



Menopause

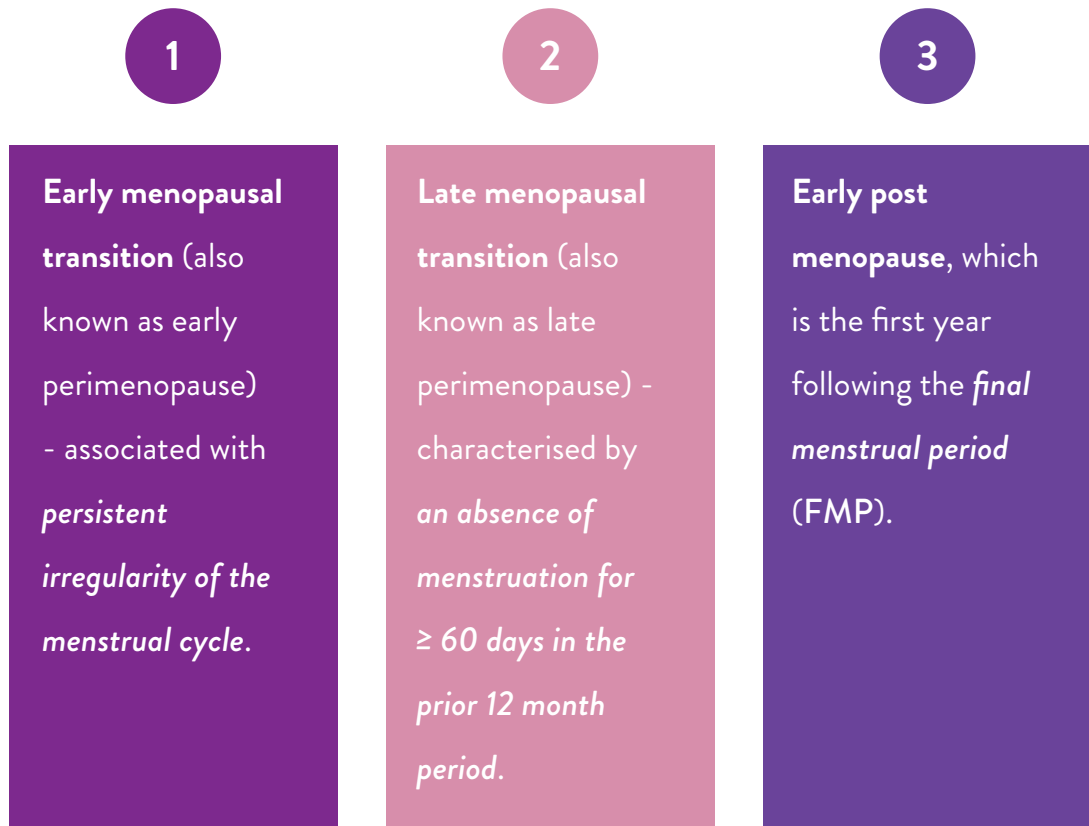
Menopause



Menopause is a *non-pathologic condition* involving the *permanent cessation of menstruation* for at least 12 months due to the loss of ovarian follicular activity.¹

The transition from the reproductive period to the **first year of postmenopause** is called **perimenopause**. This transitional period occurs over *several years* and is associated with **substantial biological changes**.²

Perimenopause can be *described* according to the following stages (Figure 1):²



During this perimenopausal period, there are **fluctuations in sex hormones** which are more marked than the *fluctuations which occur* with a normal menstrual cycle and menopausal symptoms may appear during this time.²

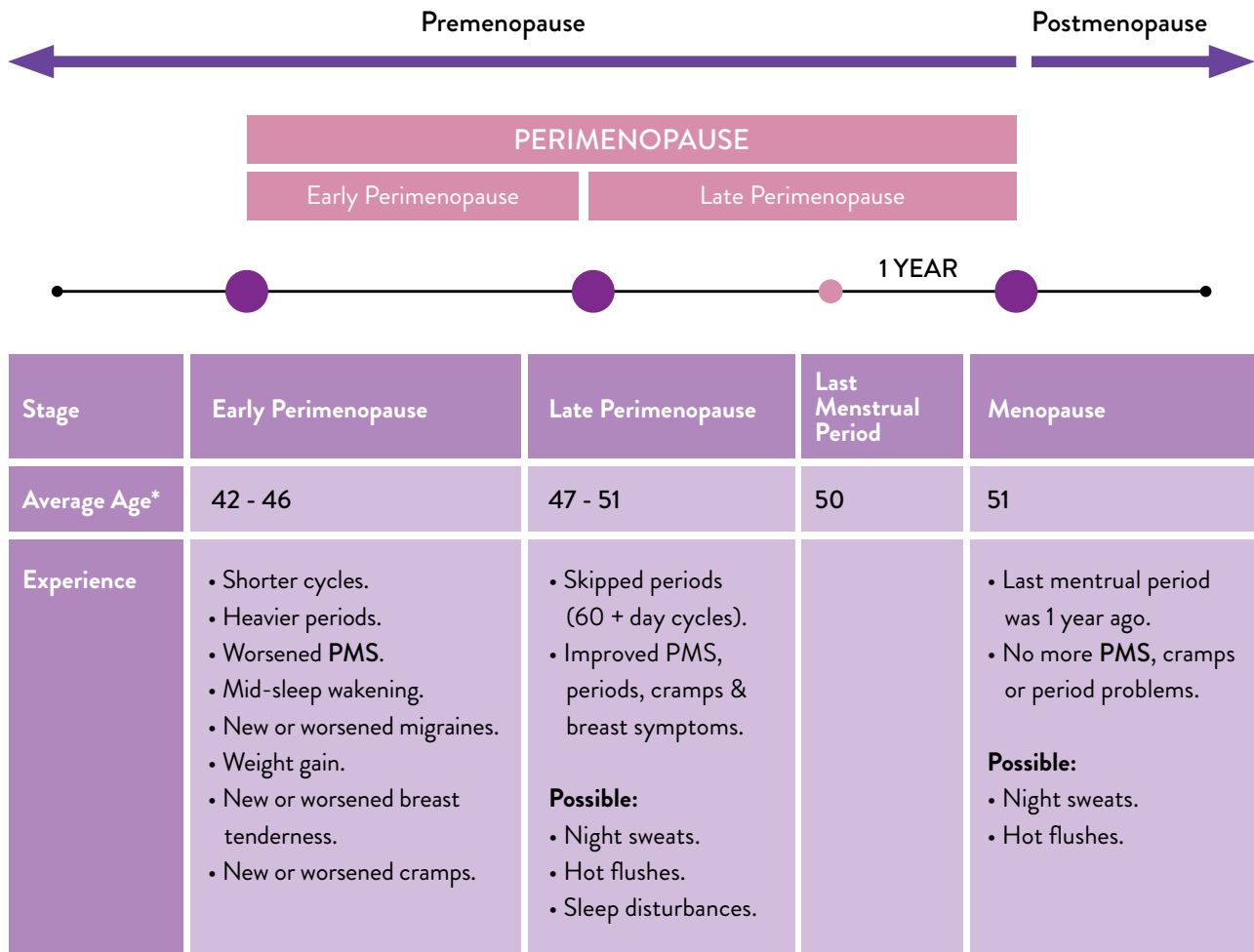
In the **postmenopausal period**, there is a decrease in oestrogen production by the ovaries which leads to common menopausal symptoms such as *hot flashes, vaginal dryness, and disrupted sleep* (with or without associated *night sweats*).¹

These symptoms **typically** begin between the **ages of 51 and 52**. However, about **5 % of women** experience **early menopause** between the ages of 40 and 45.³



The menopause transition - explained

Figure 1:⁴



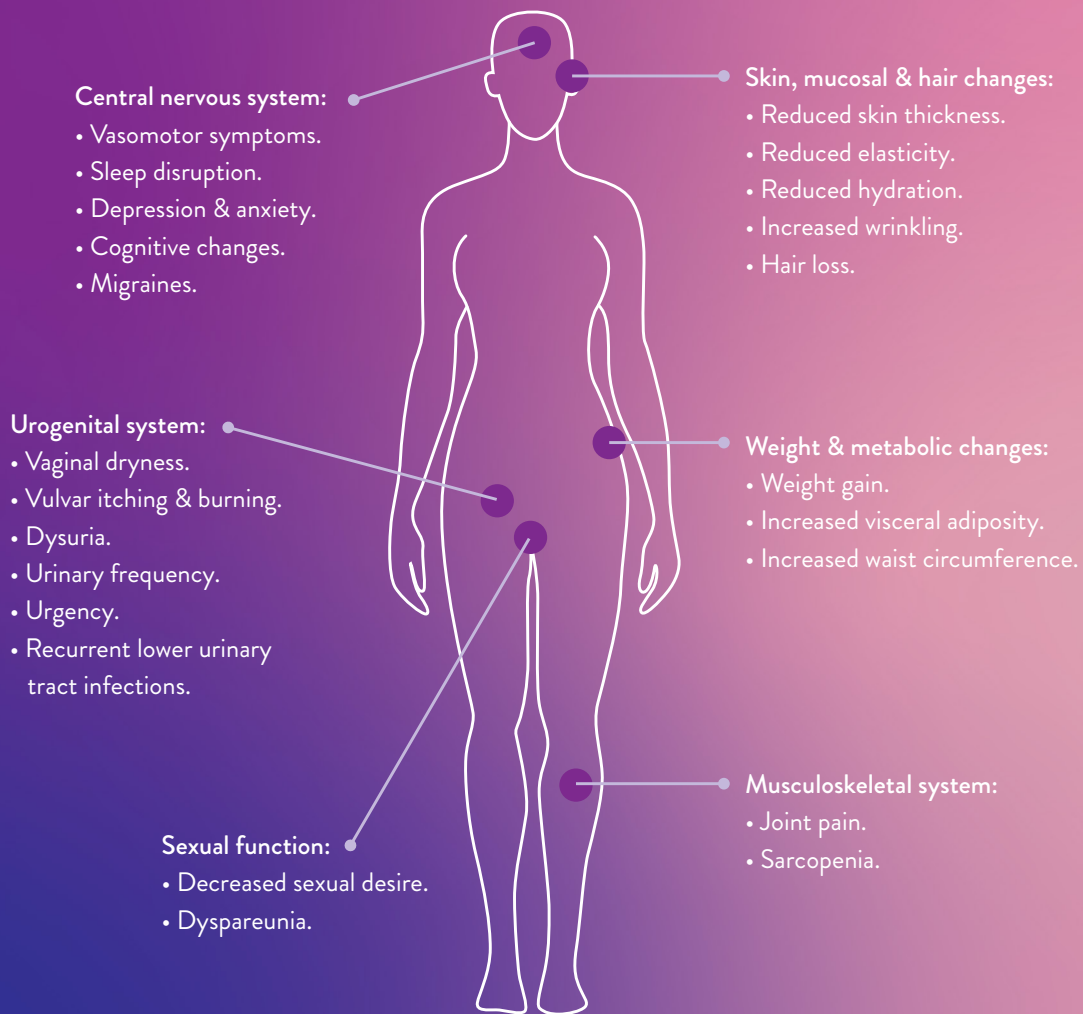
* Age can vary significantly.

Menopause and its symptoms

Women are often puzzled by the *changes in mood, sleep patterns, memory and body shape that occur*, as well as *the onset of vasomotor and urogenital symptoms* (Figure 2).

As menopausal symptoms can be very distressing and often affect a woman's personal and social life, *healthcare providers caring for women at all levels of the healthcare system must be well prepared to guide patients through this transition and provide advice to improve quality of life.*²

Figure 2:²





Vasomotor symptoms:

Vasomotor symptoms afflict most women during the menopausal transition, although their *severity, frequency, and duration vary* widely between women. Hot flashes are reported by up to 85 % of menopausal women.^{3,5}

These symptoms are caused by resetting and narrowing of the *thermoregulatory system in association with fluctuations in or loss of oestrogen production*.⁵



Urogenital symptoms and Vulvovaginal atrophy:

Although they are not frequently reported, *urogenital symptoms are often present after menopause*.² Urogenital tissues are extremely sensitive to oestrogen.⁵ The mucosal layer of the **vagina begins to atrophy due to decreased oestrogen levels**, which causes this cell layer to become drier and thinner. As a result, the **vaginal mucosa** loses its elasticity and *becomes fragile*.³

Multiple population- and community-based studies confirm that 27 % - 60 % of women report moderate to severe symptoms of vaginal dryness or *dyspareunia* (genital pain before, during, or after intercourse) in association with menopause.⁵



Sleep disruption

Sleep difficulties, particularly **night awakenings**, are major complaints and are reported by 40 - 60% of menopausal women.²



Mood changes

Depressive symptoms may be *worsened by lack of sleep and environmental stressors* which are often prevalent during midlife.

Several large studies have shown an *increased risk of depressed mood* during the **menopause transition** and an approximately 3-fold risk for the development of a *major depressive episode during perimenopause compared with premenopause*.⁵



Cognitive changes

Perimenopausal women often report a decline in memory and concentration.²



Migraines

The prevalence of migraines during menopause ranges from 10 % to 29 %. It seems that women who are *susceptible, particularly those with premenstrual migraines during fertile years*, have **more migraine headaches** as they transition through menopause.²



Weight and metabolic changes

One of the *main complaints* from women at midlife is **increased weight**. The prevalence of obesity is **higher in postmenopausal women than in premenopausal women**.²



Cardiovascular changes

Atherosclerosis and the risk of **cardiovascular adverse events** increase in women after menopause.²



Sexual dysfunction

Longitudinal and cross-sectional studies have reported that the **menopausal transition** is associated with a **decrease in sexual desire**, independent of ageing. *Specifically*, the menopausal transition is characterised by a change in **hormone-driven sexual desire**.²



Musculoskeletal symptoms

A major **concern** in menopausal women is a **decline in bone health**. Postmenopausal osteoporosis is a **degenerative bone disorder** characterised by **reduced bone marrow density (BMD)**.²



Skin, mucosal and hair changes

Menopause reduces skin thickness, elasticity and hydration and leads to an **increase in wrinkling**.²

Diagnosis

Generally, no laboratory tests are required for the **diagnosis of menopause**. The diagnosis is clinically based on the patient's age, symptoms, and ruling out other conditions for patients older than 45 years old.^{3,6}

Hormonal Replacement Therapy

Hormone Replacement Therapy (HRT) is considered to be the most effective way to relieve menopausal symptoms. It has been used in clinical practice for **over 60 years since the 1960s**; however, the benefits and *risks of HRT have been controversial*.¹

In 2002, the **Women's Health Initiative (WHI)** found that **HRT** increased the *incidence of coronary heart disease and breast cancer*, which led to a *precipitous decline* in the use of HRT.

Upon further analysis of the **WHI data** and with support from newer studies, international societies and organisations such as the **International Menopause Society (IMS)**, the **North American Menopause Society (NAMS)**, the **European Menopause and Andropause Society (EMAS)** have *formulated guidelines and announced consensus opinions on the use of HRT*.¹

As **understanding** of HRT improves, studies have found that HRT is highly beneficial to symptomatic women who are **younger than 60 years of age**, within **10 years of menopause**, and *without contraindications* such as active liver disease or thromboembolic disease.¹

References: **1.** Pan M, Pan X, Zhou J, et al. Update on hormone therapy for the management of postmenopausal women. *Biosci Trends*. 2022 Mar 11;16(1):46-57. **2.** Monteleone P, Mascagni G, Giannini A, et al. Symptoms of menopause - global prevalence, physiology and implications. *Nat Rev Endocrinol*. 2018 Apr;14(4):199-215. **3.** Tenny S, Boktor SW. Incidence. *StatPearls* [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK430746/>. **4.** <https://drkathleenmahannah.com/blog/perimenopause>. **5.** Santoro N, Epperson CN, Mathews SB. Menopausal Symptoms and Their Management. *Endocrinol Metab Clin North Am*. 2015 Sep;44(3):497-515. **6.** NICE. Menopause: diagnosis and management. NICE guideline. 2015. Available at: <https://www.nice.org.uk/guidance/ng23>.

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