ISSN: 0975-3583, 0976-2833 VOL14, ISSUE 08, 2023

Understanding Menopausal Health: A Comprehensive Review of Menopausal Diseases and Their Impact on Women's Health

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Abstract

Menstruation stops permanently for at least a year at menopause, a common, non-pathologic illness. All menstrual females experience menopause as a result of non-pathologic oestrogen insufficiency. 51 is the average age for menopause. The majority of women suffer vasomotor symptoms, although menopause can also have an impact on the urogenital and cardiovascular systems, among other things. In this exercise, the presentation, assessment, and management of menopause are reviewed, and the importance of an interdisciplinary team approach to patient care is emphasized. 51 is the average age for menopause. The majority of women suffer vasomotor symptoms, but menopause also has an impact on the urogenital, cardiovascular, and psychogenic systems of the body. 51 is the average age for menopause. Most women have vasomotor symptoms, but there are numerous other effects of menopause. Menopause typically occurs at age 51. The majority of women suffer vasomotor symptoms, but menopause also has an impact on the urogenital, cardiovascular, and psychogenic systems of the body. Hot flashes, sweating, sleep issues, mental disturbances, and monthly irregularities are among the early menopausal symptoms linked to the increasing decreases in hormone secretion and ovarian oestrogen insufficiency described in the literature. Vasomotor symptoms are experienced by 75% of women throughout menopause. Most women have VMS at some point throughout the menopausal transition. VMS (hot flushes or night sweats) are the most commonly reported of the basic symptoms that make up the menopause. 60-80% of women reported VMS throughout the menopausal transition in the Study of Women's Health across the Nation (SWAN), one of

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the largest studies on menopausal women. Medical intervention is not necessary for menopausal illness. Instead, treatments concentrate on controlling or avoiding chronic illnesses that may develop with ageing as well as curing your indications and symptoms. Hormone replacement therapy (HRT), an effective allopathic treatment for menopausal syndrome, may also cause vasoregulatory dysfunction, elevated blood pressure, and venous thrombosis. Additionally, the risk of developing cancer in vitally important functional organs like the cervix, endometrium, ovaries, and breast rises.

Keywords: *Hormone replacement therapy, endometrium, psychogenic, urogenital*

1. INTRODUCTION

Menstruation has stopped permanently for at least 12 months, which is a symptom of the common, non-pathologic condition known as menopause. All menstrual females experience menopause as a result of non-pathologic oestrogen insufficiency. 51 is the average age for menopause. The majority of women suffer vasomotor symptoms, although menopause can also have an impact on the urogenital and cardiovascular systems, among other things. This activity discusses the presentation, assessment, and management of menopause and emphasises the value of a multidisciplinary team approach to treating those who are experiencing it(Soares, 2019);(Vishwakarma et al., 2019). Menopause typically occurs at age 51. The majority of women suffer vasomotor symptoms, but menopause also has an impact on the urogenital, cardiovascular, and psychogenic systems of the body. 51 is the average age for menopause. The majority of women suffer vasomotor symptoms, but menopause also has an impact on the urogenital, psychological, and cardiovascular systems of the body(Harlow et al., 2012)

The most common complaints in menopause include vasomotor symptoms like hot flashes and night sweats, urogenital atrophy, osteopenia and osteoporosis, psychiatric disorders, sexual dysfunction, skin lesions, cardiovascular disease, cancer, and finally bone loss. Hormonal menopause (follicle-stimulating hormone [FSH], estradiol [E2], FSH/luteinizing hormone [LH]) is characterized by absolute hypoestroge These all have a negative impact on women's quality of life(Lobo et al., 2014);(Stachowiak et al., 2011). The most common metabolic disorders in menopause include dyslipidemia, impaired glucose tolerance, insulin resistance, hyperinsulinemia, and type-2 diabetes (T2DM)(Matthews et al., 2009). A number of common symptoms experienced by menopausal women, including a change in body weight (a significant gain or loss), polyuria, recurrent urogenital inflammation, fatigue, weakness, irritability, blurred vision, thirst, increased appetite, and sexual dysfunction, should be considered indicators of diabetes(N. G. Clark et al., 2007);(Stachowiak et al., 2015). Numerous established CVD risk factors are adversely affected by menopause, such as changes in body fat distribution from a gynoid to an android pattern, decreased glucose tolerance, abnormal plasma lipids, elevated blood pressure, increased sympathetic tone, endothelial dysfunction, and vascular inflammation(Rosano et al., 2007). Postmenopausal women have been seen to acquire weight starting in the first year after menopause and to have a change in their body fat distribution from a gynoid to an android pattern. Early postmenopausal women have had significant weight gain of 5 kg over a period of 36 months, which can be attributed to an increase in total body fat(Gambacciani et al., 2001). According to epidemiological studies,

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MetS is quite prevalent in both Europe and the US. Estimates state that 20–25% of persons in wealthy countries fulfil the MetS diagnostic criteria(Stefanska et al., 2015).

Menopause is best understood as a dynamic process that unfolds over a number of years and involves the transition from reproductive capability to post menopause. It involves a variety of hormonal and physiological changes, such as increased follicle-stimulating hormone (FSH) production by the pituitary, adjustments to menstrual cycle length and regularity leading to amenorrhea, reductions in hepatic sex hormone-binding globulin (SHBG) and serum levels of estradiol (E2), and a slight decline in circulating androgens(Sunbul et al., 2013);(Polotsky & Polotsky, 2010). The following terminology, adopted from the Stages of Reproductive Aging Workshop(Soules et al., 2001):

- **Menopause**: A state after 12 months of amenorrhea following the final menstrual period (FMP); note the retrospective nature of this definition.
- **Menopause's onset**: Early (stage 2) or late (stage 1) includes changes in menstrual regularity and increases in FSH that culminates in the FMP.
- **Perimenopause**: Menopausal transition plus 1 year after FMP.
- **Post menopause**: Early (stage + 1) includes 5 years after FMP and late (stage + 2) until death.

According to the research, hot flashes, sweating, sleep issues, mental changes, and menstruation problems are among the early menopausal symptoms linked to the gradual decreases in hormone output and ovarian oestrogen shortage(Stachoń, 2013). At least one menopause symptom is reported by 85% of menopausal women, which typically indicates the existence of depressive disorders, vasomotor symptoms, or sleep disturbances(Joffe et al., 2010);(Kravitz et al., 2011). Around 75% of women go through menopause with vasomotor symptoms(Monteleone et al., 2018). At a mean age of 51–52 years, loss of ovarian function results in the permanent end of menstruation(Freeman et al., 2014). Women are now living much longer following the start of menopause than they did in the past due to rising life expectancy. More than 50 million American women are expected to be older than 51 by the year 2020(Reduction et al., 2021)

1.1. Symptomatology

Most women have VMS at some point throughout the menopausal transition. VMS (hot flushes or night sweats) are the most commonly reported of the basic symptoms that make up the menopause. 60-80% of women reported VMS during the menopausal transition in the Study of Women's Health Across the Nation (SWAN), one of the largest studies on menopausal women(Thurston et al., 2008). Compared to women without symptoms, those with VMS have fewer favorable cardiovascular indicators. In one study, almost 11,000 women (45–50 years old) who experienced frequent VMS had a higher chance of getting CHD over a 14-year period, even after taking into account the impact of age, menopause status, lifestyle, and other chronic disease risk factors(Herber-Gast et al., 2015);(Biglia et al., 2017). Women's wellbeing and life expectancy can be significantly impacted by moderate-to-severe menopausal symptoms. For instance, hot flushes are more than just a bother; they could be an early warning indication of chronic illnesses including cardiovascular disease, osteoporosis, and cognitive impairment and should be addressed as such(Palacios et al., 2019). The following are a few typical signs of menopausal disease:- Inconsistent menstrual cycles, Dry vagina, Hot flashes, Chills, Night

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sweats, issues with sleep, mood swings Added pounds and a sluggish metabolism(Palacios et al., 2019).

1.3. Risk Factors:

The risk of ischemic stroke is quite low in premenopausal women, but it increases with age. The incidence of stroke, including ischemic stroke, intracerebral haemorrhage, and subarachnoid haemorrhage, is estimated to be between 0 and 1 per 1000 women per year in white women aged 45 to 54. There are few age-specific statistics on the prevalence of stroke in women from minority groups. Stroke incidence in Mexican American women aged 45 to 59 is thought to be 1•94 per 1000 per year(L. D. Lisabeth et al., 2008). The menopause is defined as the absence of menstrual periods for 12 consecutive months. The average age of menopause is 51 years, with a range of 40–60 years(Te Velde & Pearson, 2002). Following menopause, the levels continue to drop and then plateau after one to three years. Because estradiol levels drop more quickly than circulating testosterone levels during this time, the menopausal transition is linked to a relative androgen rise(Liu et al., 2001). Amenorrhea for at least 4 months, a lack of sex steroid, and two measurements of follicle-stimulating hormone (FSH) concentrations of more than 40 IU/L taken at least a month apart are all considered signs of primary ovarian insufficiency, which is the preferred term over premature ovarian failure(Coulam et al., 1986). Additionally, carotid intimal medial thickness and adventitial diameter tests for subclinical vascular disease in women show a rise in these conditions shortly after menopause(Mudali et al., 2005)(Wildman et al., 2008). Since menopause is frequently visible when amenorrhea or vasomotor symptoms are present, it is crucial to concentrate on identifying and treating these risk factors in women during midlife as well as in those aged 51–55 without a history of surgical hysterectomy. Although this is an important field of research, it is unknown if measuring these hormones or screening for subclinical disease in middle age would alter cardiovascular disease and stroke prevention measures(Jayachandran et al., 2020)(L. Lisabeth & Bushnell, 2012).

1.3.1. Sleep disturbances in Menopause:

It is normal for midlife women to have sleep issues (also known as insomnia), but it is unknown how widespread these issues are or whether menopausal hormone changes are to blame(Guidozzi, 2013). It is expected that a variety of factors, such as hormonal shifts, will modify how sleep and breathing are managed. Ovarian and social functions alter, and stress exposure takes place, throughout the menopausal transition. For women, common midlife life transitions include returning to the workforce, adjusting to children leaving the nest, caring for elderly parents, young children, and sometimes both, as well as adjusting to the death of or divorce from their partners. The stress and reproductive axis are interacting in significant ways, according to researchers(Chrousos et al., 1998). It's noteworthy to notice that the percentage of adults in the neighbourhood who experience sleep disturbances often matches or exceeds the prevalence of insomnia documented for women in their middle years(Bixler et al., 1979)(Karacan et al., 1976). Whether or whether SBD is to blame, there is uncertainty regarding the association between ovarian hormone changes or withdrawal and sleeplessness. It is challenging to come to a firm conclusion because of the intrinsic intraindividual variability in sleep patterns, general aging-related changes, and methodological variations among studies.

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To measure and evaluate the quality of the sleep, brainwaves, muscle tension, and eye movements are recorded during the sleep stage(Vgontzas et al., 1998). In cross-sectional studies of women in their mid-life, often between the ages of 40 and 55, there is some evidence linking menopause to insomnia, but the findings are conflicting. This result is likely the result of design variations, specifically in the sample selection, status classification techniques, control conditions, and analysis(A. J. Clark et al., 1995). Few studies have examined the relationship between menopause and decreased physiological sleep. According to studies, the most visible symptoms of sleep disruption are hot flushes and perspiration. Evidence comes from cross-sectional studies that look at sleep patterns in relation to menopausal status or track hot flash activity and sleep at the same time. Menopausal status was determined using FSH levels, hot flash activity, and reported alterations in the menstrual cycle(Shaver et al., 1988).

1.3.2. Weight gain in Menopause:

There are two crucial factors to think about while analyzing weight gain during the menopausal transition: ANM age is influenced by two factors: first, how body weight changes during the transition affect it, and second, how weight changes affect menopausal symptoms(Davis et al., 2012). It is well known that obesity may be associated with altered hormone levels and lengthier menstrual cycles in premenopausal women due to an extended follicular phase. A later ANM has been associated with premenopausal episodic weight loss of more than 5 kg and the rate of premenopausal BMI rise(Aydn, 2010). Other elements linked to a later ANM include not being a vegetarian, not smoking, not being a non-smoker, having a higher adult weight and BMI, drinking more alcohol, and doing regular, intensive activity(Morris et al., 2012). Numerous studies have demonstrated that weight gain is a common side effect of chemotherapy. Researchers have repeatedly observed a significant change in body composition with increasing total body fat, abdominal adiposity, and visceral adiposity, while lean mass either stays the same or slightly decreases. Women who receive treatment for ovarian failure put on a significant amount of weight compared to those who stay premenopausal 62, with intramuscular fat gaining the most weight(Gordon et al., 2011).

1.3.3. Mortality risk after menopause:

Balance of hormones, early reductions in oestrogen leading to elevated levels of FSH and LH, and finally to decreased progesterone levels and persistent amenorrhea(Reis et al., 2014). Over the course of two or three years, menopausal-related mortality may shift in a short-term or long-term manner. Due to the hormonal nature of the changes, malignancies and circulatory system disorders are the two main illness groups that may be impacted by menopause. Potential shifts in injury exposure, such as those brought on by violence, or changes in health risks, such as those produced by dietary variables(L. P. Clark et al., 2014). Age groups of men and women might be compared to search for potential menopausal mortality impacts. Men and women are exposed to essentially the same baseline mortality risks, such as virus exposure, with the exception of risks associated to their occupations or accidents. It is impossible to distinguish between impacts on female to male mortality ratios that are female in origin and those that are male in origin without more information, even though the ratios will be altered by female effects unless they are totally offset by opposite male effects(Blue & Harpham, 1994).

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2. TREATMENT

2.1. Allopathic

Hormone replacement therapy (HRT), an effective allopathic treatment for menopausal syndrome, may also cause endothelial dysfunction, high blood pressure, and venous thrombosis(Fushtey et al., 2015). Furthermore, the risk of cancer in crucial functional organs including the breast, endometrium, ovaries and the cervix increases. During hormonal therapy, the nervous system is stimulated which then prompts the manifestation of premenstrual-like symptoms including mood changes. Other adverse effects include dermatological manifestations like acne and hirsutism which result from progestogens which have a similar effect to testosterone caused by inducing of androgen receptors(Hamoda et al., 2016).

Sr. No.	Drug	Brand Name	Dose	Mode of Action	Side Effect	Reference
1.	Paroxetine	Aropax, Paxil, Pexeva (Tab)	10–25 mg/day (Orally)	Decreases overall core body temperature by vasodilation, or by reducing blood flow in blood vessels, and helps reduce vasomotor symptoms like hot flushes.	Insomnia, nervousness, dry mouth, sexual dysfunction, and in rare instances risk of suicidal thoughts	(Guthrie et al., 2015)
2.	Citalopram	Celexa (Tab)	10–20 mg/day (Orally)	It inhibit the CNS central uptake of serotonin	Headache, diarrhea, fatigue, insomnia, nervousness, dry mouth, sexual dysfunction, risk of discontinuation syndrome	(Pinkerton & Santen, 2019)
3.	Venlafaxine	Effexor (Capsule)	37.5–75 mg/day (Orally)	inhibition of the uptake pumps for serotonin	Side effects include nausea, dry mouth,	(Johnson & Carroll, 2011)

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				(5-HT) and norepinephrine (NE)[2] with inhibition of NE uptake	appetite loss, constipation, agitation, tremor, anxiety ect.	(Joffe et al., 2014)
4.	Pregabalin	Lyrica (Tab)	75 to 150 mg twice per day (Orally)	Pregabalin blocks the VGCC and hence decrease glutamate and sensory neuropeptides (substance P and CGRP) release at synapse by decreasing Ca2+ influx, and helps reduce vasomotor symptoms like hot flushes	Side effects include drowsiness, ataxia, tiredness, insomnia, weight gain, edema	(Pinkerton, 2020)
5.	Vaginal Estrogen	Gels (like EstroGel), Creams (like Estrasorb), and Sprays (like Evamist)	Adults-2-4 mg of estrone (two to four grams of cream**)**	It lower the serum estradiol concentrations and vasomotor symptoms (hot flashes)	Breast pain or tenderness, diarrhea, difficulty falling asleep or staying asleep, changes in sexual desire, hair loss	(Buck et al., 2021)
6.	Combination estrogen and progestin patches	Climara Pro and Combipatch (Patches)	Adults-Apply 0.05 mg patch two times a week (every 3 to	Protect the endometrium against hyperplasia during estrogen therapy	sudden partial loss of vision; speech problems; dizziness or faintness; weakness or numbness of an arm or a leg;	(Toffol et al., 2015) (Cagnacci et al., 1999)

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			4 days) for the first 14 days of the 28-day cycle		crushing chest pain or chest heaviness; coughing up blood	
7.	Clonidine	Catapres, Kapvay (Tab)	0.05 mg twice daily (Orally)	Ameliorate hot flushes by decreasing noradrenergic activity in the blood vessels	Feeling dizzy or faint when you stand up, Dry mouth, Constipation, Erection problems (erectile dysfunction or impotence), Headaches, Depression	(Edington et al., 1980) (Evans & Hailes, 1979)
8.	Fezolinetant	Veozah (Tab)	45 mg tablet orally once daily (Orally)	Neurokinin 3 receptor antagonist that blocks NKB signaling	Dark urine, feeling of warmth, light-colored stools, redness of the face, neck, arms and occasionally, upper chest, stomach pain, sudden sweating.	(Santoro et al., 2020)

2.2. Role of Herbal Medicine:

There is a rising desire for herbal therapies because allopathic treatments are so expensive and have so many harmful side effects when used. Medicinal plants have been a significant source of treatment since ancient times(Arentz et al., 2014). Despite the revolution in pharmaceutical chemistry that took place in the early 20th century and made it easier to synthesise a huge variety of medicinal drug molecules that also allowed the treatment of previously incurable diseases, thousands of medicinal plants that have potent effects on menopausal symptoms are still in use throughout the world(Badawy & Elnashar, 2011)(Moini Jazani et al., 2019).

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S. No.	Common name/Scientific name	Effects	Mechanisms	Type of study	References
1.	Sage herb/**Saliva Officinalis**	Treatment of flashes, sweats reduction, positive effects on the nervous system including improved memory	Bind to GABA complex/benzodiazepine Receptors in the brain, anti-perspiration feature, phytoestrogens	Clinical Trial	(Vandecasteele et al., 2012)(Hsieh et al., 2001)
2.	Lemon balm/**Melissa Officinalis**	Treatment of sleep disorders, nervousness, gastrointestinal problems in menopause	Lemon balm aroma affects the nervous system	Clinical Trial, Animal Study	(Taavoni et al., 2013)
3.	Valerian/ **Valerian Officinalis**	Treatment of hot flashes in menopause	Increase of GABA in the synaptic cleft	Clinical Trial, Clinical Trial, Cell Study	(Mirabi & Mojab, 2013)(Mirabi & Mojab, 2013)(Santos et al., 1994)
4.	Black Cohosh/ **Cimicifugaracemose**	Treatment of menopause symptoms such as night sweat, hot flash, insomnia, irritability, palpitations and headache	No permanent effect on estrogen receptors	----	(Duker et al., 1991)
5.	Fenugreek/ **Trigonella Foenum**	Treatment of vasomotor symptoms in menopause	Inhibit the excess activity of testosterone	Clinical Trial-A systematic review	(Hakimi et al., 2006)(Ghazanfarpour et al., 2016)
6.	The Black Seeds/**Nigella sativa**	Treatment of metabolic syndrome in menopause	Visceral body fat reduction	Clinical Trial	(Ibrahim et al., 2014)

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7.	Hayfork/ **Vitex Agnuscastus**	Treatment of hot flashes	Stimulate the expression of genes related to progesterone receptors as well as its ability to eliminate defects in the synthesis of progesterone in luteal phase	Clinical Trial, Randomized Trial	(Abbaspoor, 2011)(Mile wicz et al., 1993)
8.	Fennel/ **Foeniculum Vulgare**	Treatment of menopausal symptoms and vaginal atrophy	Retard excessive production of testosterone	Clinical Trial, Clinical Trial	(Yaralizadeh et al., 2016)(Mile wicz et al., 1993)
9.	Evening Prim Rose/ **Oenotherabie nnis**	Treatment of vasomotor symptoms	Antioxidant activities, contains prostaglandin E1	Clinical Trial	(Chenoy et al., 1994)
10.	Ginkgo/ **Ginkgo Biloba**	Treatment of attention disorders, memory impairment in postmenopausal women	Antioxidant and vasodilator activities	Clinical Trial	(Elsabagh et al., 2005)
11.	Alfalfa/ **Medicago Sativa**	Treatment of hot flashes	Estrogenic effects	Clinical Trial	(De Leo et al., 1998)
12.	Hypericum (Hvfaryqvn)/ **Hypericume Perforatum**	Treatment of hot flashes	Benzodiazepine receptor activation	A randomized pilot trial	(Al-Akoum et al., 2009)
13.	Ginseng/ **Panax Ginseng**	Treatment of sleep disorders, fatigue, menopausal symptoms	Estrogenic effects	A randomized pilot trial	(Qalehsari et al., 2017)
14.	Anise/ **Pinpinella Aanisune**	Treatment of hot flashes	Estrogenic effects	Clinical Trial	(Nahidi et al., 2012)

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15.	Liquorice/ **Glycyrrhiza Glabra**	Treatment of hot flashes	Estrogenic effects	Clinical Trial	(Asgari et al., 2015)
16.	Passion fruit/ **Passiflora Incarnata**	Treatment of menopausal symptoms and hot flashes and neurological disorders	Activation of $GABA_A$ receptor	Clinical Trial, Animal Study	(Lakhan & Vieira, 2010)
17.	Red clover/ **Trifolium Pretense**	Ability to reduce menopausal symptoms and support the maintenance of bone density and protect the cardiovascular.	Inhibit angiogenesis and provide protection agonist oxidative damage, anti-oxidant, estrogenic effect	Clinical Trial	(Ehsanpour et al., 2012)
18.	Soya/ **Glycine soja**	Ability to reduce menopausal symptoms, support the maintenance of bone density, protects the immune system	Estrogenic effects	Clinical Trial	(Hanachi & Golkho, 2008)

Conclusion:

The menopause, a biologically normal process, signals the end of a woman's fertile years. It is linked to a drop in progesterone and oestrogen levels, which causes a variety of physiological changes and symptoms.While menopause is a normal transition, it can impact women's health in various ways. Staying informed about menopausal health and maintaining a healthy lifestyle can help women navigate this life stage with greater ease and overall well-being. It's important to note that the impact of menopause on women's health can vary widely from one individual to another. While some women may experience severe symptoms and health issues, others may go through menopause with relatively minimal disruption to their overall health. Traditional CVD risk factors affect men and women differently. Priority should be given to treating arterial hypertension and glucose intolerance in postmenopausal women. Therefore, understanding of menopausal health is necessary for all the women’s because it cause bad impact on the health if related infectious disease occurs due to unhygienic problems. As it has no side effects, herbal medication is essential in the treatment of menopausal symptoms.

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