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PHYTOESTROGEN-CONTAINING PLANTS IN THE MANAGEMENT OF VASOMOTOR SYMPTOMS OF CLIMACTERIC SYNDROME: A FOCUSED EVIDENCE REVIEW

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M. Jumayeva

Family Physician, Tashkent, Uzbekistan

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Introduction. Vasomotor symptoms — hot flushes and night sweats — are the most characteristic and distressing manifestations of climacteric syndrome and the outcome most often targeted by both hormonal and non-hormonal therapies. Among non-hormonal options, phytoestrogen-containing plants attract particular attention because their constituents are structurally similar to endogenous oestrogens and can bind to oestrogen receptors. This focused review concentrates specifically on the principal phytoestrogen sources and their effect on vasomotor symptoms, rather than on the full range of traditional remedies.

Aim. To evaluate, on the basis of randomised controlled trials and meta-analyses, the efficacy of the main phytoestrogen-containing plants — soy, black cohosh and red clover — in reducing vasomotor symptoms of the climacteric period.

Materials and methods. Randomised controlled trials, systematic reviews and meta-analyses were identified in PubMed, ScienceDirect and the Cochrane Library using the terms "menopause" or "climacteric" combined with "phytoestrogen", "isoflavone", "soy", "black cohosh" or "red clover" and "hot flushes". The primary outcome of interest was the daily frequency of hot flushes; secondary outcomes included composite symptom scores (Kupperman Index, Menopause Rating Scale). Reported directions of effect and safety considerations were synthesised narratively.

Results. Soy (Glycine max) isoflavones — principally genistein and daidzein — show a modest reduction in hot-flush frequency relative to placebo in pooled analyses, although individual trials are inconsistent and whole-soy foods tend to outperform purified isoflavone concentrates. Black cohosh (Cimicifuga racemosa) has reduced Kupperman Index and Menopause Rating Scale scores in several controlled trials, and multiple reviews conclude that its extracts ease hot flushes; however, findings are not uniform, standardisation varies between preparations, and rare reports of hepatotoxicity warrant caution. Red clover (Trifolium pratense), despite its formononetin and biochanin A content, has generally failed to demonstrate a significant advantage over placebo for hot flushes in controlled trials and pooled analyses. Across all three plants, interpretation is complicated by a consistently large placebo response, with symptom scores often declining substantially in control groups. Phytoestrogens exert their effects mainly through oestrogen receptors, with higher affinity for the beta subtype, which provides a plausible biological rationale for an effect on vasomotor symptoms.

Conclusion. Among phytoestrogen-containing plants, soy isoflavones and black cohosh offer the most consistent, though modest, benefit for vasomotor symptoms of climacteric syndrome, whereas evidence for red clover is weak. These agents may be considered for women who prefer non-hormonal management, with attention to product standardisation, dosing and potential interactions. Larger, standardised and longer trials are required to confirm efficacy and long-term safety.

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