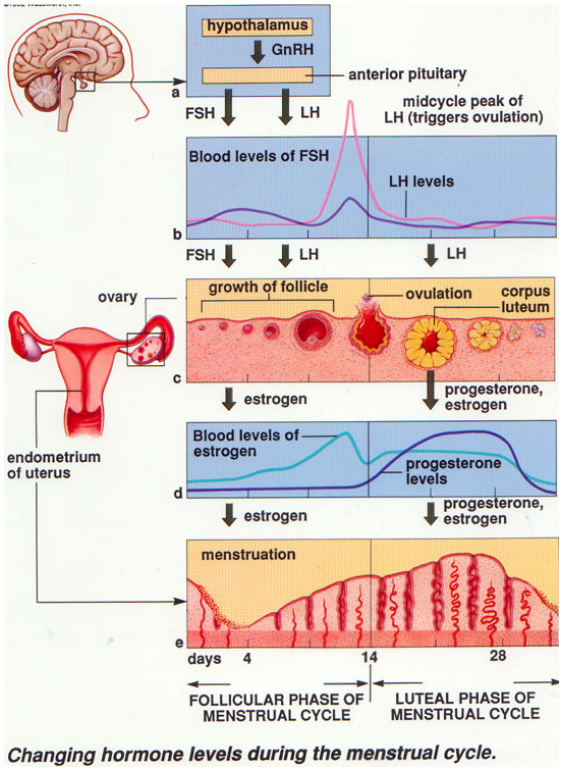
The menstrual cycle, under the control of the endocrine system (a system of glands, each of which secretes a type of hormone into the bloodstream to regulate the body), is necessary for reproduction. It is commonly divided into three phases: the follicular phase, ovulation, and the luteal phase; although some sources use a different set of phases: menstruation, proliferative phase, and secretory phase. The length of each phase varies from woman to woman and cycle to cycle, though the average menstrual cycle is 28 days. Menstrual cycles are counted from the first day of menstrual bleeding.

In the menstrual cycle, changes occur in the female reproductive system as well as other systems (which lead to breast tenderness or mood changes, for example). A woman's first menstruation is termed menarche, and occurs typically around age 12. The end of a woman's reproductive phase is called the menopause, which commonly occurs somewhere between the ages of 45 and 55.

The follicular phase (or proliferative phase) is the phase during which follicles in the ovary mature. It ends with ovulation. The main hormone controlling this stage is estradiol. In the follicular phase, discharges of blood (menses) slow then stop due to the gradual increase amount of estrogen, and the lining of the uterus thickens. Follicles in the ovary begin developing under the influence of a complex interplay of hormones, and after several days one or occasionally two become dominant (non-dominant follicles atrophy and die). Approximately mid-cycle, 24–36 hours after the Luteinizing Hormone (LH) surges, the dominant follicle releases an ovum, or egg in an event called ovulation. After ovulation, the egg only lives for 24 hours or less without fertilization while the remains of the dominant follicle in the ovary become a corpus luteum; this body has a primary function of producing large amounts of progesterone. Under the influence of progesterone, the endometrium (uterine lining) changes to prepare for potential implantation of an embryo to establish a pregnancy. If implantation does not occur within approximately two weeks, the corpus luteum will involute, causing sharp drops in levels of both progesterone and estrogen. These hormone drops cause the uterus to shed its lining and egg in a process termed menstruation.

THE HORMONES

A hormone (from Greek ὁρμή - "impetus") is a chemical released by a cell or a gland in one part of the body that sends out messages that affect cells in other parts of the organism. Only a small amount of hormone is required to alter cell metabolism. In essence, it is a chemical messenger that transports a signal from one cell to another. Endocrine hormone molecules are secreted (released) directly into the bloodstream, whereas exocrine hormones (or ectohormones) are secreted directly into a duct, and, from the duct, they flow either into the bloodstream or from cell to cell.



Changing hormone levels during the menstrual cycle.

Figure 2 Changing hormone levels

Estrogen

Estrogens (AmE), oestrogens (BE), or œstrogens, are a group of steroid compounds, named for their importance in the estrous cycle, and functioning as the primary female sex hormone. Their name comes from the Greek words estrus/οίστρος = sexual desire + gen/γόνο = to generate.

The three major naturally occurring estrogens in women are estrone (E1), estradiol (E2), and estriol (E3). Estradiol (E2) is the predominant form in nonpregnant females, estrone is produced during menopause, and estriol is the primary estrogen of pregnancy. In the body these are all produced from androgens through actions of enzymes.

Estrogens are present in both men and women; they are usually present at significantly higher levels in women of reproductive age. They promote the development of female secondary sexual characteristics, such as breasts, and are also involved in the thickening of the endometrium and other aspects of regulating the menstrual cycle. It is also a major influence in stimulating maternal behaviour.

Like all steroid hormones, estrogens readily diffuse across the cell membrane. Once inside the cell, they bind to and activate estrogen receptors which in turn modulate the expression of many genes.

From menarche to menopause the primary estrogen is 17β-estradiol. In postmenopausal women more estrone is present than estradiol. Estradiol is produced from testosterone and estrone from androstenedione by aromatase. Estrone is weaker than estradiol.

Estrogens are produced primarily by developing follicles in the ovaries, the corpus luteum, and the placenta. Luteinizing hormone (LH) stimulates the production of estrogen in the ovaries. Some estrogens are also produced in smaller amounts by other tissues such as the liver, adrenal glands, body fat and the breasts. These secondary sources of estrogens are especially important in postmenopausal women. Fat cells also produce estrogen, potentially being the reason why underweight or overweight is a risk factor for infertility. Estradiol levels vary through the menstrual cycle, with levels highest just before ovulation

Functions of Estrogen

Structural

- promote formation of female secondary sex characteristics
- accelerate metabolism
- reduce muscle mass
- increase fat stores
- stimulate endometrial growth
- increase uterine growth
- increase vaginal lubrication
- thicken the vaginal wall
- maintenance of vessel and skin
- reduce bone resorption, increase bone formation
- morphic change (endomorphic -> mesomorphic -> ectomorphic)

Protein Synthesis

- increase hepatic production of binding proteins

Coagulation

- increase platelet adhesiveness

Lipid

- increase HDL, triglyceride
- decrease LDL, fat deposition

Fluid balance

- salt (sodium) and water retention
- increase cortisol, SHBG

Gastrointestinal Tract

- reduce bowel motility
- increase cholesterol in bile

Melanin

- increase pheomelanin, reduce eumelanin

Cancer

- support hormone-sensitive breast cancers

Mental Health

- Estrogen is considered to play a significant role in women's mental health. Sudden estrogen withdrawal, fluctuating estrogen, and periods of sustained estrogen low levels correlate with significant mood lowering. Clinical recovery from postpartum, perimenopause, and post-menopause depression has been shown to be effective after levels of estrogen were stabilized and/or restored.

Sexual desire is dependent on androgen levels rather than estrogen levels

FSH- Follicle-Stimulating Hormone

Follicle-stimulating hormone (FSH) is a hormone found in humans and other animals. It is synthesized and secreted by gonadotrophs(endocrine cells) of the anterior pituitary gland. FSH regulates the development, growth, pubertal maturation, and reproductive processes of the body. FSH and Luteinizing hormone (LH) act synergistically in reproduction.

In women, FSH initiates follicular growth, specifically affecting granulosa cells. With the concomitant rise in inhibin B, FSH levels then decline in the late follicular phase. This seems to be critical in selecting only the most advanced follicle to proceed to ovulation. At the end of the luteal phase, there is a slight rise in FSH that seems to be of importance to start the next ovulatory cycle.

Like its partner LH, FSH release at the pituitary gland is controlled by pulses of gonadotropin-releasing hormone (GnRH). Those pulses, in turn, are subject to the oestrogen feed-back from the gonads.

As a woman nears perimenopause, the number of small antral follicles recruited in each cycle diminishes and consequently insufficient Inhibin B is produced to fully lower FSH and the serum level of FSH begins to rise.

High FSH levels

The most common reason for high serum FSH concentration is in a female who is undergoing or has recently undergone menopause. High levels of Follicle-Stimulating Hormone indicate that the normal restricting feedback from the gonad is absent, leading to an unrestricted pituitary FSH production.

If high FSH levels occur during the reproductive years, it is abnormal. Conditions with high FSH levels include:

1. Premature menopause also known as Premature Ovarian Failure
2. Poor ovarian reserve also known as Premature Ovarian Aging
3. Gonadal dysgenesis(multiple reproductive system development disorders), Turner syndrome 9 . It is a chromosomal abnormality in which all or part of one of the sex chromosomes is absent
4. Castrationlosses the function of the overies
5. Swyer syndrome(type of hypogonadism in which no functional gonads are present to induce puberty in an externally female person)
6. Certain forms of CAH(Congenital adrenal hyperplasia)
7. Testicular failure.

Most of these conditions are associated with subfertility and/or infertility. Therefore high FSH levels are an indication of subfertility and/or infertility.

Low FSH levels

Diminished secretion of FSH can result in failure of gonadal function (hypogonadism). This condition is typically manifested in males as failure in production of normal numbers of sperm. In females, cessation of reproductive cycles is commonly observed. Conditions with very low FSH secretions are:

1. Polycystic Ovarian Syndrome
2. Polycystic Ovarian Syndrome + Obesity + Hirsutism + Infertility
3. Kallmann syndrome(hypogonadism (decreased functioning of the glands that produce sex hormones) caused by a deficiency of gonadotropin-releasing hormone (GnRH), which is created by the hypothalamus)
4. Hypopituitarism(decreased (hypo) secretion of one or more of the eight hormones normally produced by the pituitary gland at the base of the brain.)
5. Hyperprolactinemia(the presence of abnormally-high levels of prolactin(hormone primarily associated with lactation) in the blood)
6. Gonadotropin deficiency (medical term for decreased functional activity of the gonads)

LH - Luteinizing Hormone

Luteinizing hormone (LH, also known as lutropin) is a hormone produced by the anterior pituitary gland. In females, an acute rise of LH called the LH surge triggers ovulation and development of the corpus luteum(a temporary endocrine structureformen within the ovary, involved in production of relatively high levels of progesterone and moderate levels of estradiol and inhibin A).

In women, at the time of menstruation, FSH initiates follicular growth, specifically affecting granulosa cells. With the rise in oestrogens, LH receptors are also expressed on the maturing follicle that produces an increasing amount of

estradiol. Eventually at the time of the maturation of the follicle, the oestrogen rise leads via the hypothalamic interface to the “positive feed-back” effect, a release of LH over a 24-48 hour period. This 'LH surge' triggers ovulation thereby not only releasing the egg, but also initiating the conversion of the residual follicle into a corpus luteum that, in turn, produces progesterone to prepare the endometrium for a possible implantation. LH is necessary to maintain luteal function for the first two weeks. In case of a pregnancy luteal function will be further maintained by the action of hCG (a hormone very similar to LH) from the newly established pregnancy. LH supports the cells in the ovary that provide androgens and hormonal precursors for estradiol production

Progesterone

Progesterone is produced in the ovaries (to be specific, after ovulation in the corpus luteum), the adrenal glands (near the kidney), and, during pregnancy, in the placenta. Progesterone is also stored in adipose (fat) tissue. It is said to be the pregnancy hormone.

An additional source of progesterone is milk products. They contain much progesterone because on dairy farms cows are milked during pregnancy, when the progesterone content of the milk is high. After consumption of milk products the level of bioavailable progesterone goes up.

In women, progesterone levels are relatively low during the preovulatory phase of the menstrual cycle, rise after ovulation, and are elevated during the luteal phase. Progesterone levels tend to be < 2 ng/ml prior to ovulation, and > 5 ng/ml after ovulation. If pregnancy occurs, progesterone levels are initially maintained at luteal levels. With the onset of the luteal-placental shift in progesterone support of the pregnancy, levels start to rise further and may reach 100-200 ng/ml at term. After delivery of the placenta and during lactation, progesterone levels are very low. Progesterone levels are relatively low in children and postmenopausal women.

Effects of Progesterone

- It raises epidermal growth factor-1 levels, a factor often used to induce proliferation, and used to sustain cultures, of stem cells.
- It increases core temperature (thermogenic function) during ovulation.
- It reduces spasm and relaxes smooth muscle. Bronchi are widened and mucus regulated. (Progesterone receptors are widely present in submucosal tissue.)
- It acts as an antiinflammatory agent and regulates the immune response.
- It reduces gall-bladder activity.
- It normalizes blood clotting and vascular tone, zinc and copper levels, cell oxygen levels, and use of fat stores for energy.
- It may affect gum health, increasing risk of gingivitis (gum inflammation) and tooth decay.
- It appears to prevent endometrial cancer (involving the uterine lining) by regulating the effects of estrogen.
- High progesterone levels are believed to be partly responsible for symptoms of premenstrual syndrome (PMS), such as breast tenderness, feeling bloated and mood swings. When you skip a period, it could be because of failure to ovulate and subsequent low progesterone levels
- Current research suggests that progesterone plays an important role in the signaling of insulin release and pancreatic function, and may affect the susceptibility to diabetes. It has been shown that women with high levels of progesterone during pregnancy are more likely to develop glucose abnormalities.

2. SIGNS AND SYMPTOMS OF MENOPAUSE - MEDICAL VIEW

During the menopause transition years, as the body responds to the rapidly fluctuating and dropping levels of natural hormones, a number of effects may appear. Not every woman experiences bothersome levels of these effects; the range of effects and the degree to which they appear is very variable from person to person. (Although these effects are sometimes referred to as "symptoms", that word is strictly speaking applied to the effects of maladies, whereas menopause is not a malady but a natural life change.)

Effects that are due to low estrogen levels (for example vaginal atrophy and skin drying) will continue after the menopause transition years are over; however, many effects that are caused by the extreme fluctuations in hormone levels (for example hot flashes and mood changes) usually disappear or improve significantly once the perimenopause transition is completely over. All the various possible perimenopause effects are caused by an overall drop, as well as dramatic but erratic fluctuations, in the absolute levels and relative levels of estrogens and progesterone.

The average woman has increasingly erratic menstrual periods, due to skipped ovulations. Typically, the timing of the flow becomes unpredictable. In addition the duration of the flow may be considerably shorter or longer than normal, and the flow itself may be significantly heavier or lighter than was previously the case, including sometimes long episodes of spotting. Early in the process it is not uncommon to have some 2-week cycles. Further into the process it is common to skip periods for months at a time, and these skipped periods may be followed by a heavier period. The number of skipped periods in a row often increases as the time of last period approaches. At the point when a woman of menopausal age has had no periods or spotting for 12 months, she is considered to be one year into post-menopause.

Symptoms and signs of menopause.

Vascular instability

- Hot flashes or hot flushes, including night sweats and, in a few people, cold flashes
- Possible but contentious increased risk of atherosclerosis
- Migraine
- Rapid heartbeat

Urogenital atrophy, also known as vaginal atrophy

- Thinning of the membranes of the vulva, the vagina, the cervix, and also the outer urinary tract, along with considerable shrinking and loss in elasticity of all of the outer and inner genital areas.
- Itching
- Dryness
- Bleeding
- Watery discharge
- Urinary frequency
- Urinary incontinence
- Urinary urgency
- Increased susceptibility to inflammation and infection, for example vaginal candidiasis, and urinary tract infections

Skeletal

- Back pain
- Joint pain, Muscle pain
- Osteopenia and the risk of osteoporosis gradually developing over time

Skin, soft tissue

- Breast atrophy
- breast tenderness +/- swelling
- Decreased elasticity of the skin
- Formication (itching, tingling, burning, pins and needles, or sensation of ants crawling on or under the skin)
- Skin thinning and becoming drier

Psychological

- Depression and/or anxiety
- Fatigue
- Irritability
- Memory loss, and problems with concentration
- Mood disturbance
- Sleep disturbances, poor quality sleep, light sleep, insomnia

Sexual

- Dyspareunia or painful intercourse
- Decreased libido
- Problems reaching orgasm
- Vaginal dryness and vaginal atrophy

Cohort studies have reached mixed conclusions about medical conditions associated with the menopause. For example, a 2007 study found that menopause was associated with hot flashes; joint pain and muscle pain; and depressed mood. In the same study, it appeared that menopause was not associated with poor sleep, decreased libido, and vaginal dryness. However, in contrast to this, a 2008 study did find an association with poor sleep quality.No two women experience menopause in the same way. Some may have difficulties, while others may be symptom-free. Generally, however, fluctuating hormone levels may lead to:

- Irregular periods
- Night sweats
- Hot flashes
- Fatigue
- Aches and pains
- A change in sexual desire
- Changes to skin texture and appearance
- Bladder control difficulty
- Vaginal fluid changes (dryness)
- Disruption of sleep patterns (difficulty sleeping)

Hormone Levels During Perimenopause And Menopause

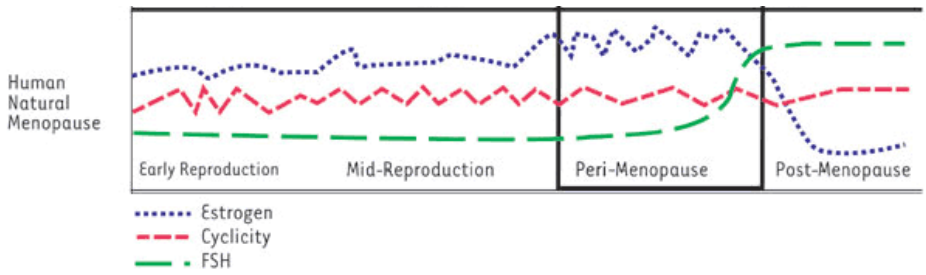


Figure 3 Estrogen and FSH levels

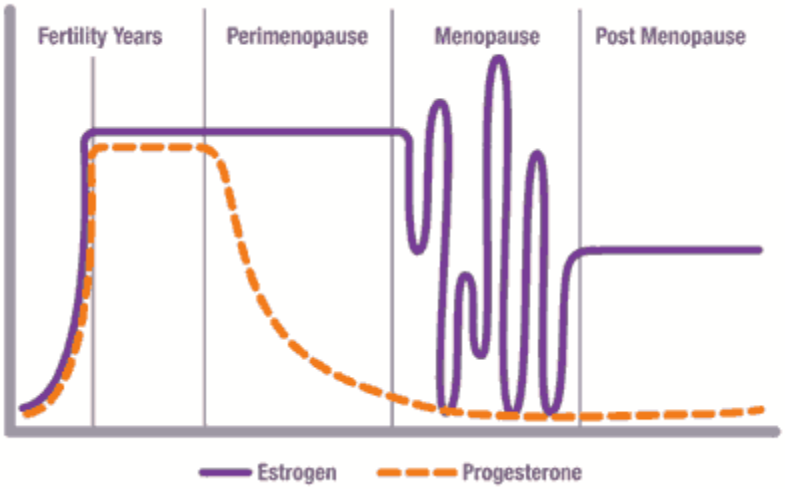


Figure 4 Estorgen and progesterone levels

3. COMMON MEDICAL TREATMENTS FOR MENOPAUSE

Perimenopause is a natural stage of life. It is not a disease or a disorder, and therefore it does not automatically require any kind of medical treatment at all. However, in those cases where the physical, mental, and emotional effects of perimenopause are strong enough that they significantly disrupt the everyday life of the woman experiencing them, palliative medical therapy may sometimes be appropriate.

Hormone replacement therapy

Hormone replacement therapy or HRT is the use of estrogen plus progestin for a woman who has an intact uterus or estrogen alone for a woman who has had a hysterectomy. Traditionally such therapy was provided as tablets but now is available in a range of formulations including skin patches, gels, skin sprays, subcutaneous implants and so forth. A popular alternative to conventional HRT is a synthetic hormone (derived from the Mexican yam) called tibolone. Of the non hormonal therapies for hot flushes, some of the SSRIs (Selective serotonin reuptake inhibitors or serotonin-specific reuptake inhibitor, are a class of compounds typically used as antidepressants) appear to provide some symptoml relief. Adverse effects of HRT appear to vary according to formulation and dose.

In addition to, hormone therapy can provide relief from hot flashes, vaginal dryness, improve sleep quality and joint pain. It is also extremely effective for preventing bone loss and osteoporotic fracture.

A woman and her doctor need to review her situation, her complaints and her relative risk before determining whether the benefits of HT/HRT or other therapies outweigh the risks. Until more becomes understood about the possible risks, women who elect to use hormone replacement therapy are generally well advised to take the lowest effective dose of hormones for the shortest period possible, and to question their doctors as to whether certain forms might pose fewer dangers of clots or cancer than others.

Until recently the most widely used estrogen preparation worldwide in postmenopausal women was oral conjugated equine estrogens. Other oral oestrogen preparations include synthetically derived piperazine estrone sulphate, estriol, micronised estradiol and estradiol valerate. Estradiol may also be used transdermally as a patch or gel, as a slow release percutaneous implant, and more recently as a metered dose skin spray. Intravaginal estrogens include topical estradiol in the form of a ring or pessary, estriol in pessary or cream form, dienoestrol and conjugated oestrogens in the form of creams. Oral micronised estradiol and other oral estrogen preparations may result in up to 10 fold higher levels of circulating estrone sulphate than transdermally administered estradiol at comparable or even higher doses. This is of concern in that estrogen sensitive tissues such as breast and endometrium have high capacity to metabolise estrone sulphate through to estradiol. Orally administered estrogen therapy also increases sex hormone binding globulin (SHBG) to a greater extent than none orally administered estrogens. SHBG binds estrogen

and testosterone in the blood and this may result in a clinically significant reduction in the bioavailability of these hormones. Thus it would seem that the prescription of oral estrogen therapy should be at the lowest available dose to minimise effects on circulating estrone sulphate and SHBG.

Oral administration of progesterone is convenient, however the oral micronised form is rapidly metabolized and inactivated in the liver, and therefore high doses must be administered to achieve adequate circulating blood levels. Synthetic progestins have been developed and are prescribed to overcome this problem. Synthetic progestins are more resistant to liver metabolism; therefore lower doses can be used to achieve the desired endometrial effect. It is not uncommon for women to experience side effects with progesterone or progestin therapy. Progesterone may cause sedation so is best taken at bedtime. Synthetic progestins may cause irritability and mood changes in some women.

Conjugated equine estrogens

Conjugated equine estrogens contain estrogen molecules conjugated to hydrophilic side groups (e.g. sulfate) and are produced from the urine of pregnant Equidae (horses) mares. Premarin is the prime example of this, either alone or in Prempro, where it is combined with a synthetic progestin, medroxyprogesterone acetate.

Women had been advised for many years by numerous doctors and drug company marketing efforts (at least in the USA) that hormone therapy with conjugated equine estrogens after menopause might reduce their risk of heart disease and prevent various aspects of aging. However, a large, randomized, controlled trial (the Women's Health Initiative) found that women undergoing HT or HRT with conjugated equine estrogens (Premarin), in combination with a synthetic progestin (medroxy pogesterone acetate (Premarin plus Provera, known as Prempro)), had an increased risk of breast cancer and heart disease. An increase in breast cancer risk was not seen in the Women's Health Initiative study of conjugate estrogen alone (Premarin) versus placebo, however this study was stopped prematurely as an increased risk of stroke was observed in women treated with Premarin . Although this increase in risk was small overall, it passed the thresholds that had been established by the researchers in advance as sufficient to ethically require stopping the study.

When these results were first reported in 2002, the popular media sensationalized the story and exaggerated the risk, while the manufacturer continued to attempt to minimize the degree of risk. However most news stories failed to mention that the average age of the women in WHI was 62 years old, significantly older than the time when most women start HRT, and in fact many years into postmenopause. In order to enroll in the study, patients had to be asymptomatic of hot flashes, so they would not know whether they received the placebo. For these reasons WHI was not representative of generally accepted clinical practice.

The 2002 and 2003 announcements of the Women's Health Initiative of the American National Institute of Health and The Million Women Study of the UK Cancer Research and National Health Service collaboration respectively, that HRT treatment coincides with a increased incidence of breast cancer, heart attacks and strokes, lead to a sharp decline in HRT prescription throughout the world, which was followed by a decrease in breast cancer incidence.

On hearing the news about the WHI study, many women discontinued equine estrogens altogether, with or without their doctor's knowledge. The number of prescriptions written for Premarin and PremPro in the United States dropped within a year almost to half of their previous level. This sharp drop in usage was followed by large and successively larger drops in new breast cancer diagnoses, at six months, one year, and 18 months after the drop in Premarin and Prempro prescriptions, for a cumulative 15% drop by the end of 2003. However, the apparent meaning of this correlation is called into question by the fact that prescriptions of Prempro and Premarin fell dramatically in Canada as well, but no similarly dramatic drop in Canada's breast cancer rates was observed during the same time period. Studies designed to track the further progression of this trend after 2003 are under way, as well as studies designed to quantify how much of the drop was related to the reduced use of HT/HRT.

Selective Estrogen Receptor Modulators

SERMs are a category of drugs, either synthetically produced or derived from a botanical source (Phytoserms) that act selectively as agonists or antagonists on the estrogen receptors throughout the body. The most commonly prescribed SERMs are raloxifene and tamoxifen. Raloxifene exhibits oestrogen agonist activity on bone and lipids,

and antagonist activity on breast and the endometrium .Tamoxifen is in widespread use for treatment of hormone sensitive breast cancer. Raloxifene prevents vertebral fractures in postmenopausal, osteoporotic women and reduces the risk of invasive breast cancer. While most SERMs are known to increase hot flushes, Femarelle (DT56a) decreases them. In addition to the relieving effects on menopausal symptoms, Femarelle also increases bone mass density (BMD), making it protective against osteoporotic fractures. These effects are achieved by an agonistic interaction with estrogen receptors in the brain and bone. On the other hand, an antagonist interaction with estrogen receptors in the breast and uterus has no effect on these tissues.

Antidepressants

Antidepressants such as paroxetine (Paxil), Fluoxetine hydrochloride (Prozac), and Venlafaxine hydrochloride (Effexor) have been used with some success in the treatment of hot flashes, improving sleep, mood, and quality of life. Paroxetine and venlafaxine may cause nausea and insomnia. In addition, venlafaxine may cause dry mouth, constipation and decreased appetite whereas paroxetine may cause headaches. There is a theoretical reason why SSRI antidepressants might help with memory problems: they increase circulating levels of the neurotransmitter serotonin in the brain and restore hippocampal function. Fluoxetine hydrochloride (Sarafem) is also prescribed for premenstrual dysphoric disorder (PMDD), a mood disorder often exacerbated during perimenopause. PMDD has been found by PET scans to be associated with dysregulation of serotonin pathways in the brain and to respond quickly and powerfully to SSRIs.

Gabapentin

Gabapentin (sometimes called by its brand name, Neurontin) and other GABA analogs are anti-seizure medications. Several GABA analogs are prescribed off-label for a variety of other conditions (such as pregabalin being used to treat the symptoms of fibromyalgia under the brand name Lyrica); gabapentin itself has been shown to be as effective as estrogen at reducing hot flashes.

Blood pressure medicines

Blood pressure medicines including clonidine (Catapres) are about as effective as antidepressants for hot flashes, but do not have the other mind and mood benefits of antidepressants. However they may merit special consideration by women suffering both from high blood pressure and hot flashes.

Alternative medicine

It is important to examine the claim that herbal remedies help relieve menopausal symptoms. Some botanical sources, referred to as phytoestrogens, do not simply mimic the effects of human steroidal estrogen but exhibit both similar and divergent actions. The ultimate actions of these compounds in specific cells is determined by many factors including the relative levels of the estrogen receptors ER alpha and beta and the diverse mix of coactivators and corepressors present in any given cell type. Thus they have been described to act somewhat like selective estrogen receptor modulators (SERMs). Effects vary according to the phytoestrogen studied, cell line, tissue, species and response being evaluated.

Systematic reviews of intervention studies question the validity of the proposed benefits of phytoestrogen supplementation, with little data in postmenopausal women to support a role for phytoestrogens as an alternative for conventional HT . Femarelle is a mixture of DT56a soy derivative and ground flaxseed at a ratio of 3:1, for oral administration. Each capsule contains 344 mg soy and 108 mg flaxseed – altogether 430 mg powder. It is being promoted for the treatment of menopause and prevention of bone loss and has also been described as having SERM qualities, thereby reducing the safety risks involved in estrogenic-like treatments. In 2008 the European Food Safety Authority concluded that "a cause and effect relationship has not been established between the consumption of Femarelle® and increased BMD, increased bone formation, or decreased risk of osteoporosis or other bone disorders in post-menopausal women."

In the area of complementary and alternative therapies, acupuncture and acupressure treatments are promising. Numerous studies indicate positive effects, especially on hot flashes but also others showing no positive effects of acupuncture regarding menopause.

There are regular claims that soy isoflavones are beneficial concerning menopause. However, one study indicated that soy isoflavones did not improve or appreciably affect cognitive functioning in postmenopausal women.

Other remedies which work in some studies, but in other studies appear to be no better than a placebo, include red clover isoflavone extracts and black cohosh. Black cohosh (Cimicifuga racemosa, also known as Actaea racemosa) is a North American native plant. It has common usage internationally for the treatment of hot flushes and sweats experienced by postmenopausal women. However, study results do not support a benefit of black cohosh for the treatment of menopausal symptoms . Black cohosh has been associated with reports of acute liver toxicity and a concern has been raised regarding the stimulation of pre-existing breast cancer based on an animal study.

Other therapies lifestyle changes

Lack of lubrication is a common problem during and after perimenopause. Vaginal moisturizers can help women with overall dryness, and lubricants can help with lubrication difficulties that may be present during intercourse. It is worth pointing out that moisturizers and lubricants are different products for different issues: some women feel unpleasantly dry all of the time apart from during sex, and they may do better with moisturizers all of the time. Those who need only lubricants are fine just using the lubrication products during intercourse.

Low-dose prescription vaginal estrogen products such as estrogen creams are generally a safe way to use estrogen topically, in order to help vaginal thinning and dryness problems while only minimally increasing the levels of estrogen in the bloodstream.

In terms of managing hot flashes, lifestyle measures, such as drinking cold liquids, staying in cool rooms, using fans, removing excess clothing layers when a hot flash strikes, and avoiding hot flash triggers such as hot drinks, spicy foods, etc., may partially supplement (or even obviate) the use of medications for some women.

Individual counseling or support groups can sometimes be helpful to handle sad, depressed, anxious or confused feelings women may be having as they pass through what can be for some a very challenging transition time.

The bisphosphate drug alendronate can help prevent loss of bone mass, reducing the risk of fractures, according to a Cochrane review of studies. This applies both to women that have suffered bone loss but have not yet suffered fractures, and women that have suffered both bone loss and fractures.

4. YOGA THERAPY VIEW – CHAKRA FOCAL POINT OF MENOPAUSE

Menopause an imbalance in the 1st and 2nd chakra related to the adrenals and the sex organs. An imbalance in these chakras can lead to an imbalance in any of the other chakras. The various symptoms may reflect different chakral imbalances. Menopause is a time of reflection and reassessment of one's life. Through reflection and investigation and being mindful of what the body is communicating a woman may be able to rebalances and be better prepared to face the next stage of life. The focus of one's life is switching from procreation to personal growth, to coming into ones true self.

The major hormonal changes occurring in the reproductive organs, the ovaries and uterus are located in the lower abdomen and are represented in yoga by the 2nd Chakra the Sacral chakra, the Swadhisthana.

The Sacral chakra, the second chakra represents a person's sexuality, creativity, finances, personal power, relationships, sensuality, and pleasure. Organs associated with the Second Chakra include uterus, ovaries, vagina, cervix, large intestine, lower vertebrae, pelvis, appendix, and bladder. The colour associated with this chakra is orange, the element is water and the sound is AH (father). Spiritual and emotional issues that can block energy in the Second Chakra are balancing your drives toward sex, money, and relationships; co-creating with others; defining

boundaries; and struggling with when to give and take and when to be assertive and passive. The goals of this chakra are fluidity, movement, pleasure, relaxation, self nurturance and change. Physical dysfunctions that can occur are: lower back pain, sexual impotency, urinary problems, kidney problems, attachment, isolation, emotional instability and appendicitis.

The secondary changes occur in the 1st, base chakra representing the adrenals, the Muladhara represents a person's family connection and the foundation of your emotional and mental center. It helps keep you grounded. Organs associated with the First Chakra include adrenals muscles, bones, hip joints, spine, blood, and immune system. Spiritual and emotional issues that can block energy in the First Chakra include how to feel safe and secure in the world, knowing when to trust or mistrust, knowing when to feel fear, and finding a balance between independence and dependence. Physical dysfunctions that can occur are: back pain, scoliosis, rectal cancer, fibromyalgia, arthritis, and skin problems.

The second chakra's goals are of fluidity, movement, pleasure and change. Menopause asks that a woman accepts the changes in her body, reassesses her priorities and make being true to herself and listening to her feelings a way to move forward into the next phase of her life. It is the time in a woman's life to let go of guilt and to be true to ones feeling and let pleasure, creativity and self nurturance be the focus. By being true to ourselves, redefining boundaries and taking time to nurture oneself the sacral energy will expand and flow.

Yoga For Sacral Chakra

To balance the sacral chakra belly breathing may be helpful as well as meditating/visualizing on the colour orange in the area of the navel. Asana poses helpful to unblock the sacral chakra are lunge, cat dog breathing focusing on bringing the breath into the belly, cobra, pigeon, hip stretches, twists, and bound angle. As the element of this chakra is water, focus on making the poses fluid flowing from one to the other with breath almost like a sensual dance. Taking time to walk and sit by water to meditate and reflect.

5. YOGIC REMEDIES FOR MENOPAUSE

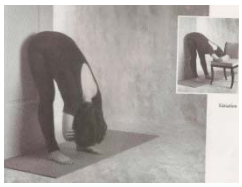
Yoga therapy is the science of "One". From this perspective each person needs to be looked at individually and even though the physical symptoms are found on the physical level most of them can be traced to the emotional, mental and spiritual level. The best ways to achieve a smooth transition through menopause is to know yourself — a learning process that involves recognizing your physical, nutritional, and emotional imbalances, while working to achieve a peaceful and harmonious state of being. When a woman reaches perimenopause, she can benefit from turning inward to renew her self-awareness and self-knowledge. We can come to know ourselves better by simply reflecting on the energetic forces that create balance as opposed to imbalance in our lives. Many women may benefit from practices like meditation and yoga.

General Guidelines For Yoga Practice

- Inversions, where the head is places lower than most of the body, stimulate the endocrine system especially the pituitary gland which controls the changes in the hormone levels. Inversions should not be practice during menses, as the flow of blood can be reversed, which would not be beneficial as the body is trying to get rid of the waste blood.
- Poses that bring prana to the abdomen, uterus and ovaries, like forward bends, twists and abdominal breathing. The alternate squeezing and releasing brings new blood and prana to the ovaries enhancing their function to produce and balance hormones.
- Forward bends sooth the nervous system and quiet the mind.
- Poses that open the front of the body to stimulate the thyroid to balance overall level of energy and minimize the tendency to gain weight.

Judith Lasater, in her book “Relax and Renew” designed the “Transitions: opening to menopause” series. It is designed to stimulate the ovaries and the pituitary gland to produce and balance hormones. The series is made up of 8 poses and takes from 60-100 minutes.

1. Wall Hang –



This pose is an inversion, which stimulates the endocrine system. It also places pressure on the abdominal area squeezing blood from the reproductive organs and when the pose is released the organs are bathed in new blood. It is recommended to hold this pose for 30 seconds to 1 minute.

2. Hang Dog Pose -

This pose is a modified inversion. It stimulates the pituitary gland and calms the nervous system. It increases prana flow to the lower torso and neck which can relieve muscle tightness. It is recommended to hold this pose for 30 seconds to 1 minute.

3. Mountain Brook Pose-

This pose is an opening pose with a slight backbend. It opens the throat stimulating prana flow to the thyroid gland which can increase and regulate hormone production. This can balance overall level of energy and minimize the tendency to gain weight during menopause. It is recommended to hold this pose for 5 to 15 minutes.

4. Reclined Cobblers Pose-

In this pose reduces constriction and tension on the abdomen, uterus, ovaries and vagina which enables balanced hormonal activity. It helps with severity and duration of mood swings. It can also be helpfull with high blood pressure, breathing problems and headaches. It is recommended to hold this pose for 15 to 30 minutes

5. Elevated Legs Up The Wall-

This pose lets the blood and lymph fluids to drain from the legs and pool in the belly, bathing the organs in oxygen. It is this alternate action of squeezing and bathing of these organs in this series that helps to regulate hormones during menopause. This also helpful in reducing the effects of stress, it quiets the mind, refreshes the heart and lungs, it helps with water retention, varicose veins and tired legs. It is recommended to hold this pose for 5 to 15 minutes.

6. Supported Bridge Pose-

This pose has been found to reduce blood levels of norepinephrine, a key hormone regulating blood pressure. This pose is helpful for women with high blood pressure. This pose enables to belly, uterus and the ovaries to drop deeper into the pelvic cavity which helps to balance hormonal secretions to moderate the hormonal fluctuations during menopause. It is recommended to hold this pose for 5 to 15 minutes.

7. Supported Child Pose-

This pose creates a counter pressure on the abdomen, and stretches the lower back. It is helpful in relieving pain in the lower back due to the irregular periods of Perimenopause. It is recommended to hold this pose for 5 to 15 minutes.

8. Basic savasana with sandbag and bolster-
(Place the sandbag on the belly)

This pose is a basic relaxation pose good at any time. This pose lowers blood pressure, heart rate, releases muscular tension, reduces feeling of tiredness, improves sleep, enhances immune response, and helps to manage chronic pain. It is recommended to hold this pose for 7 to 20 minutes.

Doshic Point of View

Menopause is a very complex system of hormonal, emotional and spiritual symptoms. Each woman experiences it slightly differently, from almost no symptoms to very sever, life debilitating ones. From the Ayurvedic point of view, a treatment is based on individual dosha imbalances (Ayurvedic vikriti) rather than treatment of specific symptoms. If you have an excess of one dosha during menopause, the resulting imbalance in your body tends to produce a certain "type" of menopausal symptoms characteristic for that dosha. Recognizing which dosha dominates your system in menopause will help identify which treatments best match your constitution and are most likely to ease your symptoms

Vata types — air and space

The mature, menopause years of life are considered the Vata stage of life. This is a time of inner examination, vision and growth. Menopause and perimenopause symptoms are characteristically indicators of high Vata dominance. During a Vata-dominated menopause, you will likely be experiencing any of the following symptoms:

- Nervousness
- Anxiety
- Insomnia
- Mild hot flashes
- Depression
- Poor skin tone
- Constipation
- Vaginal dryness
- Cold extremities
- Painful joints

Suggestions for Vata-dominated menopause

Pranayama- To calm and ground and warm the body, done slowly and rhythically

- Nadi Shodhana(alternative nostril deep diapdragmatic breathing focusing on the exhale to calm and relax) to calm, relax, sooth and balance the nervous system.
- Ujjayi to warm the body bring prana,
- During hot flashes a rhythmic slow cooling breath may be helpful like Chandra bhedana, or shitali

Mula bandha would be helpful to ground the Vata energy and connect to the earth.

Asana
For Vata imbalance it is helpful the asana practice to be done slowly and rhythmically. Any restorative posses that ground the body and calm the nervous system (like described above). While practicing focus on growing roots and connecting with the earth.

Dietary habits that decrease Vata include frequent but small meals, prepared warm and mildly-spiced. Warm drinks and foods build strength, unlike cooling foods like salads. It is also suggested that you try to eat regular meals, avoid eating when you're nervous or worried, and share your meals with people who relax you. Going to bed early can also help balance excess Vata.

Massaging the body with oils like sesame, almond and olive oil to reduce Vata, as well as inhaling vapours from essential oils such as wintergreen, cinnamon and sandalwood, or the incenses myrrh and frankincense for their restorative effect.

Pitta types — fire and water

Pitta is associated with mid life define as the productive, working period. Moving from the pitta stage into vata (from fire into air) occurs while a woman transitions from perimenopause into menopause Women whose menopause is dominated by pitta may generally experience any or all of the following symptoms:

- Angry outbursts
- Irritability
- Short temper
- Hot flashes and night sweats
- Urinary tract infections (UTI's)
- Skin rashes

Suggestions for pitta-dominated menopause

Pranayama- to cool and calm the body

- Mouth breathing focused on the exhale (Anuloma) can be cooling and soothing.
- Sitali and Sitkari
- Chandra bhedana(inhale left nostril and exhale right) cooling and calming
- All breathing is to be done with ease and relaxation making the breath silk smooth.

Jalandhara bandha can be helpful to calm the mind if done smoothly and calmly

Asana
All practice done calmly without strain.
Practice any of the restorative poses from above would be helpful to calm and sooth the nervous system and ground the pitta imbalance. Other poses that may be useful are slow cat cow breathing, cobra, cresacent moon, all forward bends without strain, all inversions are calming and grounding if done without strain.

A good way to calm your fiery pitta-dominant menopause is with coconut, sandalwood and sesame oils.

You may also benefit from the very relaxing, pitta-balancing vapors of essential oils made from gardenia, honeysuckle, lotus and iris, as well as incense made from saffron, jasmine or geraniums

The anti-pitta diet is also designed to cool, and is especially the type of Ayurvedic diet helpful during the spring and summer months for pitta-dominance. It consists of lots of cooling, heavy foods, eaten raw or relatively plain — not cooked in a lot of oil or heavily laden with hot spices — eaten at three regular meals a day. It is helpful to avoid alcohol and drink generous amounts of cool clear water to stay refreshed and hydrated. Sweet juicy fruits like grapes,

pears, plums, mango, melons, and apples also serve this purpose. Also suggested are summer vegetables like zucchini, yellow squash, and cucumber as good options. Avoid pungent, sour, salty, and hot spicy tastes and hot drinks.

Kapha types — water and earth

Kapha is associated with youth, or childhood. Its natural elements, water and earth, can manifest as a "heavy menopause," where you're feeling tired a lot, have difficulty concentrating or just can't seem to shake that "heavy feeling." Other symptoms may include:

- Weight gain
- Sleepiness
- Sluggishness
- Yeast infections
- Slow digestion
- Fluid retention

Suggestions for kapha-dominated menopause

Pranayama- focus on faster rhythm and energizing inhalations.

- Diaphragmatic breathing, energetic focusing on inhalations
- Upper chest breathing- energizes the seat of kapha
- Surya bhedana(inhale right nostril exhale left) energizing
- Ujjaya- heating and energysing
- Bhastika done without strain can be heating and energizing

All bandhas practiced energetically with movement to increase air and space elements

Asana

All practice done dynamically with energy especially in a vinyasa practice.

Kapha need motion and energy, sun salutations are a good way to warm the body with emphases on energizing back bends. Helpful poses done in as part of vinyasa practice are bridge, sun bird, chair, cobblers pose, cobra, crescent moon, fish, shoulder stand, hand stand, tree, triangle, warriors; all poses done with emphases on expanding upwards.

Use mustard oil and linseed oil to dry out and avoiding all massage and cooking oils which are heavier. Inhaling the sharp essential oil vapors of cedar, pine and sage, as well as incense made from basil, frankincense and cedar is also said to help balance kapha.

Lessening kapha through your diet means eating light, dry and warm, so it's best to avoid sweet and cold foods, as well as oily or heavy foods like meats and cheeses. Instead, women with kapha dominance are encouraged to eat mild fruits as opposed to very sweet or sour ones, warm and drying whole grains such as millet and buckwheat rather than wheat, smaller legumes such as mung beans and red lentils, and pungent and bitter vegetables such as greens. Tastes considered good to balance this dosha include bitter, pungent, and astringent, and those that are best avoided are sweet, sour, and salty. Any and all spices (but salt) are fine, including black pepper, turmeric and ginger. Women with kapha dominance often find they feel best when they avoid big meals, strive for a late breakfast, and make lunch the heaviest meal.

Conclusion

Perimenopause and menopause is a complex interplay of hormones, diet and lifestyle. It is an opportunity to tune in and reflect on the next phase of life. This passage can be enhanced through yogic practices of yoga especially restorative yoga, pranayama, meditation and self reflection.