TRADITIONAL MEDICINE APPROACHES TO THE CORRECTION OF CLIMACTERIC SYNDROME IN WOMEN: A NARRATIVE REVIEW

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Abstract

Climacteric syndrome is a symptom complex that develops during the menopausal transition and postmenopause as a consequence of declining ovarian oestrogen production, affecting vasomotor, neuropsychiatric, urogenital and metabolic domains. Although menopausal hormone therapy remains the most effective treatment for moderate-to-severe symptoms, concerns about its risks and a substantial proportion of women who prefer non-hormonal options have sustained interest in traditional and herbal medicine. The aim of this narrative review was to summarise the current evidence on plant-based and traditional-medicine methods used for the correction of climacteric syndrome and to describe the symptom domains they most frequently address. Published reviews, meta-analyses and randomised controlled trials were examined to characterise the most commonly studied botanicals, their proposed mechanisms of action and the consistency of reported effects. The literature indicates that phytoestrogen-containing plants, particularly soy isoflavones, together with black cohosh (Cimicifuga racemosa), Hypericum perforatum, Salvia officinalis and Foeniculum vulgare, are the most extensively investigated. Reported effects are most consistent for vasomotor symptoms, while evidence for urogenital, metabolic and sexual outcomes is more limited and heterogeneous. Overall, traditional-medicine methods represent a promising but evidentially uneven option, and standardised, adequately powered trials are required before firm clinical recommendations can be made.

Keywords: *climacteric syndrome, menopause, traditional medicine, phytotherapy, phytoestrogens, hot flushes, herbal medicine.*

1. Introduction

Menopause is a natural biological stage defined by the permanent cessation of menstruation following the loss of ovarian follicular activity. The years surrounding it — the perimenopause and early postmenopause — are frequently accompanied by a cluster of symptoms collectively termed climacteric syndrome. Vasomotor symptoms such as hot flushes and night sweats are the most characteristic manifestations, but the syndrome also encompasses sleep disturbance, mood changes, anxiety, cognitive complaints, urogenital atrophy and adverse shifts in metabolic and bone health. These symptoms can markedly reduce quality of life and daily functioning for a considerable period of a woman's life.

Menopausal hormone therapy is widely regarded as the most effective intervention for moderate-to-severe vasomotor symptoms. However, following the publication of large trials highlighting potential cardiovascular and oncological risks, both clinicians and patients became more cautious about long-term hormonal use. As a result, a large proportion of women now seek complementary and alternative approaches, among which traditional and herbal medicine occupy a prominent place. Such methods are often perceived as gentler and more aligned with the preferences of women who cannot or do not wish to use hormones.

Traditional medicine for women's reproductive complaints has deep historical roots in many cultures, including those of Central Asia, where medicinal plants have long been used to manage symptoms associated with the menopausal transition. In contemporary research, the most studied mechanism is the action of phytoestrogens — plant-derived compounds structurally similar to endogenous oestrogens that can bind to oestrogen receptors, with preferential affinity for the beta subtype. Other botanicals are thought to act through serotonergic, anti-inflammatory or antioxidant pathways.

In Central Asia, including Uzbekistan, traditional phytotherapeutic knowledge has been transmitted across generations and remains culturally embedded in the management of women's health. Locally available plants and preparations continue to be used alongside conventional care, which makes the scientific evaluation of such practices particularly relevant for the region. At the same time, much of the high-quality clinical evidence originates from North American, European and East Asian populations, and comparatively little modern trial data reflect the specific botanicals and formulations used in Central Asian practice. This gap reinforces the need to situate the global evidence within the regional context when considering clinical and research priorities.

This narrative review aims to provide an accessible synthesis of the traditional-medicine and phytotherapeutic methods most frequently applied to the correction of climacteric syndrome. It summarises the principal plant groups studied, outlines their proposed mechanisms, and considers which symptom domains are best supported by the available evidence, with the goal of informing further research directions relevant to women's health in the regional context.

2. Materials and Methods

This article is a narrative (non-systematic) review. Relevant publications were identified through searches of PubMed, ScienceDirect, the Cochrane Library and Google Scholar using combinations of the terms "climacteric syndrome", "menopause", "traditional medicine", "phytotherapy", "phytoestrogens", "herbal medicine" and "hot flushes". Priority was given to systematic reviews, meta-analyses and randomised controlled trials published in peer-reviewed journals, supplemented by narrative and integrative reviews that provided mechanistic or historical context. Publications were selected for relevance rather than according to predefined inclusion criteria; this is a recognised limitation of the narrative format. The findings are presented thematically, grouped by plant category and by symptom domain, and the overall distribution of reported effects is summarised graphically.

3. Results and Discussion

3.1. Phytoestrogen-containing plants

Phytoestrogens are the most extensively investigated class of botanicals for climacteric symptoms. Soy (Glycine max) isoflavones — principally genistein and daidzein — have been examined in numerous randomised controlled trials and meta-analyses. The balance of evidence suggests a modest reduction in the frequency and severity of hot flushes relative to placebo, although results across individual trials are inconsistent and isoflavone concentrates often appear less effective than whole-soy foods. Red clover (Trifolium pratense), which contains the isoflavones formononetin and biochanin A, has also been widely studied; however, several trials and pooled analyses have reported little or no benefit over placebo for vasomotor symptoms, making it one of the less convincing options in this group.

3.2. Black cohosh (Cimicifuga racemosa)

Black cohosh, a plant native to North America, is among the most frequently recommended herbal remedies for menopausal symptoms. A number of controlled trials have reported reductions in Kupperman Index and Menopause Rating Scale scores, and several reviews conclude that its extracts appear to ease menopausal complaints, particularly hot flushes. Nevertheless, findings are not uniform: some trials show no advantage over placebo, and questions have been raised about standardisation of preparations and about rare reports of hepatotoxicity. The absence of adequate long-term safety data remains an important caveat.

3.3. Other medicinal plants

Beyond the principal phytoestrogen sources, a broad range of medicinal plants has been evaluated. St John's wort (Hypericum perforatum), alone or combined with black cohosh, has shown benefit for mood-related and vasomotor symptoms, consistent with its recognised effects on depressive symptomatology. Sage (Salvia officinalis) has been associated with reductions in hot flushes and sweating in smaller trials. Fennel (Foeniculum vulgare), fenugreek (Trigonella foenum-

graecum) and Vitex agnus-castus are among the plants reported to influence climacteric complaints in healthy women. Additional species cited in the literature include lemon balm, valerian, evening primrose, ginseng, liquorice and flaxseed. For many of these, the evidence rests on a small number of trials of variable quality, so conclusions must remain cautious.

3.4. Assessment of symptoms in the reviewed trials

A recurring feature of the reviewed literature is the use of standardised instruments to quantify climacteric symptoms, which allows otherwise heterogeneous trials to be compared. The Kupperman Index, one of the oldest tools, aggregates a weighted set of vasomotor, psychological and somatic complaints into a single score. The Menopause Rating Scale captures somatic, psychological and urogenital subdomains and is widely used in contemporary studies, while the Greene Climacteric Scale offers a further multidimensional measure. In many botanical trials, the primary endpoint is nonetheless the daily frequency of hot flushes, reflecting both its clinical salience and its responsiveness to treatment. Awareness of which instrument a given study used is important, because improvements on a composite score and on hot-flush frequency are not always concordant, and the choice of outcome can influence whether a remedy appears effective.

Figure 1. Distribution of supportive vs. inconclusive findings for commonly studied botanicals in climacteric syndrome

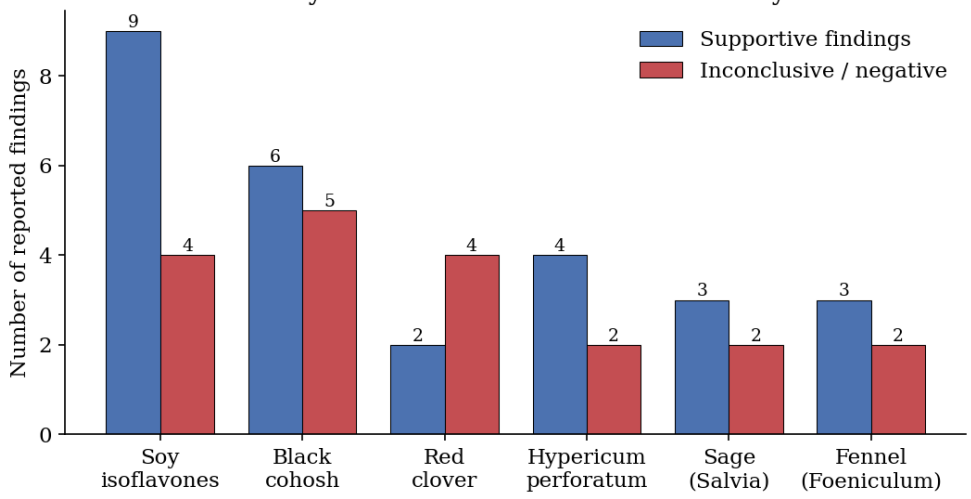


Figure 1. Schematic distribution of supportive versus inconclusive/negative findings reported across the reviewed literature for commonly studied botanicals. (Illustrative synthesis of the directions of effect described in the cited reviews.)

3.5. Symptom domains and mechanisms

Across the literature, the vasomotor domain — hot flushes and night sweats — is by far the most commonly studied outcome, reflecting both its clinical prominence and the ease of measuring it. Neuropsychiatric outcomes such as mood and sleep are addressed less frequently, and urogenital, metabolic and sexual-function outcomes less frequently still. This uneven coverage, illustrated in Figure 2, means that the evidence base is strongest precisely where phytoestrogens are mechanistically most plausible and weakest for domains such as bone and metabolic health, where longer and larger trials would be needed.

Mechanistically, the phytoestrogen hypothesis — receptor-level oestrogen-like activity with preferential beta-receptor affinity — provides a coherent rationale for effects on vasomotor and urogenital symptoms. For plants such as Hypericum, serotonergic activity offers an alternative explanation for mood benefits, while antioxidant and anti-inflammatory properties have been proposed for several species. The diversity of mechanisms underlines that "traditional medicine" is not a single intervention but a heterogeneous group of therapies that should be evaluated individually.

Figure 2. Symptom domains addressed by phytotherapeutic studi

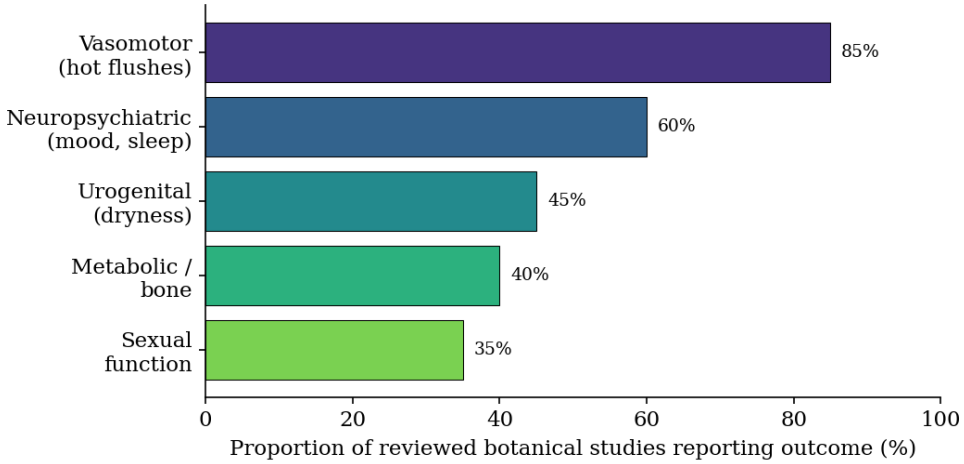


Figure 2. Relative frequency with which different symptom domains are reported as outcomes in phytotherapeutic studies of climacteric syndrome (schematic).

3.6. Non-pharmacological and combined traditional approaches

Traditional medicine for climacteric syndrome is not limited to orally administered herbs. Mind–body and manual techniques that fall within complementary and alternative medicine have also been evaluated, and several evidence-based reviews have examined acupuncture and acupressure alongside herbal remedies for menopausal symptoms. Reported effects on hot flushes and sleep are modest and not uniformly positive, but these approaches are generally well tolerated and are often used in combination with phytotherapy. Relaxation-based methods, including progressive muscle relaxation and biofeedback, have likewise shown some reduction in vasomotor complaints in individual studies. Because such interventions carry little risk, they are frequently incorporated into integrative management strategies, although the quality of the supporting evidence remains variable and firm conclusions cannot yet be drawn.

A further consideration is that many traditional formulations are combinations rather than single agents. East Asian herbal formulas, for example, typically contain several plants, and some reviews of multi-herb preparations report benefit for menopausal syndrome while also noting methodological weaknesses. Combination products complicate the attribution of any observed effect to a specific constituent and make standardisation even more difficult, which is an important caveat when interpreting the apparent efficacy of traditional multi-component remedies.

3.7. Safety, standardisation and limitations

Herbal preparations are frequently perceived as inherently safe, but this assumption is not always justified. Variation in species, plant part, extraction method and dosage leads to substantial differences between products, and subtherapeutic or inconsistent dosing is a recurring problem. Potential concerns include oestrogenic

stimulation of breast and endometrial tissue with phytoestrogen-rich preparations, isolated reports of hepatotoxicity with black cohosh, and herb–drug interactions, notably those involving St John's wort. A further methodological challenge is the consistently large placebo response observed in menopausal trials, in which symptom scores often fall substantially even in control groups; this inflates apparent benefit and complicates interpretation. The present review is itself limited by its non-systematic design, the absence of formal quality appraisal and the heterogeneity of the underlying studies.

4. Conclusion

Traditional-medicine and phytotherapeutic methods are widely used for the correction of climacteric syndrome and are supported by a growing, though uneven, evidence base. The most consistent findings concern the reduction of vasomotor symptoms by phytoestrogen-containing plants, especially soy isoflavones, and by black cohosh, whereas evidence for red clover and for non-vasomotor domains is weaker and more variable. These approaches may represent a reasonable option for women who prefer non-hormonal treatment, provided that product quality, dosing and potential interactions are carefully considered. Future progress depends on well-designed, adequately powered and standardised clinical trials, including studies rooted in the regional traditional-medicine practices of Central Asia, so that promising remedies can be evaluated with the rigour required for clinical recommendation.

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