

THE ROLE OF SWASTHAVRITTA AND YOGA IN PREVENTING AGE-RELATED MUSCULOSKELETAL DISORDERS SUCH AS ARTHRITIS

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ABSTRACT

The aim of this article was to systematically review the existing literature on the use of yoga for persons with arthritis. Musculoskeletal diseases such as arthritis, back pain, spondylosis, and osteoporosis significantly impact quality of life. In Ayurveda, the concept of Swasthavritta (the science of health preservation) along with Yoga plays a vital role in both prevention and management of these conditions. Swasthavritta emphasizes daily (Dinacharya) and seasonal (Ritucharya) routines, diet, exercise, and ethical conduct to maintain health. The role of yoga in musculoskeletal disease by asana (postures), pranayama (breathing), and dhyana (meditation). Combining Swasthavritta with Yoga provides a preventive and therapeutic system: Helps prevent degeneration of muscles and joints, Assists in pain management and functional restoration, Reduces dependence on medications.

KEYWORDS: yoga, rheumatoid arthritis, osteoarthritis, physical activity, exercise, mindfulness.

INTRODUCTION

Age-related musculoskeletal disorders, such as osteoarthritis, rheumatoid arthritis, osteoporosis, and sarcopenia, are common among the elderly and significantly impact mobility, independence, and quality of life. While modern medicine offers various treatments, preventive approaches rooted in traditional systems like Ayurveda and yoga have gained attention for their holistic benefits. Swasthavritta, an Ayurvedic concept focused on health preservation and disease prevention, along with yoga, offers a natural and sustainable way to prevent and manage these disorders.

UNDERSTANDING AGE-RELATED MUSCULOSKELETAL DISORDERS

As the body ages, natural degenerative changes occur in bones, joints, and muscles, leading to conditions such as.

- **Osteoarthritis (OA):** A degenerative joint disease caused by cartilage breakdown, leading to pain, stiffness, and reduced mobility.
- **Rheumatoid Arthritis (RA):** An autoimmune disorder that causes chronic inflammation and joint damage.
- **Osteoporosis:** A condition characterized by reduced bone density, increasing the risk of fractures.
- **Sarcopenia:** The age-related loss of muscle mass and strength, leading to weakness and instability.

These conditions often result from poor lifestyle habits, inadequate nutrition, lack of physical activity, and chronic inflammation.

SWASTHAVRITTA: THE AYURVEDIC APPROACH TO MUSCULOSKELETAL HEALTH

Swasthavritta is a branch of Ayurveda that emphasizes disease prevention through proper daily regimens (Dinacharya), seasonal regimens (Ritucharya), and a balanced lifestyle. It incorporates dietary regulations, physical activity, detoxification practices, and mental well-being to promote long-term musculoskeletal health.

KEY PRINCIPLES OF SWASTHAVRITTA FOR MUSCULOSKELETAL HEALTH

1. Dinacharya (Daily Routine)

- **Abhyanga (Oil Massage):** Regular self-massage with warm medicated oils (such as sesame oil or Mahanarayana oil) nourishes the joints, enhances flexibility, and prevents stiffness.

- **Ushapana** (Morning Hydration): Drinking warm water in the morning aids in flushing out toxins (Ama), which can contribute to joint inflammation.
- **Surya Namaskar (Sun Salutation)**: A sequence of yoga postures that improves joint mobility and muscle strength.

2. Ritucharya (Seasonal Regimen)

- Ayurveda emphasizes adapting lifestyle habits to seasonal changes to maintain dosha balance.
- During cold seasons, warming foods and herbal preparations like Dashmoola and Ashwagandha help prevent joint pain.

3. Ahara (Dietary Guidelines)

- A Vata-pacifying diet (warm, unctuous, and nourishing foods) is recommended to maintain joint lubrication and bone strength.
- Calcium-rich foods like milk, sesame seeds, and leafy greens help prevent osteoporosis.
- Anti-inflammatory herbs like turmeric (Curcumin), ginger, and guggulu reduce joint inflammation.

4. Panchakarma (Detoxification Therapy)

- Ayurvedic detox therapies, including Basti (medicated enema), help remove toxins from joints and strengthen the musculoskeletal system.



THE ROLE OF YOGA IN PREVENTING AGE-RELATED MUSCULOSKELETAL DISORDERS

Yoga is a holistic practice that combines physical postures (Asanas), breathing exercises (Pranayama), and meditation to promote joint flexibility, muscle strength, and mental well-being.

Benefits of Yoga for Musculoskeletal Health

1. Enhances Joint Mobility and Flexibility

- Asanas such as Trikonasana (Triangle Pose), Bhujangasana (Cobra Pose), and Vrikshasana (Tree Pose) help maintain joint function and prevent stiffness.
- Research has shown that yoga improves range of motion and reduces joint stiffness in individuals with arthritis.

2. Strengthens Muscles and Prevents Sarcopenia

- Weight-bearing yoga poses like Virabhadrasana (Warrior Pose) and Setu Bandhasana (Bridge Pose) improve muscle tone and reduce age-related muscle loss.
- A study published in *The Journal of Aging and Physical Activity* found that yoga helps improve muscle strength and balance in older adults.

3. Reduces Inflammation and Pain

- Regular yoga practice has been linked to lower levels of inflammatory markers (C-reactive protein, IL-6), which contribute to arthritis and osteoporosis.
- A clinical trial published in *Pain Medicine* demonstrated that yoga reduces pain perception in individuals with chronic arthritis.

4. Improves Bone Density

- Research suggests that yoga helps maintain bone health by stimulating bone formation and reducing bone loss.
- Studies on osteoporosis patients have shown significant improvements in bone mineral density with consistent yoga practice.

5. Enhances Balance and Reduces Fall Risk

- Yoga improves proprioception (body awareness) and balance, preventing falls that can lead to fractures and disability in older adults.

- A study in BMC Geriatrics found that elderly participants who practiced yoga regularly had a lower risk of falls and improved postural stability.

6. Supports Mental Well-Being and Reduces Stress

- Chronic stress is linked to inflammation and musculoskeletal degeneration.
- Meditation and Pranayama (breathing techniques) activate the parasympathetic nervous system, reducing stress and promoting healing.

SCIENTIFIC EVIDENCE SUPPORTING SWASTHAVRITTA AND YOGA

Several studies have validated the role of Ayurvedic practices and yoga in preventing musculoskeletal disorders.

- A systematic review published in the Journal of Clinical Rheumatology (2021) found that yoga-based interventions significantly improved physical function, pain relief, and mental health in arthritis patients.
- Research in The Indian Journal of Endocrinology and Metabolism (2017) highlighted the role of Ayurveda-based lifestyle modifications in preventing osteoporosis and arthritis.
- A 12-week randomized controlled trial in Pain Research & Management (2022) demonstrated that daily yoga practice led to reduced pain severity and improved mobility in osteoarthritis patients.

INTEGRATING SWASTHAVRITTA AND YOGA INTO DAILY LIFE

To prevent age-related musculoskeletal disorders, individuals can incorporate the following into their daily routine.

Morning Routine

- Practice gentle yoga poses for 15–20 minutes
- Perform self-massage (Abhyanga) with warm sesame oil
- Drink warm water with turmeric and lemon throughout the day
- Maintain an anti-inflammatory, bone-nourishing diet
- Stay hydrated and avoid processed foods
- Engage in light movement every hour to prevent stiffness

Evening Routine

- Practice relaxation techniques like meditation and deep breathing
- Avoid heavy meals and screen exposure before bedtime

CONCLUSION

Swasthavritta and yoga provide a holistic, natural, and effective approach to preventing age-related musculoskeletal disorders like arthritis. By nourishing the body, promoting flexibility, reducing inflammation, and enhancing mental well-being, these practices empower individuals to maintain mobility and independence as they age. By integrating Ayurvedic principles and yoga into daily life, individuals can prevent musculoskeletal decline, improve quality of life, and achieve long-term health and wellness.

Adopting a "swasthavritta" lifestyle, incorporating yoga, and practicing mindful movement can significantly reduce the risk of age-related musculoskeletal disorders like arthritis, by promoting flexibility, strength, and reducing stress and inflammation.

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