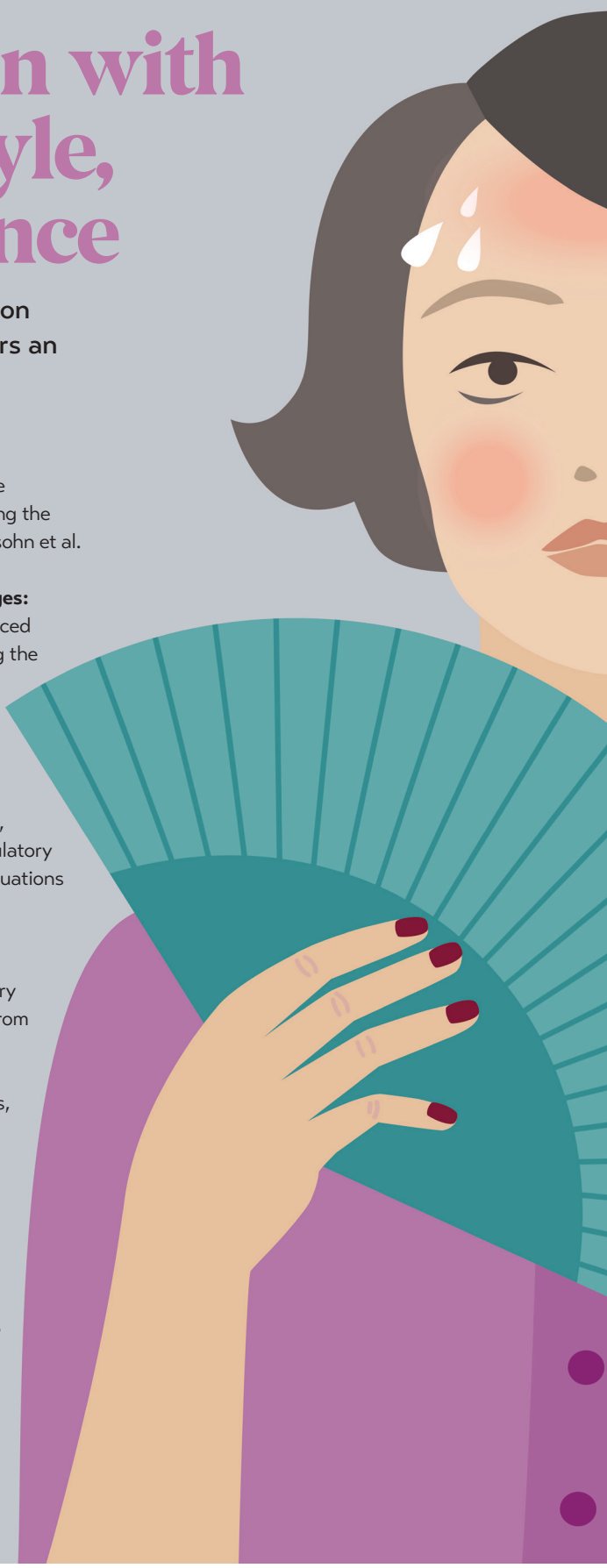
Menopause – supporting women with nutrients, lifestyle, and clinical guidance

With Menopause Awareness Month almost upon us, Nutritional Therapist, Meaghan Esser, offers an essential guide to supporting customers.



Menopause is diagnosed after 12 consecutive months without menstruation, but symptoms often begin years earlier in perimenopause. Fluctuating oestrogen and progesterone levels affect multiple systems, contributing to symptoms that reduce quality of life and influence long-term health.

Pharmacists are well-placed to support women at this stage by offering evidence-based nutritional and lifestyle advice, identifying possible deficiencies, and signposting when further medical evaluation is required.

Common symptom areas

Hormonal changes in the menopausal transition can contribute to:

- **Bone and joint issues:** Osteoporosis risk, reduced bone mineral density, and fracture susceptibility [National Osteoporosis Foundation].
- **Mood and cognitive changes:** Low mood, depression, and anxiety are common during the menopausal transition, with evidence linking hormone fluctuations to increased risk of depressive symptoms [Freeman et al. 2010; Albooshi et al. 2019].
- **Sleep and energy issues:** Insomnia, nocturnal waking, and fatigue are common in the menopausal transition, with evidence highlighting a higher prevalence of sleep disturbances in midlife women [Polo-Kantola 2011; Baker et al. 2019].
- **Cardiovascular and metabolic shifts:** Changes in blood pressure, lipids, and weight, driven in part by declining oestrogen and adverse body composition changes during the menopausal transition [Mendelsohn et al. 2005; Kodoth et al. 2022].
- **Skin, hair, and collagen changes:** Dryness, thinning hair, and reduced elasticity are common, reflecting the impact of declining oestrogen on skin structure and ageing [Thornton et al. 2013].
- **Vasomotor symptoms:** Hot flushes and night sweats are hallmark menopausal symptoms, linked to changes in thermoregulatory control driven by hormonal fluctuations [Freedman et al. 2014].

Magnesium

Magnesium is an essential dietary mineral that must be obtained from food, as it cannot be produced endogenously. Rich sources include leafy greens, nuts, seeds, legumes, and whole grains, yet modern dietary patterns and soil depletion mean that suboptimal intake is common [DiNicolantonio et al. 2018]. Magnesium participates in hundreds of biochemical reactions in the body [NIH ODS Magnesium Fact Sheet], with around half stored in bone, where it contributes to both structure and regulation of bone metabolism.

- **Clinical relevance:** Magnesium is a cofactor

Vitamin D, calcium, and vitamin K2

Bone strength and calcium balance rely on nutrients that work in synergy to support mineralisation, muscle function, and vascular health. For pharmacists, recognising this interplay is essential when advising menopausal women at increased risk of nutrient deficiencies and osteoporosis.

- **Calcium:** Vital for bone strength but also required for nerve transmission and muscle contraction [Looker 2003].
- **Vitamin D:** Enhances calcium absorption and contributes to muscle, immune, and neurological health [NIH ODS 2022].
- **Vitamin K2:** Directs calcium into bone by activating osteocalcin while preventing arterial calcification [Maresz 2015].
- **Clinical implication:** Calcium alone is less effective and may even raise vascular risk if not paired with cofactors. A multi-nutrient strategy combining calcium, magnesium, vitamin D, and vitamin K2 is recommended for postmenopausal women at risk of osteoporosis [Maresz 2015; Rondanelli et al. 2021].

for enzymes involved in bone matrix synthesis and promotes bone formation by stimulating osteoblast proliferation [Rondanelli et al. 2021]. It works in synergy with calcium, vitamin D, and vitamin K2: calcium provides structural integrity; vitamin D enhances absorption and requires magnesium-dependent enzymes for activation; vitamin K2 directs calcium into bone and prevents arterial calcification [Capozzi et al. 2020; Khalil et al. 2021]. Magnesium deficiency compromises bone density and increases risk of calcium misplacement in soft tissues, raising concerns for both osteoporosis and vascular calcification. Importantly, reviews suggest supplementation may help preserve or improve bone mineral density in menopausal/postmenopausal women, especially when combined with calcium, vitamin D, and vitamin K2 [Rondanelli et al. 2021; Khalil et al. 2021].

- **Beyond bone health, magnesium supports cardiometabolic resilience:** Supplementation has been shown to reduce blood pressure and may improve insulin sensitivity and glucose control [DiNicolantonio et al. 2018] – key considerations as cardiometabolic risk rises after menopause. Magnesium has also been linked with better sleep [Abbasi et al. 2012] and improved mood and anxiety reduction, particularly when combined with vitamin B6 [Noah et al. 2021].
- **Evidence in menopause:** Declining oestrogen accelerates bone loss, and a 2021 review confirmed low magnesium status is consistently associated with reduced bone mineral density and higher fracture risk, while supplementation may offer protective benefit [Rondanelli et al. 2021]. Small-scale trials further suggest magnesium may reduce hot flushes, though evidence is preliminary [Park et al. 2011].
- **Practical point**: Well-absorbed forms (for example, bisglycinate, citrate) are generally better tolerated than magnesium oxide. Caution is advised in patients with significant renal impairment.

Vitamin B6

Vitamin B6 is essential for neurotransmitter synthesis, including serotonin, dopamine, and GABA [Zielińska et al. 2023]. It also supports metabolism, immune function, and inflammation control [NIH ODS 2022]. Low B6 status is linked with depressive symptoms [Merete et al. 2008; Zielińska et al. 2023], and low intake was significantly associated with depression in middle-aged and older women [Odai et al. 2020]. Observational data also suggest higher intake may reduce severity of hot flushes [Odai et al. 2019].

- **Clinical relevance:** Adequate vitamin B6 intake may help reduce menopausal depression [Odai et al. 2020], improve energy through serotonin support, and lessen vasomotor symptoms.
- **Consideration:** Evidence is promising but largely based on small or observational studies; larger trials are needed.

Liver support

The liver is central to hormone metabolism and detoxification [Rhyu & Yu 2021], which can influence the severity of menopausal symptoms. Links between vasomotor symptoms and liver health are emerging – for example, moderate to severe →

hot flushes and night sweats have been identified as independent risk factors for non-alcoholic fatty liver disease (NAFLD) in postmenopausal women [Ryu et al. 2019].

- **Milk thistle (*Silybum marianum*)**: A randomized controlled trial found 400mg/day significantly reduced the frequency and severity of hot flushes [Saberi et al. 2020].
- **Other botanicals:** Dandelion root, schisandra, and artichoke leaf show early evidence for liver and metabolic support, with improvements in inflammation, lipid metabolism, and menopausal symptoms [Park & Kim 2016; Kania-Dobrowolska 2022; Wauquier 2021].
- **Clinical caution:** Pharmacists should remain alert to potential herb-drug interactions (for example, CYP450 substrates).

Lifestyle interventions

- **Nutrition:** Diets rich in whole foods and low in refined sugar and alcohol are associated with reduced vasomotor symptoms, as well as lower long-term risks of osteoporosis, cardiovascular disease, and breast cancer [Kennard et al. 2024].
- **Exercise:** Mind-body exercise modalities such as yoga, tai chi, and qigong have been shown to improve menopausal symptoms, sleep quality, mood, and quality of life. Evidence from a systematic review and meta-analysis suggests these may offer a balanced alternative to high-intensity exercise, supporting both physical and psychological health [Xu et al. 2024].
- **Psychological support:** Encouraging self-compassion and open discussion around menopause can reduce stress burden and improve adherence to lifestyle changes.

Pharmacist's role

Pharmacists are uniquely positioned to support women through menopause by:

- **Recognising** symptoms that may signal nutrient deficiencies (for example, cramps with low magnesium).
- **Advising** on safe supplementation, including forms and dosages.
- **Counselling** on potential interactions (for example, magnesium with certain antibiotics; herbs with CYP substrates).
- **Reinforcing** the importance of nutrition, exercise, and lifestyle for symptom management.
- **Referring** to a GP when red-flag symptoms present (severe depression, cardiovascular signs, abnormal bleeding).

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Closing thought

Menopause is a natural but complex transition that can present with overlapping symptoms mimicking other conditions. Pharmacists can play a pivotal role by offering evidence-based guidance, reassurance, and referral when needed. Supporting women through menopause is not only about easing symptoms but also about optimising long-term health outcomes.

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