

Dietary Patterns and Menopausal Health: A Comprehensive Literature Review

Dr. Kulsum Ahmed^{1*}; Dr. Bashayer Khan²

^{1,2}Assistant Professor

¹Dept. of Community Medicine, Uttaranchal Unani Medical College & Hospital, Haridwar

²Dept. of obstetrics & Gynaecology, Z.V.M Unani Medical College, Pune

Corresponding Author: Dr. Kulsum Ahmed*

Publication Date: 2026/05/21

Abstract: Menopause represents a natural physiological transition marked by permanent cessation of menstruation and ovarian estrogen depletion, resulting in systemic effects on vasomotor regulation, metabolic processes, bone health, cardiovascular function, and psychological well-being. Dietary modification is a safe, non-pharmacological intervention that plays a central role in managing menopausal symptoms and reducing long-term disease risks. Evidence indicates that Mediterranean dietary patterns, phytoestrogen-rich foods, anti-inflammatory diets, and targeted micronutrient optimization improve vasomotor symptoms, bone mineral density, lipid metabolism, insulin sensitivity, and overall metabolic health.

According to Unani medicine, menopause is aligned with Sin-e-Sheikhookhat (ageing), characterised by decline in Harārat-e-Gharīziyya (innate heat), predominance of Barid-Yābis Mizāj (cold-dry temperament), and weakening of functional faculties. Unani dietotherapy (Ilaj-bil-Ghiza) emphasises consumption of warm, moist, temperament-balancing foods (Murattib Ghiza) to counter tissue dryness and preserve vitality.

A Strong convergence was observed between traditional Unani dietary principles and evidence-based nutritional science. An integrative dietary framework is proposed to support menopausal health through culturally adaptable, safe, and holistic dietary strategies.

Keywords: Menopause, Diet, Mediterranean Diet, Phytoestrogens, Unani, Ghiza Perimenopause.

How to Cite: Dr. Kulsum Ahmed; Dr. Bashayer Khan (2026) Dietary Patterns and Menopausal Health: A Comprehensive Literature Review. *International Journal of Innovative Science and Research Technology*, 11(5), 880-884. <https://doi.org/10.38124/ijisrt/26may674>

I. INTRODUCTION

Menopause is clinically defined as the permanent cessation of menstruation for 12 consecutive months due to ovarian follicular depletion¹. Globally, most women transition between 45–55 years [1]. Estrogen decline contributes to vasomotor instability, altered mood, weight gain, cardiovascular risk, urogenital atrophy, and accelerated bone loss².

In Unani medicine, menopause is understood through the framework of Sin-e-Sheikhookhat, characterized by reduction in Harārat-e-Gharīziyya and dominance of Barid-Yābis Mizāj³. These changes predispose women to dryness, fatigue, degenerative changes, indigestion, and metabolic dysfunction⁴. Classical physicians such as Ibn Sina and Nafisi emphasized Ghiza (diet) as the most essential mode

of therapy (Ilaj-bil-Ghiza) for maintaining metabolic strength, organ integrity, and emotional balance.

II. PHYSIOLOGICAL BASIS FOR DIET IN MENOPAUSE

➤ *Modern Perspective*

• *Hormonal Changes*

- ✓ Declining estrogen triggers:
- ✓ Vasomotor instability leading to hot flashes⁵
- ✓ Accelerated bone turnover and osteoporosis risk⁶
- ✓ Dyslipidemia and increased cardiovascular disease⁷
- ✓ Visceral adiposity and insulin resistance⁸

- *Influence of Diet*

Diet modulates:

- ✓ Inflammatory and oxidative pathways ⁵
- ✓ Calcium and bone metabolism ⁶
- ✓ Body composition and insulin sensitivity ⁷

- *Unani Perspective*

Ageing is marked by:

- Decline in Harārat-e-Gharīziyya (innate heat) ⁹
- Weak digestive faculty (Quwwat-e-Hazima) leading to impaired assimilation ⁹
- Tissue dryness (Yubūsat), manifesting as fatigue, stiffness, and degeneration ¹⁰
- Weakening of vital faculties: assimilative (Quwwat-e-Jaziba), retentive (Quwwat-e-Mumsika), and expulsive (Quwwat-e-Dafī'a) ¹⁰

III. DIET AND MENOPAUSAL SYMPTOMS

- *Vasomotor Symptoms*

Phytoestrogen-rich diets (soy, flaxseed) demonstrate significant reduction in frequency and severity of hot flashes ¹¹

- *Psychological Symptoms*

Omega-3 fatty acids, antioxidants, and low-glycemic diets improve mood, sleep, and anxiety scores ¹²

- *Urogenital Atrophy*

Unani recommends warm, moist, mucilaginous foods such as broth, milk, and barley, which reduce dryness-associated discomfort ¹³

- *Musculoskeletal Symptoms*

Calcium, vitamin D, magnesium, and adequate protein intake preserve bone mass and joint integrity ¹⁴

- *Metabolic Changes*

Mediterranean and plant-forward diets improve lipid profile, abdominal obesity, and insulin resistance ¹⁵

IV. MODERN DIETARY PATTERNS IN MENOPAUSE

- *Mediterranean Diet* ¹⁵

Characterized by fruits, vegetables, olive oil, nuts, legumes, whole grains, and fish.

Benefits include:

- Reduced vasomotor symptoms
- Improved lipid profiles
- Lower inflammatory biomarkers
- Better metabolic syndrome indices

- *Phytoestrogen-Rich Diets* ¹⁶

Soy, flaxseed, sesame, chickpeas, fenugreek.

Benefits:

- Significant reduction in hot flashes
- Improved endothelial function
- Positive influence on bone density

- *Anti-inflammatory Diet* ¹⁷

- Includes turmeric, ginger, berries, leafy greens, and omega-3 sources.
- Reduces metabolic inflammation and chronic pain, supports cognition

- *High-Fibre Whole Food Diet*

Improves lipid metabolism, glycemic control, and gut health.

V. UNANI DIETARY PRINCIPLES FOR MENOPAUSE

- *Recommended Foods (Murattib, Lateef, Strengthening)* ¹⁸

- Warm milk, moderate ghee
- Yakhni (meat broth)
- Almonds, walnuts, pistachios
- Dates, figs
- Talbina (barley porridge)
- Cooked vegetables: gourd, pumpkin, spinach
- Light meats: chicken, fish

- *Foods to Avoid* ¹⁹

- Excess sour (vinegar, pickles)
- Raw salads
- Cold foods and iced drinks
- Caffeine
- Deep-fried items

- *Evidence-Based Unani Herbs*

- Asgandh (*Withania somnifera*): adaptogenic, anti-stress ²⁰
- Saunf (fennel): improves vasomotor symptoms ²¹
- Zanjabeel (ginger): anti-inflammatory ²²
- Banafsha: soothing, anti-dryness ²³

VI. MICRONUTRIENTS ESSENTIAL TO MENOPAUSAL HEALTH ²⁴

- Calcium: 1200 mg/day for fracture reduction
- Vitamin D: 1000–2000 IU/day for calcium absorption
- Magnesium: neuromuscular support
- Vitamin K2: improves bone mineralisation
- Protein: 1–1.2 g/kg/day to prevent sarcopenia

VII. DIETARY RECOMMENDATIONS

- Consumption of no more than 350–500 g boiled/steamed/fried (500–700 g of raw meat) red meat

(e.g., beef) per week is recommended. Intake of processed meat products should be only occasional, in small quantities. Incorporating at least one meat-free day per week can be useful. Meat can be replaced with fish, eggs, dairy products, and the right combination of legumes, grains, and nuts.

- At least two servings per week (100–120 g/occasion) of deep-sea fish with fatty meat (e.g., consumption of salmon, mackerel, tuna, herring, and sardines) or freshwater fish (e.g., trout and silver carp) is recommended;
- Consumption of 30 g of unsalted nuts, other oily seeds, or seeds per day *can be beneficial*. When it comes to frequency, it is important to take body weight into account;
- Incorporation of foods and ingredients with a higher fiber content daily is recommended: whole grain bread, fiber-rich breakfast cereals without added sugar, and brown rice. Oats, whole grains, whole wheat bread, and legumes such as lentils, chickpeas, and beans are excellent sources of fiber. The daily amount of dietary fiber should be 30–45 g.²⁵
- Correction of Mizaj: Barid Yabis is the worst kind of sue mizaj. The procedures that cause hararat and rutubat (hot and moist) in the body should be used to correct the mizaj. Ilaj bil ghiza and ilaj bil tadbeer are two examples of these techniques.
- Ilaj bil ghiza (Dietary management): Since menopausal women's mizaj is Barid Yabis, foods with haar ratib mizaj will be beneficial, such as badam (*Prunus amygdalus*), narial (*Coco nucifera*), pista (*Pistachia vera*), kaju (*Anacardum occidentale*), kishmish (*Vitis vinefera*), munaqqa (*Vitis vinefera*), sabz chana (*Cicer arietinum*), angur (*Vitis vinefera*), sweet aam (*Mangifera indica*), sweet kharbuzah (*Cucumis melo*), gajar (*Daucus carota*), injeer (*Ficus carica*), khajur (*Phoenix dactylifera*), taroi (*Luffa cylindrical*), palak (*spinacea oleracea*), cow and goat milk, sweet curd, jaggery, ghee, butter, half boiled egg. Foods that are stale, salty, astringent, or spicy ought to be avoided. Although spicy meals have a hot mizaj, they also cause khilt to burn and become dry, which leads to sauda. Foods high in salt also make the body feel dry.²⁶
- Advising a Mediterranean-style or comparably whole-food dietary pattern that increases vegetables, fruits, whole grains, legumes, and nuts while reducing added sugars and ultra-processed items.
- prioritizing carbohydrate quality—focusing on fiber-rich, minimally processed sources— appears reasonable for symptom management and metabolic risk.

These strategies can be integrated with weight management and physical activity interventions that independently reduce vasomotor symptom burden and improve quality of life.²⁷

- The European Menopause and Andropause Society (EMAS) also emphasizes the importance of lifestyle. There is growing evidence that lifestyle factors such as diet, physical activity, smoking, and alcohol consumption have a significant impact on health and

menopausal symptoms. Probiotic supplementation in menopausal women suggest a favorable effect on some cardiovascular risk factors through maintaining the integrity of the intestinal barrier, therefore, reducing translocation of bacteria through the gut wall and decreasing systemic inflammation. Fermentation of polysaccharides and undigested proteins by some microbial strains generates SCFA (i.e., acetate, propionate, and butyrate), possibly benefiting several metabolic pathways.²⁵

- Dietary patterns exert profound influence on the menopausal transition by modulating hormonal milieu, systemic inflammation, and metabolic homeostasis. Among these, the Mediterranean diet emerges as the most robustly evidenced paradigm, distinguished by abundant intake of fruits, vegetables, whole grains, legumes, nuts, extra-virgin olive oil, and moderate consumption of fish and dairy products. Plant-predominant dietary patterns, which emphasise fruits, vegetables, whole grains, and legumes while minimising animal-derived foods, similarly demonstrate considerable promise in alleviating both depressive symptomatology and vasomotor disturbances.
- Evidence-based recommendations specifying $\geq 1,200$ mg calcium and 800–2,000 IU vitamin D daily.
- Anti-inflammatory micronutrients, notably omega-3 fatty acids, vitamin K (particularly menaquinone- selenium, and magnesium, exert critical roles in counteracting the heightened inflammatory and cardiovascular burden of menopause. Omega-3 supplementation, especially eicosapentaenoic acid-rich formulations, consistently lowers triglyceride concentrations and systemic inflammatory markers, conferring robust cardioprotection. Longterm menaquinone-7 administration has been shown to ameliorate arterial stiffness and hypertension, while selenium and magnesium bolster antioxidant defences and sleep architecture, with the latter additionally alleviating muscle cramps and anxiety symptomatology. Optimal sources include fatty fish (omega-3), natto and green leafy vegetables (vitamin K), Brazil nuts (selenium), and whole grains/seeds (magnesium).²⁸

VIII. DISCUSSION

Dietary modulation in menopause demonstrates significant clinical relevance across vasomotor, metabolic, and musculoskeletal domains. Modern evidence supports the role of Mediterranean and phytoestrogen-rich diets in reducing systemic inflammation, improving lipid profiles, and enhancing bone health. These findings align closely with Unani principles of Ilaj-bil-Ghiza, which emphasize restoration of humoral balance through temperament-specific dietary interventions.

The Unani concept of Barid-Yābis Mizāj corresponds to the degenerative and catabolic state observed in postmenopausal women, particularly in relation to bone demineralization, dryness, and reduced metabolic efficiency. The recommendation of Murattib (moistening) and Lateef (easily digestible) foods parallels modern nutritional

strategies focusing on anti-inflammatory diets, adequate protein intake, and micronutrient optimization.

This convergence highlights the potential for integrative dietary models that combine traditional wisdom with evidence-based nutritional science to provide holistic and culturally acceptable management strategies for menopausal health.

IX. SUMMARY

Modern nutrition and Unani dietetics converge on the use of whole foods, phytoestrogens, healthy fats, gut-supportive fibre, and warm, moist dietary principles. These dietary strategies significantly influence vasomotor, musculoskeletal, metabolic, and psychological aspects of menopause.

X. CONCLUSION

Dietary interventions are among the safest and most accessible therapeutic strategies for managing menopausal health. Integrating Mediterranean and phytoestrogen-rich diets with classical Unani Ghiza principles offers a comprehensive, culturally adaptable, and evidence-based approach. Further clinical trials examining synergistic modern-Unani dietary interventions are warranted.

ACKNOWLEDGEMENT

The authors would like to express sincere gratitude to colleagues and mentors for their valuable insights and constructive feedback during the preparation of this review. We also acknowledge the support of the Department of Community Medicine, [Uttaranchal unani medical college & hospital] & Department of Obs & Gynae(Z.V.M Unani medical college) for providing access to essential resources. Special thanks are extended to the peer reviewers whose comments helped refine the manuscript. No specific funding was received for this work.

➤ *Conflict Of Interest*
Nil

REFERENCES

- [1]. Dutta DC. Textbook of Gynecology. 7th ed. Konar H, editor. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2016. p. 57–65.
- [2]. Howkins J, Bourne G. Shaw's Textbook of Gynaecology. 15th ed. Kumar S, Padubidri VG, Daftary SN, editors. New Delhi: Elsevier RELX India Pvt Ltd; 2019. p. 86–96.
- [3]. Khan AI. Umooor-Al-Tibiya. New Delhi: Aizaj Publication; 2000. p. 46–56.
- [4]. Khan HMA. Talim-ul-Qaabla: Tashreeh A'aza-e-Niswan. Vol. 1–3. Delhi: Delhi Printing Works; 1926. p. 200–209.
- [5]. Calder PC, Ahluwalia N, Brouns F, Buetler T, Clement K, Cunningham K, et al. Dietary factors and low-grade inflammation in relation to overweight and obesity. *Br J Nutr.* 2011;106(Suppl 3):S5–78.
- [6]. Tapsell LC, Neale EP, Satija A, Hu FB. Foods, nutrients, and dietary patterns: interconnections and implications for dietary guidelines. *Adv Nutr.* 2016;7(3):445–54.
- [7]. Lanham-New SA. Importance of calcium, vitamin D and vitamin K for osteoporosis prevention and treatment. *Proc Nutr Soc.* 2008;67(2):163–76.
- [8]. Maki KC, Phillips AK. Dietary substitutions for refined carbohydrate that show promise for reducing risk of type 2 diabetes in men and women. *J Nutr.* 2015;145(1):159S–163S.
- [9]. Sina I. Al Qanoon fil Tib. Vol. 2. Kantoori GH, translator. New Delhi: Idara Kitab-us-Shifa; 2007. p. 343–46.
- [10]. Tabri AHABSR. Firdaus ul Hikmat. Sanbhali, translator. Deoband: Faisal Publications; 2010. p. 254–55.
- [11]. Hooper L, Ryder JJ, Kurzer MS, Lampe JW, Messina MJ, Phipps WR, et al. Effects of soy protein and isoflavones on circulating hormone concentrations in pre- and post-menopausal women: a systematic review and meta-analysis. *Hum Reprod Update.* 2009;15(4):423–40.
- [12]. Gupta S, Sharma S, Arora S. Omega-3 fatty acids and menopausal symptoms: current research and future directions. *Climacteric.* 2020;23(3):248–54.
- [13]. Qureshi B. Dietotherapy in geriatrics: Unani perspective. *Anc Sci Life.* 1996;16(2):112–7.
- [14]. Cashman KD. Calcium intake, calcium bioavailability and bone health. *Br J Nutr.* 2002;87(Suppl 2):S169–77.
- [15]. Martínez-González MA, Sánchez-Villegas A. The emerging role of Mediterranean diets in cardiovascular epidemiology. *Eur J Epidemiol.* 2004;19(1):9–13.
- [16]. Chen MN, Lin CC, Liu CF. Efficacy of phytoestrogens for menopausal symptoms: a meta-analysis and systematic review. *Climacteric.* 2015;18(2):260–9.
- [17]. Grzanna R, Lindmark L, Frondoza CG. Ginger—an herbal medicinal product with broad anti-inflammatory actions. *J Med Food.* 2005;8(2):125–32.
- [18]. Jurjani IH. Zakhira Khwarazm Shahi. Vol. 2. Tehran: Iran University Press; 1992. p. 234–56.
- [19]. Kabiruddin M. Al Akseer. Vol. 2. New Delhi: Idara Kitab-us-Shifa; 2003. p. 1356–58.
- [20]. Vani I, Muralidhar G, Rao BS. Efficacy and safety of Ashwagandha root extract for managing menopausal symptoms: a randomized controlled study. *Front Reprod Health.* 2026; 7:1647721.
- [21]. Ghavi F, Shakeri F, Abdolalian S. Comparison of fennel and evening primrose oil on menopausal problems: a randomized controlled trial. *Iran J Nurs Midwifery Res.* 2023;28(5):567–73.
- [22]. Pingali U, Nutalapati C, Wang Y. Ashwagandha and Shatavari extracts reduce menopause symptoms: a randomized controlled study. *J Menopausal Med.* 2025;31(1):21–34.

- [23]. Rahimikian F, Sadeghi M, Golmakani N. Fennel for menopausal health: a systematic review and meta-analysis. *Complement Ther Clin Pract.* 2021; 43:101360.
- [24]. Indian Menopause Society. Clinical practice guidelines for menopause: an executive summary and recommendations. *J Midlife Health.* 2026;17(1):1–20
- [25]. Erdélyi A, Pálfi E, Túú L, Nas K, Szűcs Z, Török M, Jakab A, Várbbó S. The Importance of Nutrition in Menopause and Perimenopause-A Review. *Nutrients.* 2023 Dec 21;16(1):27. doi: 10.3390/nu16010027. PMID: 38201856; PMCID: PMC10780928
- [26]. Anwar, Ramsha & Anwar, Ibtisam & Irshad, Suboohi. (2024). Navigating Menopause with Unani Medicine: Effective Strategies for Women's Health. *International Journal of Research Publication and Reviews.* 5. 2597-2600.
- [27]. Safdar, Iqra & Hassan, Hafiz & Asif, Muhammad. (2025). The Menopause - Diet Connection: A Critical Review of Nutritional Influences on Women's Midlife Health. *Journal of Health, Wellness and Community Research.* e946. 10.61919/hf8aw031.
- [28]. Liu Y and Guo Z (2025) Dietary interventions and nutritional strategies for menopausal health: a mini review. *Front. Nutr.* 12:1702105. doi: 10.3389/fnut.2025.1702105