



The Yoga Review

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EDITORIAL



The term 'Yoga' is derived from the Sanskrit root 'Yuj', which means to unite or to join or to direct and concentrate one's attention. Initially in Hindu philosophy, it was developed as a spiritual practice but over the period of time Yoga aimed to foster profound connection between the individual self (Atman) and universal consciousness (Brahman). This ancient practice, originating in India, has transcended borders and culture to become a global phenomenon. Classical texts such as the Bhagavad Gita and the Yoga Sutras of Patanjali outline the principles of Yoga, emphasizing the integration of body, mind, senses and spirit. In Yoga Sutras, Patanjali outlines an eightfold path awareness and enlightenment called Ashtanga Yoga (eight limbs). This union extends beyond the physical realm to encompass emotional and spiritual dimensions, encouraging practitioners to cultivate mindfulness, compassion, and self-awareness. The holistic perspective of Yoga provides a counterbalance, promoting reconnection with oneself and others in the world characterized by fragmentation whether in personal identity or social connections in today's fast-paced and technology-driven world, the pursuit of holistic health has become increasingly important. Due to lifestyle-related diseases, stress, and mental health challenges, many are seeking relief through ancient practices including Yogic practices.

Seeing the health benefits of Yoga, the scientific community has recognized its therapeutic potential for the management of ailments by incorporating Yoga in their research protocol as well as in their day-to-day practices. The integration of modern medicine and Ayurveda with Yoga therapy is recognized for its holistic benefits. Influential Indian sage *Patanjali*, laid down the ground framework of contemporary practices in his treatise 'Yoga Sutras'. Based on this many different Yogic disciplines have been developed. First time Swami Vivekananda has introduced Yoga to the Western world, emphasizing the spiritual aspects of Raja Yoga. Further, B.K.S. Iyengar developed the Iyengar method, focusing on alignment and therapeutic use of props, as discussed in his influential book, 'Light on Yoga'. T.K.V. Desikachar, a student of Krishnamacharya, highlighted the importance of individualized practices tailored to health needs in 'The Heart of Yoga'. Modern researchers, including Dr. Dean Ornish, have demonstrated that lifestyle interventions, including Yoga, can reverse coronary artery disease. Dr. Jon Kabat-Zinn incorporates Yoga in his Mindfulness-based stress reduction program to improve chronic pain and stress management, while Dr. K.N. Udupa shows that Yoga significantly reduces cortisol levels, enhancing psychological health. Ayurvedic practitioners like Dr. Vasant Lad emphasizes personalize Yoga practices based on individual Dosha balance. Research from the University of Utah demonstrated that Yoga significantly reduces symptoms of anxiety and depression, highlighting its potential as a complementary treatment alongside traditional therapy. A study from the university of





Massachusetts found that participants engaging in mindfulness-based Yoga therapy reported lower levels of perceived stress and anxiety. A novel study lead by Dr. Chris Streeter at Boston University found that Yoga can increase gamma-aminobutyric acid (GABA), a neurotransmitter that plays a crucial role in regulating mood and anxiety. This physiological change underscores the biochemical impacts of yoga, further supporting its use in therapeutic contexts. According to the World Health Organization lifestyle-related conditions such as obesity, diabetes, cardiovascular diseases etc are rising globally. Recent evidences shows that even gentle practices of Yoga poses can improve flexibility, balance, and strength in older adults, helping to reduce the risk of falls and injuries. The National Institutes of Health (NIH) has funded extensive projects and explore the Yoga's effects on mental health. Together, these sages and scientific outcomes 'Yoga therapies' are emerging as holistic healing potential, which are focusing on prevention, self-care strategies, management of ailments along with imparts significant impact on physical, mental, sensorial and spiritual well-being.

As the complexities of modern life have increased, Yoga emerged as a beacon of hope for holistic health. Its spiritual roots, combined with contemporary research highlighting its therapeutic benefits, make it a vital practice for addressing lifestyle-related diseases and promoting overall well-being. The focussed-on mindfulness, community, and preventive health aligns perfectly with the needs of today's society. Incorporating Yoga into daily routines, it can lead to profound changes in physical, mental, and spiritual health. As we strive for a more balanced and fulfilling life, embracing Yoga can serve as a transformative journey toward holistic wellness. In summary, Yoga is not just a series of physical postures; it is a comprehensive lifestyle that nurtures the mind, body, and spirit. It is essential for individuals, healthcare providers, and policymakers to acknowledge Yoga's potential as a powerful tool for holistic health. By doing so, we can cultivate a healthier, more harmonious society for future generations.

Chief Editor
Dr. Ajai Kumar Pandey





JOURNEY OF INDIAN ACADEMY OF YOGA (CONCEPTION TO TILL DATE)

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From times immemorial the city of Kashi, nesting on bank of Ganga, India's sacred river, the city known in recent time also under the names of Varanasi, Banaras or Benaras has been contributing vigorously to the growth and propagations of Yoga, undoubtedly the oldest and most fascinating scientific-cum-spiritual tradition of India. Outstanding path finders in the field of Yoga like legendary Veda Vyasa, Gautama Buddha and Acharya Shankara lived and taught in this city that has been cherished for millennia as the spiritual metropolis of the Indian subcontinent. Pandit Madan Mohan Malaviya, the revered founder of Banaras Hindu University, was a karma yogi par excellence, while other servants of Kashi like Dr. Annie Besant, Dr. Bhagwan Das, Dr. Swarpalli Radhakrishnan and Pandit Gopalnath Kaviraj, Made their own massive and distinct contribution of Yoga during first three quarters of the last century. During this period many great Acharyas in the field of Yoga like Swami Sivananda of Rishikesh, Swami Kuvalayananda of Lonavala, Professor Krishnamacharya of Mysore's and Shri Yogendraji of Bombay also strove along with their many distinguished disciples to interpret the philosophy and practice of Yoga to the outside world and to highlight its special relevance and global significance in the present age of science and technology. Many of them derived inspiration from Swami Vivakanand's clarion call in the last decade of the nineteenth century to treat Yoga "Like any other science" and to ride its noble edifice of cobwebs of secrecy and superstition.

In May 1979 in the conference on Yoga, Science and Society it was resolved having galaxy on Yogis from all parts of India to establish an Indian Academy of Yoga, as a learned Society at this center.

The founder of the Yoga Institute, Shri Yogendra ji, Santa Cruz, Bombay spoke his message "Knowledge both objective and Subjective, intellectual and transcendental and suggested that its first task will be to organize, codify and put across the knowledge concerning

Yoga in an effective and systemic way, without fear and favour. The monumental contribution of great yogis of today as well as ages gone by will without doubt be a source of information and inspiration to the academy of all time.

The Indian Academy of Yoga came into existence in 1981 and Quarterly Journal of Yoga entitled. 'The Yoga Review' was started with the aim to include research articles, review' research papers, reports of Institutions, thesis synopsis etc. dealing with theoretical and practical aspect of Yoga on scientific and systematic forms with modern ideas. This was circulated free of cost to all members of the academy and was circulated to the libraries of various Institutions.

The following are the brief review of the activities in the field of Yoga at this University which has been marked as number one university in the country (2010).





(A) Training and Education in the field of Yoga: The Yoga Sadhana Kendra started a certificate course for better living in the year 1972. This course is of one month duration and it organized three times per year and in each course girls and boys numbering 300 to 400 students get trained.

(B) Diploma in Yoga: The Yoga Sadhana Kendra, BHU has started this course in 1975 and which is a four months course where each time 100 students are taken. At end of one course two theory papers namely – Paper 1 i.e. foundation of Yoga and Yoga down the ages and paper 2 consist of Yoga for health and contemporary Yoga are included. The practical Yoga is also taught and students are examined for that also. Now the course is for one year with 02 hours practical training every week.

(C) Yoga Unit in Department of Physical Education: There is a small division in Department of Physical Education, Faculty of Arts where Yogic aspect of theory and practical classes are demonstrated to the B.P.E. and B.P.Ed. (Bachelor of Physical Education) and M.P.E. and M.P.Ed. (Master of Physical Education), number of students on Yogic aspect ranges from 150 to 200 per year in both groups.

(D) Yoga Research: For smooth Yoga research conduction of following things have been established at the University:

(D1) Yoga Research Laboratory: It is located in the faculty of Ayurveda where all biochemical hematological and immunological tests were being performed for patients as well experimental animals in Yogic model of research, UP till now a large number of students have completed Ph.D. work in Yoga in addition to Yogic research project for M.D. (Doctor of Medicine), M.S. (Master of Surgery) and Doctor of Medicine in Ayurveda have been completed presently it is being renovated which will be ultimately merged with Fac of Yogic Sciences in the near future.

(D2). Research Publication: The Banaras Hindu University has contributed immensely in various field of Yoga in last four decades. The field includes the experimental study of various Hath Yogic postures, Pranayama, clinical study of effect of Yoga in managing hypertension, Bronchial Asthma, early renal failure, various physiological disorders, Mental retardation etc. the work has been presented in more than 5 dozen National and International conferences on Yoga and allied specialty.

(D3). The Department of Yoga & Swasthavritta: This department has been established in the Faculty of Ayurveda for imparting Yogic training at graduate and post graduate levels. The regular Ph.D. programme is also been conducted by the department.

(D4). Research Project on Yoga: The various research projects conducted by various Faculty members in the field of Yoga have contributed immensely in field of Yoga.

Few important research projects are

1. **D.S.T. (Deptt. of Science and Technology):**
(July 1981 to April 1985).
Title: Yoga for control of mind in health and disease.
Principal Investigator: Prof. K.N. Udupa
Co-Investigator: Prof. R.H. Singh
2. **CCRYN (Central Council of Research in Yoga and Naturotherapy):**
(August 1985 to April 1987)
Title: Yogasana & Sathakama
Principal Investigator: Prof. K.N. Udupa
3. **ICMR (Indian council of Medical Research):**
(November 1987 to March 1991).
Title: School Health Education





- Principal Investigator: Prof. K.N. Udupa
Co-Investigator: Prof. R.H. Singh
4. **CCRYN (Central Council of Research in Yoga and Naturopathy):**
Title: Evaluation of saline and Dhauti Karma in the management of renal failure.
Principal Investigator: Prof. R.G. Singh
Co-Investigator: Prof. R.H. Singh
Prof. Usha
5. **CCRYN (Central Council of Research in Yoga and Naturopathy):**
Title: Evaluation of effect of some Hath Yogic exercises on primary and secondary hypertension.
Principal Investigator: Prof. R.G. Singh
Co-Investigator: Prof. R.H. Singh
Prof. Usha
6. **CCRYN (Central Council of Research in Yoga and Naturopathy):**
Title: Evaluation of saline and Dhauti Karma in the management of renal failure.
Principal Investigator: Prof. R.G. Singh
Co-Investigator: Prof. R.H. Singh
Prof. Usha

(D5). Ph.D./MD Thesis conducted in the field of Yoga: The faculty members are involved in guiding/conducting research leading to professional degrees such as Ph.D./MD/MS/MD(Ay) in various Yoga and allied field including Yoga therapy. This is conducted in Department of Faculty of Oriental Learning & Theology, Deptt. of Yoga & Swasthritta, Kaya Chikitsa of Faculty of Ayurveda, Department of Medicine & Nephrology in Faculty of Modern Medicine, Division of Yoga in Department of Physical Education, Faculty of Arts, Sanskrit Department of Women's College etc.

E: Patient Care Programme

(E1). Yoga OPD: The Yoga OPD was established in OPD block of S.S. Hospital in March 1980 where patients of various diseases like hypertension, bronchial asthma, allergy, skin diseases, early renal failure, anxiety, neurosis etc. were treated by an expert Yogi Mr. R.M. Shettiwar. He served as a main Yogi for the treatment i.e. Yoga therapy. Recently, OPD has been started in old Ayurvedic building under the Department of Swasthavritta and Yoga of

Faculty of Ayurveda, which is running 6 days per week. Lot of patients are attending Yoga OPD for redressal of their problem.

(E2). Yoga Ward: Few of the Faculty members have conducted research project where patient required to be admitted in the hospital. The funding agency gave the provision of few beds (10 beds) as a Yoga ward which was established for the project. The principal investigator who conducted the indoor project were:

1. Late Prof. K.N. Udupa, Former Director and Rector of Banaras Hindu University.
2. Prof. R.H. Singh, Former Dean, Faculty of Ayurvedic & Former Vice Chancellor of Rajasthan Ayurvedic University.
3. Prof. R.G. Singh, Professor & Head, Department of Nephrology and Secretary General, Indian Academy of Yoga.

Recently, patients are admitted under the Ayurvedic ward and the respective ward of the investigators for treatment and research facilities.





(F): Publication of books, Journal and Monograph in the field of Yoga: The Faculty members of the University are involved in scientific publication in the field of Yoga for last 4 decades or so. This can be divided in the following heading:

(F1). Journal: The Indian Academy of Yoga is contributing a quarterly publication in the field of Yoga since its inception.

The field covered in the Journal includes Philosophy, Psychological practice and various other allied subjects related to Yoga Journal as entitled “**Yoga Review**”. Its publication was disrupted for some time but again has been regularized.

(F2). Year Book of Yoga: This is also publication of Indian Academy of Yoga which gives the details of academy and name and address of its fellows and members in addition to details of academy etc.

(F3). Books and Monographs: The Faculty members involved in various aspects. Member of academy has published more than 03 dozen books and more than 20 monographs. This has covered the various aspect of Yoga like benefit of Yoga, method of Pranayama, Dhyana, Dharana & Samadhi etc. covering practical & Philosophical aspect of Yoga. Some books are very popular.

(G). Conference, seminars and workshop. The academy has organized number of conferences, seminars and workshop on Yoga. Few important are as follows:

1. Organized collaborative National Symposium on Spiritual health on April 12, 1998 at BHU as organizing Secretary.
2. International Certificate Course in Sports & Mountaineering Medicine from March 12-17 at BHU as Chairman, Organizing Committee.
3. Organized Annual Meet of Indian Academy of Yoga at BHU from April 27-28, 2003 at Organizing Secretary.
4. Session on Role of Yoga in Renal Disease in the Annual Meet of Indian Academy of Yoga, held from March 11-14, 2005 at BHU as Chairman, Organizing Committee.
5. Organized International CME on Yoga Therapy in the Current Millennium & Annual Meet of Indian Academy of Yoga from March 12-14, 2005 at BHU as Chairman, Organizing Committee.
6. Organized Workshop on “Role of Yoga in Elderly Age Group” at Malviya Bhawan on 27.04.2006 as Chairman, Organizing Committee.
7. Organized Silver Jubilee Assembly of Indian Academy of Yoga and Symposium on Yoga and Health: Current Trends on Jan 21-22, 2007 at Malviya Bhawan, BHU as Organizing Secretary of the Conference.
8. Organized as Chairman of “National Seminar on Yoga in Modern Life & Annual Assembly of Indian Academy of Yoga” held on 18-19 October, 2008 at Malviya Bhawan, BHU, Varanasi.
9. In Collaboration with Indian Academy of Yoga organized International Conference on Recent Advances in Yoga at Malviya Bhawan, BHU from Nov. 27-28, 2010 as Chairman of the Organizing Committee.
10. Life Style Diseases and its Naturopathic and Yogic Management from 30.11.2011 to 01.12.2011 (National)
11. Development of Mental Health through Yoga from 30.11.2012 to 01.12.2012. (National)
12. Importance of Yoga and Naturopathy in the 21st Century from 30.11.2013 to 01.12.2013. (National)





13. Management of Obesity through Yoga and Naturopathy from 30.11.2024 to 01.12.2014. (National)
14. Scientific View of Yoga from 30.11.2015 to 01.12.2015. (National)
15. Management of Diabetes through Yoga and Naturopathy from 30.11.2016 to 01.12.2016. (National)
16. Management of High Blood Pressure through Yoga and Naturopathy from 30.11.2017 to 01.12.2017. (National)
17. Management of Joint Disorders through Yoga and Naturopathy from 30.11.2018 to 01.12.2018. (National)
18. Management of Asthma through Yoga and Naturopathy from 30.11.2019 to 01.12.2019. (National)
19. Stress Management through Yoga from 30.11.2020 to 01.12.2020. (National)
20. Role of Yoga and Naturopathy during Pregnancy from 30.11.2021 to 01.12.2021. (National)
21. Web conference, Seminars on Yoga for Modern man from 09.11.2022. (National)

(H). Organized Research: The Yoga centre & Academy members conducted various Research Program on Yoga & Allied discipline few important are as follows:

1. 17th November, 2023: A comparative Study of Schools of Yoga in Buddhism. Hindustan and Jainism.
2. 17th November, 2023: A comparative Study of Swastha Vritha and Yoga with the Modern Preventive and Social Medicine.
3. 15th November, 2023: Yoga and Mental Health.
4. 17th May, 2023: The Concept of Mind in Yoga Philosophy and its Relevance to the Yoga of Sri Aurobindo.
5. 11th May, 2023: Prakarantar Yoga ke Vyavaharik Lakshya Sankiya Yoga.
6. 30th November, 2021: Sankhya Yoga Aacharmeemansha Ek Samikshatmak Adhyayan.
7. 15th May, 2023: Aupnishad Yog aur Patanjali Yog ka Tuinatmak Adhyayan.
8. 20th September, 2023: Biochemical Studies of Kundalini Yoga in Health and Disease.
9. 8th January, 2024: Effect of Yoga on Managing Stress Adjustment and improving academic Achievement of Visually impaired Adolescent Girl student.
10. 18th September, 2023: Yog parampra aur ayurved.
11. 2nd November, 2023: Psychological Evaluation of Mental Health in Patients of Neurosis. Treated with Ayurvedic and Yoga Therapy.
12. 12th August, 2024: A comparative Clinical Evaluation of Yoga Nidra and Preksha Medication in the Management of Mixed Anxiety Depressive Disorder.
13. 28th February, 2022: Effect of Surya Namaskar on Fitness of Adolescent School Children.
14. 23rd March, 2023: Upasna vidhi mein ved evamagamo ka darshanik avadan.
15. 10th February, 2021: Yoga and modern Psychotherapy.
16. 22nd October, 2020: Patanjalyogsutra ke Pripekshya mein agnipuranastha Yoga ka Samikshatmak Ek Adhyayan.
17. 6th February, 2023: Yog evam Sangeet ka Anta Sambandha Dhyana Pradayaam Aasno evam. Mudra ke sandarbha me.
18. 8th December, 2021: Effect of Comprehensive Yogic program on selected psychological and physiological variable in college student.
19. 24th March, 2020: Effect of calisthenics and Yogasanas on Health related physical fitness components and physiological variables of Junior High School Boys.





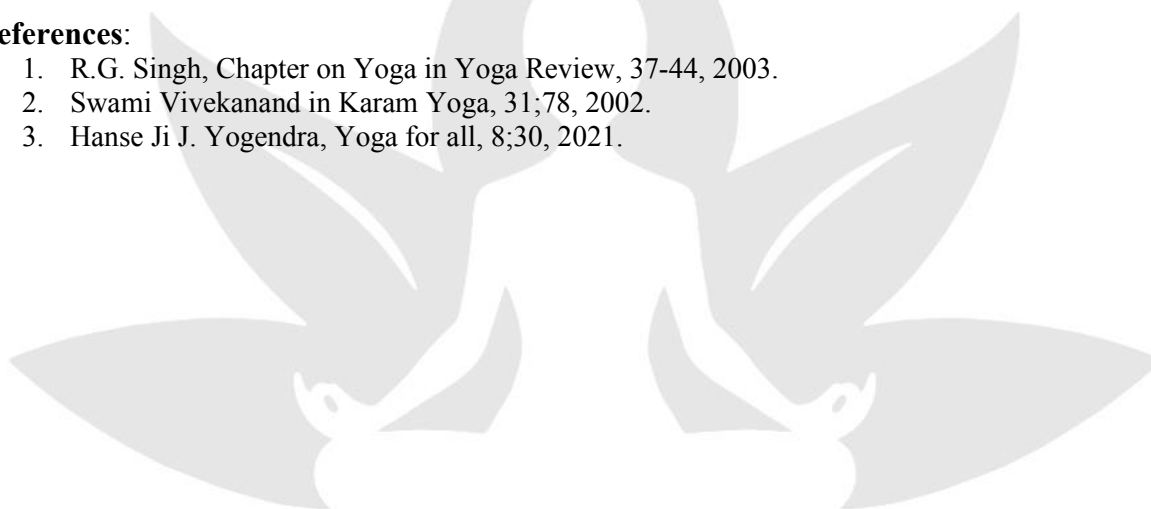
20. 11th February, 2020: Pharmaceutico nutraceutical study of chanaka Yoga and its application as a dietary supplement in diabetes mellitus.
21. 22nd March, 2020: Comparative study of Shilajatu processed shodhita in different media A pharmaceutical and experimental study.
22. 10th February, 2020: Achievement motivation stress and its management of high and low achieving visual need students.
23. 8th January, 2020: Religion of peace exploration in Buddhism.

Future Plan: Following are few development plans of the Academy:

1. The development of Institute of Yoga & Consciousness.
2. The make Varanasi Yoga Centre as National referral centre.
3. To start and standardized the various methods of Asans, Pranayam which is variable various schools of Yoga.
4. To promote the practical mode of Yoga for good health.
5. Start the training centre of Yoga at the level of Graduate, Post-Graduate and Doctorate level teaching program in Yoga.
6. To popularized and promote Yoga in the Country at various level.
7. Develop “Yoga” Kutiya for practice of Yoga specially Dharna and Samadhi in the South Campus of BHU, Varanasi.
8. To promote scientific of Yoga therapy.

References:

1. R.G. Singh, Chapter on Yoga in Yoga Review, 37-44, 2003.
2. Swami Vivekanand in Karam Yoga, 31;78, 2002.
3. Hanse Ji J. Yogendra, Yoga for all, 8;30, 2021.





SIGNIFICANCE OF *SHANKHAPRAKSHALANA KRIYA* (YOGIC COLON CLEANSING) - A CRITICAL REVIEW

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ABSTRACT

Background: *Shankhaprakshalana* kriya is a part of *Shatkarmas* (six cleansing technique of *Hatha Yoga*), which have been done since ancient time. This technique involves drinking lukewarm salt water in combination with series of active *Asanas* that aid the intestinal motility and leads to the cleansing of the entire gastrointestinal canal. It removes the all the auto intoxicants in alimentary canal, effective in IBS, anxiety neurosis, obesity etc. **Aim:** This study aims to study the effect of *Shankhaprakshalana* in different disease condition and health protection. **Material Methods:** A thorough search was conducted by using the terms i.e. '*Laghu shankha prakshalana*', '*Shankhaprakshalana*', '*Varisaradhauti*', 'Yogic Enema', and 'Yogic colon cleansing' on data base engines like Web of science, Scopus, PubMed Central, and Google Scholar etc. **Discussion:** *Shankhaprakshalana Kriya* helps remove toxins from the body. Several researches indicate improvements in digestive functions, including relief from constipation, bloating, and irritable bowel syndrome. The saline water acts as a laxative, promoting bowel movements. **Conclusion:** *Shankhaprakshalana Kriya*, a traditional Yogic practice for cleansing the digestive tract, is associated with several potential benefits. Advocates of this practice highlight its role in detoxification, improved digestive health, and enhanced mental clarity.

Keywords - Gut health, *Shankha prakshalana*, *Shatkarma*, *Varisara dhauti*, Yogic colon cleansing.

INTRODUCTION

The Hathayoga tradition of Yoga describes six purifying techniques/*Shatkarma* that are known to balance a person's constitution. *Shatkarma* includes *dhauti* (internal body cleansing), *basti* (Yogic enema), *neti* (nasal cleansing), *traṭaka* (focused staring), *lauliki/nauli* (abdominal massage), and *kapalbhati* (frontal head cleansing) and are said to enhance health and wellbeing by thoroughly detoxifying the entire body.¹ *Shankhaprakshalana*, also known as *Varisara antardhauti*, is a Yogic cleansing procedure that means 'intestinal purification' or 'intestinal wash'. In *Gheraṇḍa Samhita*, it is one of six purification techniques or *shatkarma* under *dhauti*.² The term *shankha* refers to the coiled and cavernous-shaped intestine, while *prakshalana* means 'to wash'. The word *shankha* is used to epitomize to represent the intestine with their cavernous and coiled shape. This practice consists of drinking two glasses of lukewarm salt water (2 teaspoon salt in 1 litre of water) on an empty stomach and completing a sets of Yoga postures i.e. *Tadasana* (palm tree pose), *Tiryak tadasana* (swaying palm tree pose), *Kati Chakrasana* (waist rotating pose), *Tiryak bhujangasana* (twisting cobra pose), and *Udarakarshana* (abdominal stretch pose) to cleanse the alimentary canal by stimulating the digestive tract and removal of the impurities from the body. These 5 *Asanas* should be repeated for 8 times. The entire process is repeated 3 times in *Laghu Shankhaprakshalana*.

Light and semi-solid meal should be consumed before undertaking this practice. After completing the entire practice, it is strongly recommended to rest in *Shavasana* or relaxation for at least 45 minutes to help the digestive system replenish itself after eliminating toxins. One should refrain from bathing, walking, sleeping, and drinking water while in this state. Drinking lukewarm water might occasionally cause someone to feel feverish. After 45 minutes of resting, it is advised to consume homemade khichadi. The khichadi ingredient aids in the restoration of the intestines' normal activities. Melted clarified butter, or ghee, is usually beneficial. If person is hungry, it's advised to have a complete





meal after six hours. This helps the intestine to continue peristalsis and restores the intestine's function by giving it bulk. Avoidance of certain dietary limitations, such as those related to milk, caffeine, spices, acidic food, processed food, sweets, salad and fruits, intoxicated substances, pickles and chutneys for upcoming seven days.

METHODOLOGY

Detailed information regarding *Shankhprakashalana* has been searched and reviewed by systematic screening of different internet databases, which included Wikipedia, PubMed, PubMed Central, Web of Science, Cochrane Library, Embase, AYUSH Research Portal, Scopus, and Google Scholar, were searched for research articles using the following keywords gut health, *varisara dhauti*, *laghu shankha prakshalana*, *shankh prakshalana*, Yogic colon cleansing, and Yoga.

RESULT

Shankhprakashalana should be practised before Pranayama in those persons who are fatty and have excessive kapha dosha.³ It has a very positive effect on the digestive tract, liver, pancreas, and kidneys by giving them a kind of internal massage. Via its osmotic action, it also lowers urea,⁴ creatinine, and other harmful substances, clearing the circulatory system. The following effects of *Shankhprakashalana* in different conditions are mentioned below:

1. **Effect of *Shankhprakashalana* Kriya in Digestive Disorder** – Various digestive diseases can be managed with regular cleansing of the entire gastrointestinal tract. *Shankhprakashalana* helps to cure constipation which occurs due to not drinking enough water leads to builds up the dry and hard faeces.⁵ All Irritable Bowel Symptoms, including vomiting tendency, loss of appetite, diarrhoea, and vague abdominal discomfort, were significantly relieved, according to Singh et al.⁶ After the intervention, there was also a considerable decrease in the need for medication. After receiving one *shankhprakashalana* session each week for four weeks in sixty healthy participants demonstrated improved results on the Cleveland Clinic constipation scale.⁷ *Shankhprakashalana* decreases cholesterol level via bile removal.⁸
2. **Effect of *Shankhprakashalana* Kriya in Diabetes Mellitus** - *Shankhprakashalana* is an important purification therapy for a variety of metabolic diseases, including diabetes mellitus, obesity, hypoglycaemia, hypothyroidism, and skin diseases like eczema, boils, and pimples.⁹ *Shankhprakashalana* results in a significantly drop in blood glucose levels that results in improving insulin synthesis and aids in the management of diabetes.¹⁰
3. **Effect of *Shankhprakashalana* in Obesity** - By doing the *Shankhprakashalana* once a week for 8 weeks resulted in a notable decrease in anthropometric measurements such as body weight, body mass index, and waist-hip ratio, as well as improvements in lipid profile, among a group of 40 obese persons. *Laghu Shankhprakashalana* has the ability to lower cholesterol levels by decreasing the bile acid pool,^{12,13} *Shankhprakashalana*, in addition to the fecal matter, washes the bile acid pool to some amount, reducing fat breakdown and absorption when done for few days, resulting in weight loss.¹⁴ Eight sessions of *Shankhprakashalana* led to weight loss, waist circumference and hip circumference reduction in an obese person.¹⁵
4. **Effect of *Shankhprakashalana* in chronic low back pain** - A self-controlled study was conducted in 40 in-patients having mild-to-moderate chronic pain in the lumbar region. They were randomly assigned to receive *laghu shankhprakashalana* and a back pain Yogic special technique on two different days. Assessments were done before and after the sessions. The Oswestry disability index was used to assess pain and disability, while Spiedlberger's state and trait anxiety assessment was used to examine state anxiety. Spinal flexibility and straight leg raising tests were performed with Leighton and caliper goniometers, respectively. Both Yoga sessions were found to beneficial in the chronic low backache patients, but the magnitude of change was greater after the *laghu shankhprakashalana* session. Thus, the practice of *laghu shankhprakashalana* was found a better





reduction in pain, disability, anxiety, and help to increase spinal flexibility (flexion, extension, left and right lateral bending).¹⁶

5. **Effect of *Shankhaprakshalana* in Hypertension** - In 32 individuals with mild to moderate primary hypertension, Mashyal et al. evaluated the safety and immediate impact of SP. The same subjects received SP on two different days, one with regular water and the other with triphalā, a mild herbal laxative. The findings revealed a notable reduction in pulse rate and systolic and diastolic blood pressure right after both sessions.¹⁷ Thus, in hypertensive patients, SP is safe for decreasing blood pressure.
6. **Effect of *Shankhaprakshalana* in Psychological and Mental Health** - Beyond its physical benefits, *Shankhaprakshalana Kriya* is also believed to contribute to mental and emotional well-being. Practitioners often report enhanced mental clarity and a sense of emotional balance after completing the practice. The calming effect on the nervous system may further support mental health and cognitive function.
7. **Efficacy of *Shankhaprakshalana* in preparation of Colonoscopy** - LSP is a distinct technique that can be applied for the preparation of a colonoscopy. A research study examined the safety and efficacy of SP (*Shankhaprakshalana*) and PEG (polyethylene glycol) in preparing the gut for a colonoscopy. The SP method was used in the morning, supervised by a Yoga instructor, prior to the colonoscopy. The conventional PEG-electrolyte solution colonoscopy preparation is not as effective as the ancient Yoga practice '*Shankha Prakshalana*' in terms of tolerability and side effects.¹⁸

Precautions¹⁹

- It is crucial not to exceed over the point beyond which almost clear water without particles of solid matter is being passed because exceeding over limit may leads to produce bile, which is indicated by bright yellow water. When there is still some cloudiness in the water, it is preferable to stop. After finishing the practice, one should relax for 45 minutes, but do not go to sleep as this could cause a headache and cold.
- *Shankhaprakshalana* should not be performed when the weather condition is extreme like very cloudy, rainy and windy weather.
- Sitting in the extreme sunlight, excessive exercise, near a fire.
- *Purna Shankhaprakshalana kriya* should not be performed more than twice a year

Contraindications -

- Avoid the *Shankhaprakshalana* during the pregnancy.
- Person below 15 years age.
- Persons with Kidney and heart diseases, Peptic ulcer, acute abdominal pain, any inflammatory conditions, Hernia, Bleeding piles, Hypertension, Dizziness, epilepsy etc.

DISCUSSION

Always lukewarm water is used for the procedure of *Shankhaprakshalana* because cold water leads to the constriction of the blood vessels which supply to the gastrointestinal tract as well as hot water is also contraindicated because it would burn the lining of the digestive tract. Also, lukewarm water cause promotes the frequent passage of hard stool with mucus.²⁰ There is an important reason for adding salt. When plain water is drunk, it is absorbed through the intestine into the body and excess is eliminated in urine. If salty water is drunk, much of it is not absorbed and comes out via the anus.²¹ Five sets of Asana advised during *Shankhaprakshalana* have many benefits on the body. Mode of action of asanas have limited scientific explanation. The fundamental five asanas of the practice improve the cleansing process and stimulate intestinal peristalsis. When carried out correctly, these asanas gradually open the ileocecal valve at the small intestine's exit, the pyloric valve at the stomach's outflow, and finally the sphincter which forms the anus. The expansion of the oesophagus, stomach, and duodenum in *Tadasana* (Palm Tree Pose) opens the stomach's pyloric sphincter. After that, the small intestine is exposed to salted water. *Tiryaka Tadasana*, also known as the Swaying Palm





Tree Pose, involves periodically contracting one side of the intestines and relaxing the other. The entire smooth muscle of the stomach and intestines are twisted in the *Katichakrasana* (Waist Rotating Pose), which forces the food and fluids downhill. The ileocecal sphincter opens in *Tiryaka Bhujangasana* (Twisting Cobra Pose). Water moves from the small intestine into the big intestine at that precise instant. The digestive system, nerves, and muscles are all stretched in the *Udarakarshan* (Abdominal Stretch Pose).²² The digestive tract as a whole so experiences repeated contraction and relaxation. *Shankhaprakshalana* wash the gastrointestinal tract from mouth to anus. By facilitating the peristalsis, it catalyses the further movement of foods. This improves the bowel movement. The stomach chyme enters the small intestine as a result of peristalsis. Bile juice is combined with it as it passes into the duodenum. The mixture is easily evacuated due to the improved bowel movement. Bile's concentration is lowered as a result. A significant part of bile secretion is cholesterol. Consequently, in order to make bile, cholesterol is ingested more frequently, which lowers cholesterol levels.²³ By clearing out accumulated mucus which act as barrier in absorption of ferrous iron and other residues from the gastrointestinal tract, *Shankhaprakshalana* may improve the absorption of ferrous ion better absorption of iron can support the production of haemoglobin, which is crucial for oxygen transport in the blood.²⁴

CONCLUSION

Shankhaprakshalana Kriya presents a potential alternative method that offers a natural and holistic approach to bowel cleansing. It should be performed under the guidance of an experienced instructor, particularly for beginners or individuals with pre-existing health conditions. Currently, there is limited clinical research on the use of *Shankhaprakshalana Kriya*. Hence, more clinical researches on large scale will be needed to see the benefits of *Shankhaprakshalana*.

CONFLICTS OF INTEREST

There are no conflicts of interest.

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PLANNING OF THE SCIENTIFIC STUDY BASED ON THE PRINCIPLES OF YOGA ŚĀSTRA: NEED OF THE HOUR

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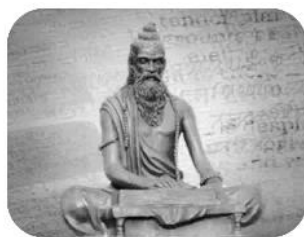
ABSTRACT

Perfection needs to complete a journey of learning in the life, on the other hand, perfection required to put the endeavours in the daily routine. Yoga is 'a philosophical science' which nourish perfection and satisfaction for upgrading the ethos of human life via deepening the cultural roots, enhancing the intellectual boundaries, defining the spiritual metaphysics, solving the mental hurdles, uplifting the scientific understanding and many more. In the recent scenario, Yoga is accepted in the society not-only for the eradication of diseases but also maintaining the health & wellness. Yoga is a complete discipline which automatically promotes the disease-free life or life near about to nature, where gift of happiness is very natural. In the Traditional Knowledge of Bharat (India), Yoga Śāstras like Upaniṣad, Bhagavadgītā, Veda, Purāṇa, Rāmacaritamānasa, Śrīmadbhāgavatam, all other Tantras, and many more are the major sources of spreading the awareness about the goals of human life. Today's people are very far away from the spiritual and scientific legacy of Yoga Śāstra; on the contrary, demand of proofs & evidences is to show its cultural significance. To achieve this investigative works in the form of literary, clinical trials, observational studies, experimental researches have to be done in the Yoga Śāstra. Designing clinical trials as per Yoga Śāstra is the need of hour for making the fusion of traditional knowledge with modern scientific thought.

Keywords: Yoga, Śāstra, Tantra, health, clinical, traditional knowledge, modern scientific thought.

INTRODUCTION

The Traditional Knowledge systems of Bharat is deeply rooted to the greatest values that are practiced in the daily routine's experience which is recorded in the astonishing collection of manuscripts. There are many thinkers, philosophers, scientists, Vaidyas, Doctors, writers, poets and many more professional personalities who are worked and a working in the different domains of knowledge. The prime source of knowledge in Bharat is Veda; Vedas are the collection of divine mantras (secret coding) pouring out of the Rishi's experiences. Since these experiences of these Rishi's varied from an observation of the visible sky (with the Sun, the Moon, the stars, planets, comets, etc.); to flora and fauna in and around to the forests, deserts, rivers, seas and oceans; to the people in and around - to their own physical body, to their breath, to their mind, intellect, ego and the inner Self witnessing this whole thing. The subject matter spoken in the Vedas is very vast and its meaning cannot be easily deciphered.



Courtesy - <https://www.artofliving.org/in-hi/yoga/patanjali-yogasutra/knowledge-sheet-1>





The inward nature of transformation of human life through Yoga practice is very obvious result; but to understand the inner alchemy of life needs pure approaches of Yoga. There are various dimensions of Yoga practice, majorly classified in two ways viz. Vedic tradition and Tantric tradition.¹ Tantra provides such solutions via beautiful understanding of Śakti (Universal Energy) which illustrates the necessary subtle changes within the Psyche. On the other hand, Veda provides such solutions via attractive understanding of Jyoti (Universal Light) which enlightens the divine pathway of removal of darkness of spiritual ignorance. Yoga Śāstra includes arts, science, philosophy and literature related to the human existence. It is based on a holistic approach that integrates different aspects of human life such as mind, body, and spirit. Yoga is one of the key subjects of the Indian Knowledge System which emphasis on the interconnectedness and interdependence of all beings and the universe. The Vedas contain different views about the origin of the universe. The origin of the universe is traced to Agni or fire. After that earth, heaven, day, night, water and medicines come into existence.

MATERIAL & METHODS

Persons who are completely unaware about Indian knowledge always felt that Yoga is a Science or an Art. Yoga is considered as Psychology or Para Psychology or Meta Physics or divine science or something else that can't be defined. But in the real terminology, it is the complete science of Chitta (mind or psyche). From the time immemorial it is being utilised for the higher cultivation and nourishment of body, mind and soul for attaining bliss of life; but in the modern scenario, people are highly demotivated and discouraged about the basic structure of Yoga and limited to its impact on health. Upanishads are in continuation of Vedic thought but it is not merely continuation but enlarging and transforming the hidden thought mentioned in Vedic verses. Upanishads are regarded as secret doctrines; however, it does not mean that it is meant for only few privileged sections of society. This knowledge is open for all those who are capable and fit to receive it and who are the true seekers of knowledge.

The philosophical science, Yoga is a widespread knowledge in different domains of life like education, health, psychology, spirituality and many more.



Courtesy: <https://www.iik.edu.in/courses/basics-of-Yoga/>

Health as defined in Ayurveda, an Indian science of health, is in the complete way such as equivalency of Dosha, Agni, Dhatu and Mala along with happiness of Atma, Indriye and Manas as explained by Acharya Suśruta.

समदोषः समानग्निश्च समधातुमलक्रियः। प्रसन्नात्मेन्द्रियमनाः स्वस्थ इत्यभिधीयते॥

**Samadoṣaḥ Samānāgniśca Samadhātumalakriyaḥ |
Prasannātmendriyamanāḥ Svastha Ityabhidhiyate ||**

Suśruta Saṁhitā² 15/45

Śaunaka asked to Mahirṣi Aṅgirā about the supreme kind of knowledge, in the reply Mahirṣi said there are 2 types of knowledge viz. Parā Vidya and Aparā Vidya. Both are directly connected in the form of experience of satisfaction in the daily life; Parā Vidya is the most supreme kind that can't be easily grasped by senses directly while Aparā Vidya³ is a collection of all kinds of existing literature of knowing about this cosmos.



तस्मै स होवाच। द्वे विद्ये वेदितव्ये इति ह स्म यत्ब्रह्मविदो वदन्ति परा चैवापरा च॥

Tasmai Sa Hovāca| Dve Vidye Veditavye Iti Ha
Sma Yatbrahmavido Vadanti Parā Caivāparā Ca||

Muṇḍakopaniṣad⁴ 1/1/4.

It can be tabulated as follows-

Aparā Vidya	✓ 4 Veda (Ṛgveda, Yajurveda, Sāmaveda and Atharvaveda) ✓ 6 Vedāṅga (Śikṣā, Kalpa, Vyākaraṇa, Nirukta, Chanda and Jyotiṣa)
Parā Vidya	Akṣaram Adhigamyate (state of Self-realization attained by above 10 ingredients).

Though the Yoga has a wide expansion of knowledge of different domains it should not be easily be given/taught to everybody, one should be taught to only the persons who have desire to learn and practice as said by Ādiyogī Śiva, in Śiva Saṁhitā. The most secret Yoga Śāstra, that such special secrets must be revealed only to Subhaktā (that devotee which possess faith and piousness in the daily routine) and Mahātma (higher souled person) in all the three Loka (world).

योगशास्त्रमिदं गोप्यम्माभिः परिभाषितम्। सुभक्ताय प्रदातव्यं त्रैलोक्ये च महात्मने॥

Yogaśāstramidaṁ Gopyamsmābhiḥ Paribhāṣitam|
Subhaktāya Pradātavyaṁ Trailokye Ca Mahātmane||

Śiva Saṁhitā 1/19.

Clinical practices by Rishi

In the beginning of this cosmic world, people lived in harmony with the connection of nature. From time to time the realized sages of the old times have been showing the path that leads to liberation. The average person had contact with the truth inherent inside the divine nature. Religion or philosophy was not needed very much because people saw truth, beauty, and value within the surroundings. The Yoga Śāstra (scriptures) compiled in this age were called the Vedas, of which the most important is the Rig Veda. It comprises hymns in appreciation of life and the earth on which the entire world exists. But nowadays a great number of people trying to turn their back on society and willing to go inside the forest for searching the lost happiness. All this happens just because most of the person have distracted and suspended mind due to which the thought process is not stopped. Resultantly, person posses the bad quality of mind as like an individual often comparing with another person. The advantage of still being able to think about one subject until a clear solution is arrived at. The Yoga Śāstra (scriptures) compiled in those days were the Upanishads, which are mystical dialogues between master and student.⁵ 'Upanishad' means sitting near the master, while 'mysticism' means that the hidden or the inexpressible is being expressed.

Sr. No.	Name of Maharishi/Rishi	Yoga Śāstra	Idea for Clinical studies
1.	Yogeśvara Śrīkrṣṇa	Śrīmadbhagavat Gītā ⁶	Life skills, Diet Management, Mediations, Behavioral pattens, Q&A asking techniques, Writing skills, Counselling and many more
2.	Ādiyogī Śiva	Śiva Saṁhitā	Meditation, Upavāsa (style of fasting), Satisfaction techniques, Subtle anatomy & physiology and many more
3.	Svāmī Svātmārāma	Haṭhayogapradīpikā ⁷	Intake of food, Listening the Nāda ⁸ (inner sound), stress free lifestyle and many more
4.	Mahirshi Gheraṇḍa	Gheraṇḍa Saṁhitā ⁹	Detoxification of body, Meditation, Boosting Metabolic activity
5.	Ādi Śaṁkarācārya	Yogatārāvalī ¹⁰	Meditation, Non-engagement in Karma
6.	Ādiyogī Śiva	Śivasvarodaya ¹¹	Subtle anatomy & physiology via Swar



7.	Ādi Śaṅkarācārya	Viveka Chudamani ¹²	Scientific temper of Vedant
8.	Mahirshi Vasiṣṭha	Vasiṣṭhasaṁhitā ¹³	Maintaining the holistic health of Body in the ancient model of Bharat
9.	Abhinavagupta	Tantrāsāra	Elaborate techniques to deal with lifestyle confusions and problems

One of the famous sage-scientist of Bharat, named Madhava Kar, who was a Ayurvedic practitioner, gave one of the best descriptions of Heart Attack in the late 7th century. This scripture is known as Madhava Nidana (Rog Vinischaya) which possess an ornamental position in the Ayurveda literature of medical practice. Also, it mentions various diseases with symptoms and remedies.

Teaching & Learning strategies

Informal education system of Bharat believes in the training of student for becoming capable of being brilliant in the daily jobs. All such kind of practices turns the major hindrances into the easy functioning of life; all such can be modified by learning the skills like reading, writing, delivering lectures, observing the surroundings, discovering newer horizons, visualizing silence and many other strategies are greatly described in the Yoga Śāstra.

योगोपदेशं संप्राप्य लब्ध्वा योगविदं गुरुम्। गुरुपदिष्टविधिना धिया निश्चय साधयेत्॥

**Yogopadeśaṁ Saṁprāpya Labdhvā Yogavidam Gurum|
Gurūpadiṣṭavidhinā Dhiyā Niścatya Sādhayet||**

Śiva Saṁhitā 3/19

The blessings of Guru are very important in the Yoga practice, which helps to recognise a practitioner of either higher class or middle class or lower class of Sadhana. Those practitioners received the knowledge of Yoga from a Guru having highly devotion towards the Yoga Śāstra should memorize the actual learning strategy with solemn faith, devotion and belief.

RESULT

In any electrical circuit, three specific wires are required for conduction - one positive, one negative and one neutral. Likewise, within the body there are three specific Nadis for conducting energy. In Haṭhayogapradīpikā¹⁴, Ida refers as negative line, the channel of manas shakti or mental force. The positive line is Pingala, which channels the dynamic energy of Prana Shakti. In order to avoid short-circuiting of these lines there is a third channel, Sushumna, which functions as an earth wire, The Śivasvarodaya¹⁵ names ten major Nadis which connect to the 'doorways' leading in and out of the body.

People learn all kinds of modern science and technology
but what about own science and technology of mind!!!

People learn all kinds of mathematical calculations
But what about own thoughts process!!!

People learn all sorts of worldly architecture
But what about own structure of body, mind and beyond mind!!!

There is a high need of establishing newer dimension of research in the field of Traditional Yoga for better health promotion. Every person has excellency to observe and visualize the cosmos in the body and vice versa; in this manner Yoga Sutra says there are 4 types of Sadhana viz. Mridu (mild), Madhya (middle), Adhimatraka (higher) and Adhimatrama (the highest) who is qualified Adhikari in all forms of Yoga.

CONCLUSION

The promotion of clinical approaches of Yoga is the demand of modern era to re-introduce the Sādhana practiced by the Rishi-Muni (Sages), but the researches must be planned and stickly based on

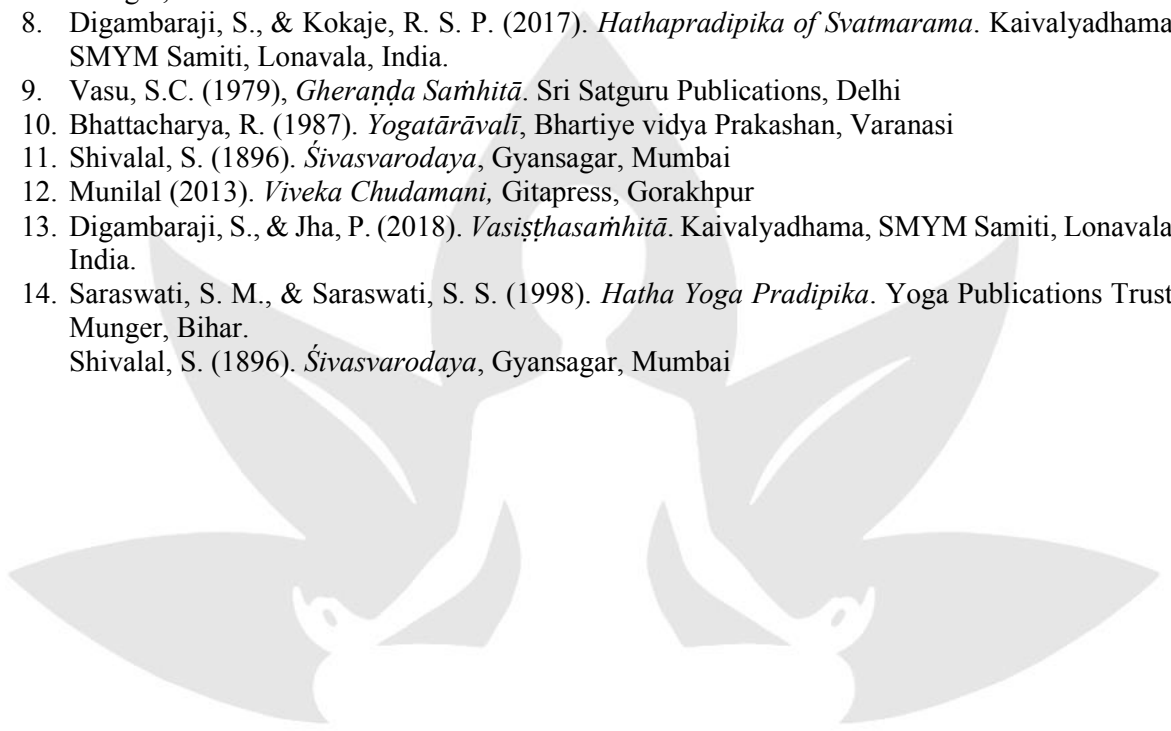




the principles of various classical texts of HaṭhaYoga, RājaYoga, BhaktiYoga, KarmaYoga, MantraYoga, JapaYoga, LayaYoga and etc.

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सावित्री प्राणायाम का उच्च रक्तचाप पर प्रभाव का एक समीक्षात्मक अध्ययन

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सारांश

आज के भौतिकवादी युग में बदलती जीवनशैली एवं मानसिक तनाव से अनेक प्रकार की साध्य एवं असाध्य तथा प्राणघातक बीमारियों का उद्भव हो रहा है। इनके रोकथाम के लिए चिकित्सकीय सुविधायें प्रयाप्त नहीं पड़ रही हैं। इस यथावह स्थिति को देखते हुए चिकित्सक समुदाय अपनी-अपनी विद्या के साथ-साथ परंपरागत उपायों योग आदि की तरफ अपना ध्यान इन बीमारियों की तरफ कर रहा है। इस दिशा में यौगिक क्रियाएँ तथा प्राणायाम विशेष रूप से उपयोगी सिद्ध हो रहे हैं। वर्तमान समय में फैली बीमारियों के व्यापक जाल में हृदयवाहिनी रोगों ने विशेष रूप से अपनी जड़े जमा रखी हैं। विश्व स्वास्थ्य संगठन के अनुसार, विश्व पटल पर 1.28 अरब व्यक्ति उच्च रक्तचाप से प्रभावित है, जिसमें 4 में से 1 पुरुष तथा 5 में से 1 महिला इस रोग से प्रभावित है। भारत में, हृदय आघात से होने वाली 57 प्रतिशत मृत्यु तथा हृदय धमनी रोग से होने वाली 24 प्रतिशत मृत्यु का प्रमुख कारण उच्च रक्तचाप ही है। अगर शुरुआती दौर में इसको नियंत्रित करने का प्रयास न किया जाये तो यह समय के साथ गुर्दा, आँख, अन्तःस्त्रावी ग्रंथियों और तंत्रिका तंत्र को प्रभावित करता है। उच्च रक्तचाप के मुख्य कारणों में से मानसिक तनाव एक प्रमुख कारण है। तनाव अल्पावधि के लिए अच्छा है, क्योंकि यह मनुष्य को प्रेरित तथा ध्यान केंद्रित रखता है लेकिन यदि इसे लंबे समय तक नियंत्रित नहीं किया जाता है, तो यह नाना प्रकार की समस्याएं उत्पन्न करता है, जिसमें उच्च रक्तचाप मुख्य है। सावित्री प्राणायाम एक मुख्य यौगिक अभ्यास है जो श्वसन क्रिया को उत्कृष्ट बनाकर शरीर व मन की गतिविधियों को सुचारु रूप से संचालित करने में सहायक है। क्रमिक अभ्यास द्वारा सावित्री प्राणायाम के माध्यम से जब अपरानुकम्पी तंत्रिका तंत्र उद्दीप्त हो जाता है, तो हृदय पर रक्त का पड़ने वाला दबाव भी अपनी सामान्य अवस्था में आ जाता है।

कूटशब्द – उच्च रक्तचाप, सावित्री प्राणायाम, तनाव, योग

प्रस्तावना

विश्व पटल में फैली बीमारियों के व्यापक जाल में उच्च रक्तचाप ने विशेष रूप से अपनी जड़े जमा रखी हैं। उच्च रक्तचाप एक प्रमुख हृदयवाहिनीगत रोग है। रक्तचाप सामान्य रूप से रक्त के प्रवाह के फलस्वरूप रक्त वाहिनियों पर लम्बवत् पड़ने वाला दबाव है, जो अवांछित कारणों से दबाव में वृद्धि करता है, तथा उच्च रक्तचाप को जन्म देता है। विश्व स्वास्थ्य संगठन के अनुसार, विश्व में 1.28 अरब व्यक्ति उच्च रक्तचाप से ग्रसित है, जिसमें पुरुष की संख्या महिलाओं से अधिक है। भारत में, हृदय आघात से होने वाली मृत्यु तथा हृदय धमनी रोग से होने वाली मृत्यु का मुख्य कारण उच्च रक्तचाप ही है। आयु वृद्धि के साथ यह समस्या बढ़ती जाती है तथा अनुमानन 46 प्रतिशत व्यक्ति इस बात से अपरिचित रहते हैं कि उन्हें यह समस्या है भी या नहीं।¹ 2005 में, उच्च रक्तचाप का वैश्विक बोझ भारतीय पुरुषों में 20.6 प्रतिशत और भारतीय महिलाओं में 20.9 प्रतिशत था, जो अनुमानतः 2025 तक यह प्रतिशत दर बढ़कर पुरुषों में 22.9 प्रतिशत तथा महिलाओं में 23.6 प्रतिशत हो जाएगी। राष्ट्रीय स्वास्थ्य और परीक्षा सर्वेक्षण के अनुसार, उच्च रक्तचाप का प्रसार उम्र के साथ बढ़ता गया, 18–39 आयु वर्ग के वयस्कों में 7.5 प्रतिशत से बढ़कर 40–59 आयु वर्ग के लोगों में 33.2 प्रतिशत और 60 और उससे अधिक आयु वालों में 63.1 प्रतिशत हो गया है।² अगर शुरुआती दौर में इसको नियंत्रित करने का प्रयास न किया जाये तो यह समय के साथ गुर्दा, आँख, अन्तःस्त्रावी ग्रंथि और तंत्रिका तंत्र को प्रभावित करता है। उच्च रक्तचाप के मुख्य कारणों में से मानसिक तनाव एक प्रमुख कारण है। वर्तमान समय में प्रत्येक व्यक्ति जीवनशैली से सम्बंधित परेशानियों, कार्यक्षेत्र में समय सीमाएं, हताशा, भौतिक वस्तुओं का अधिक संग्रह, शारीरिक गतिविधियों की कमी और गलत खान-पान की आदतों से भरी हुई है, जो तनाव का कारण बनती है।³ तनाव अल्पावधि के लिए अच्छा है, क्योंकि यह प्रेरित तथा ध्यान केंद्रित रखता है, लेकिन यदि इसे लंबे समय तक नियंत्रित नहीं किया जाता है, तो यह कई समस्याएं पैदा करता है जिसमें उच्च रक्तचाप मुख्य है।



योग उत्तम जीवन शैली को समाहित किये भारतीय संस्कृति का प्राचीनतम विज्ञान है। यह योग शब्द की उत्पत्ति संस्कृत की "युज्" धातु से हुई है, जिसका अर्थ है "जुड़ना"। योग एक जीवन जीने की कला है, जिसके द्वारा व्यक्ति इंद्रियों को संयमित कर जीवन को आनंदमय तथा सहज रूप से व्यतीत कर सकता है। महर्षि पतंजलि ने पतंजलि योग सूत्र में सामान्य व्यक्ति के लिए अष्टांग योग का वर्णन किया है, जैसे यम, नियम, आसन, प्राणायाम, प्रत्याहार, धारणा, ध्यान, तथा समाधि। प्राणायाम अष्टांग योग का चतुर्थ अंग है। यह मुख्यतः दो शब्दों से बना है— "प्राण+आयाम"। प्राण का अर्थ है सांस, श्वसन, जीवन शक्ति, ऊर्जा या शक्ति और आयाम का अर्थ है खिंचाव, विस्तार, लम्बाई, विनियमन, संयम या नियंत्रण। इस प्रकार प्राणायाम का अर्थ है सांस को लम्बा करना तथा उसका संयमन है।⁴ महर्षि पतंजलि ने योग दर्शन (2/49) में बताया है

तस्मिन्सति श्वासप्रश्वासयोरगतिविच्छेदः प्राणायामः ॥ (2/49)

योग दर्शन के अनुसार, भौतिक शरीर चेतना की अभिव्यक्ति का माध्यम है। यह मन द्वारा निर्मित व्यवहारिक स्वरूप का क्रिस्टलीकरण है। सामान्य जीवनशैली में जो शारीरिक स्तर पर महसूस होता है वह सीधे मनोवैज्ञानिक स्तर या मानसिक स्तर पर प्रतिबिंबित होता है। प्राणायाम पूर्वजों द्वारा दी गई कुंजी है, जो मानव चेतना पर स्थूल से सूक्ष्म स्तर तक कार्य करती है। इसके लिए आवश्यक है कि हम न केवल सांस लेने की तकनीकों के लिए बल्कि हमारे भीतर उत्पन्न होने वाली मानसिक और भावनात्मक स्थिति के लिए भी प्राणायाम का अभ्यास करें। प्राणायाम की आवश्यकता केवल ऊर्जा के लिए ही नहीं है, बल्कि चेतना की अभिव्यक्ति के लिए भी यह आवश्यक है।⁴ सावित्री प्राणायाम एक मुख्य यौगिक अभ्यास है जो श्वसन क्रिया को उत्कृष्ट बनाकर शरीर व मन की गतिविधियों को सुचारु रूप से संचालित करने में सहायक है। श्वास ही एकमात्र स्वायत्त प्रक्रिया है, जिसके प्रति सजग होकर नियंत्रित किया जा सकता है। इसके द्वारा मस्तिष्क के परानुकम्पी तथा अपरानुकम्पी तंत्रिका में सामंजस्य स्थापित किया जा सकता है।⁵

उच्च रक्तचाप

उच्च रक्तचाप एक मौन एवं अदृश्य घातक बीमारी है, जो मनुष्य को कब प्रभावित करती है, आसानी से पता नहीं चलता है। जिसमें प्रारंभिक अवस्था में शायद ही कुछ लक्षण दिखाई देते हैं। रक्तचाप निलय संकुचन और विश्राम के दौरान रक्त द्वारा धमनियों पर लगाया गया दबाव है। सामान्य व्यक्ति का रक्तचाप 120/80 mmHg होता है, परन्तु जब यह रक्तचाप लगातार बढ़कर 130/90mmHg या इससे ज्यादा हो जाता है, और लगातार उच्च बना रहता है, तो उच्च रक्तचाप की श्रेणी में आ जाता है।⁶

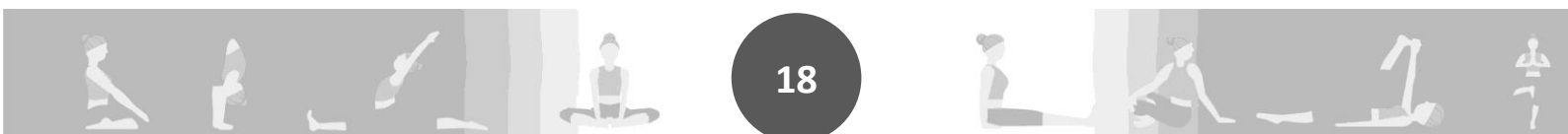
उच्च रक्तचाप का वर्गीकरण⁷

उच्च रक्तचाप का वर्गीकरण संयुक्त राष्ट्रीय समिति (जेएनसी7) की 2003 की सातवीं रिपोर्ट में दिया गया है। इसके अंतर्गत समिति ने उच्च रक्तचाप की रोकथाम, मूल्यांकन, उपचार और अनुसन्धान के बारे में बताया है।

सिस्टोलिक रक्तचाप (mmHg)	डायस्टोलिक रक्तचाप (mmHg)	जेएनसी 7
<120	<80	सामान्य स्थिति
120-139	80-89	उच्च रक्तचाप की पूर्ववस्था
140-159	90-99	प्रथम चरण उच्च रक्तचाप
>160	>100	द्वितीय चरण उच्च रक्तचाप

उच्च रक्तचाप के प्रकार

सामान्यतः उच्च रक्तचाप दो प्रकार का होता है।





- प्राथमिक (मूलभूत) उच्च रक्तचाप – जो रक्तचाप मुख्यतः विभिन्न आनुवंशिक, पर्यावरणीय और जीवनशैली जन्य कारकों के कारण लगातार बढ़ता रहता है, वह प्राथमिक उच्च रक्तचाप की श्रेणी में आता है। 90–95 प्रतिशत व्यक्ति इन्हीं कारणों से उच्च रक्तचाप की समस्या से ग्रसित होते हैं।⁶
- द्वितीयक उच्च रक्तचाप – यह किसी चिकित्सीय स्थिति या किसी विशेष प्रकार की दवाओं के उपयोग के कारण उत्पन्न होता है। जिसमें गुर्दे के रोग, अंतःस्रावी विकार, गर्भावस्था और गर्भनिरोधक गोलियाँ आदि जैसी स्थितियाँ हैं। औसतन 5 प्रतिशत व्यक्ति इस उच्च रक्तचाप की स्थिति में आते हैं।⁶

उच्च रक्तचाप के कारण³

- मानसिक तनाव
- आनुवंशिक या पारिवारिक रोग
- आरामदायक जीवनशैली
- मोटापा
- मधुमेह
- धूम्रपान
- अधिक मात्रा में शराब का सेवन
- अत्यधिक नमक का सेवन
- गुर्दे की बीमारी

उच्च रक्तचाप के लक्षण³

- सिरदर्द
- चक्कर आना
- सूजन
- जी मिचलाना
- भ्रम
- अनिद्रा
- थकान
- दृष्टि सम्बंधित विकार
- साँस लेने में तकलीफ
- मूत्र आवृत्ति में वृद्धि
- नाक से खून आना
- अनियमित हृदय स्पंदन

उच्च रक्तचाप के परिणाम

कुछ प्रमुख परिणाम इस प्रकार हैं⁵

- हृदयाघात
- हृदपात
- आंखों की क्षति के साथ-साथ दृष्टि की हानि
- गुर्दे की बीमारी/विफलता
- परिधीय धमनी रोग
- धमनीविस्फार
- यौन रोग





सम्बन्ध हैं। भविष्य में सावित्री प्राणायाम के उच्च रक्तचाप पर पड़ने वाले प्रभावों को रिसर्च के माध्यम से सिद्ध करने की आवश्यकता है। जिससे व्यक्ति इस प्राणायाम के अभ्यास के माध्यम से उच्च रक्तचाप की समस्या को नियंत्रित करने का प्रयास कर सकें। अतः यह समीक्षात्मक अध्ययन, सावित्री प्राणायाम के अभ्यास का उच्च रक्तचाप पर पड़ने वाले सकारात्मक प्रभाव को प्रस्तुत करता है।

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THERAPEUTIC BENEFITS OF PRANAYAMA (YOGIC BREATHING) IN BRONCHIAL ASTHMA

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ABSTRACT

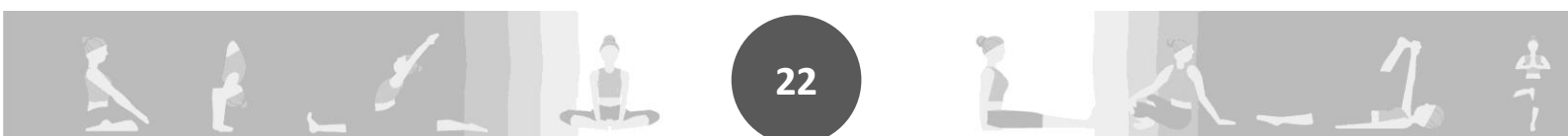
Background: Pranayama, or Yogic breathing, has shown numerous beneficial health effects. Although it is appreciated, the efficacy of Yoga therapy is yet to be clearly defined and modified. **Aim:** To study the effect of breathing exercises (*Pranayama*) in patients with mild to moderate severity of bronchial asthma. **Methods:** Data was collected using a stepwise search process. This involved searching the online PubMed, Google Scholar, databases using specific keywords. We selected controlled clinical trials in humans that used 'Pranayama' as an intervention with an appropriate control group and evaluated health-related outcomes for inclusion. **Results:** Initial database searching indicated 125 potentially eligible articles, of which 10 studies satisfying the inclusion/exclusion criteria were selected. All were controlled trials, of which 9 were randomized and 1 was a crossover study. The duration of Pranayama practice varied from 3 days to 3 months. Studies demonstrated a significant effect on cardiorespiratory functions, in patients with bronchial asthma, with the improvement of pulse rate, systolic blood pressure, and respiratory function measurements. Furthermore, a reduction in the frequency of attacks, severity, and medication requirement was also observed, with improved quality of life (QOL). **Conclusion:** Pranayama, a form of breathing exercise, particularly expiratory ones, has been shown to enhance both subjective and objective lung function and should be included as a regular part of therapy.

Keywords: Bronchial asthma, expiratory breathing exercises

INTRODUCTION

The prevalence of bronchial asthma worldwide is increasing. This condition is characterized by coughing, wheezing, and difficulty breathing, particularly during exhalation.¹ Various factors such as environmental triggers, infections, occupational factors, and cold exposure can exacerbate the disease. The current management strategy involves pharmacological therapy, including inhaled or oral medications. Initially, this treatment is effective, but over time it can lead to increased financial burden, higher morbidity rates (with more patients requiring oxygen or respiratory support therapy), and elevated mortality rates.^{2,3} Nonpharmacological therapy includes Yogic techniques such as breathing exercises (*Pranayama* – the basic vitality necessary to life is regulation of *prana* is *Pranayama*.) Various studies have shown the effectiveness of these techniques in asthma.⁴ Therapeutic Yoga is defined as the application of Yoga postures and practice to the treatment of health conditions to prevent, reduce, or alleviate structural, physiological, emotional, and spiritual pain, suffering, or limitations.⁵ Hatha Yoga, the most widely practiced and studied form of Yoga in the modern world, emphasizes two main aspects, 'Asana' (physical postures) and 'Pranayama' (breathing exercises).⁶

Pranayama is a Sanskrit word formed by the conjunction of two words, namely '*Prana*', meaning breath of life/vital energy, and '*Ayama*' meaning expansion/regulation/control.⁷ It is the Yogic art of breathing, consisting of deliberate modifications of the breathing process, such as rapid diaphragmatic breathing, slow/deep breathing, alternate nostril breathing, and breath holding/retention, which are usually done in a seated posture.⁸ Pranayama practices four important aspects of breathing





such as *Pūraka* (inhalation), *Recaka* (exhalation), *Antah kumbhaka* (internal breath retention), and *Bahih kumbhaka* (external breath retention). According to the Yoga-Sutra of Patanjali, which is the most authoritative book on Yoga in India, Pranayama is the fourth limb of the eight-fold holistic process defined as Yoga.⁹

Methods

Literature search:

Data were obtained using a stepwise search process, such as searching the online PubMed, Google Scholar, and Scopus databases using keywords. Controlled clinical trials in humans, using ‘Pranayama’ as an intervention with an appropriate control group and evaluating health-related outcomes were selected for inclusion. Subsequently, the studies were screened by reading the ‘title’, ‘abstract’ and ‘text’ of the manuscripts. Studies not satisfying the inclusion criteria were excluded at this stage. To obtain additional data, a manual search was performed using the reference lists of articles selected in the final stage.

Types of Breathing Techniques:

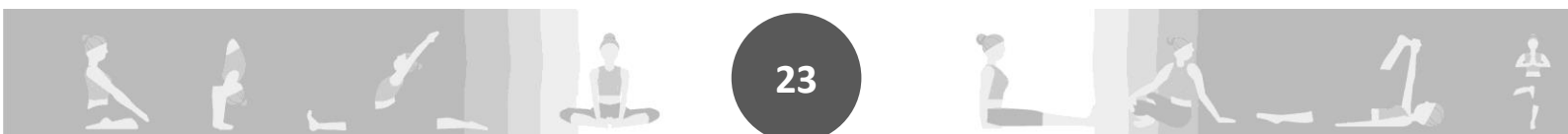
Breathing exercises for asthma can be divided into three main groups: breathing retraining (which involves manipulating the breathing pattern), respiratory muscle training (aimed at increasing the strength of the respiratory muscles), and musculoskeletal training (focused on increasing the flexibility of the thoracic cage).⁹ In recent years, there has been a particular emphasis on breathing retraining exercises.^{10,11,12,13,14,15,16,17} For this review, the authors will specifically discuss various breathing retraining exercises, placing special emphasis on Pranayama.

Breathing Retraining:

Breathing retraining is a widely used method in both asthma research and therapy. Its goal is to ‘normalize’ breathing patterns by slowing down the respiratory rate, extending the exhalation phase, and reducing ventilation.¹⁸ Additionally, it emphasizes the use of abdominal muscles for resting breathing instead of the thoracic cage muscles, as well as nasal breathing instead of mouth breathing. This approach is based on addressing the abnormal or dysfunctional breathing patterns often seen in individuals with asthma. The breathing training consists of two sessions: instruction and practice. During the instruction session, the therapist delivers the training either face-to-face with the patient or in small groups, and sometimes through video. The number of instruction sessions needed for effectiveness varies for each asthmatic patient. Some studies suggest that 3–4 sessions over 6 weeks are usually effective.¹⁹ Following this, the practice session begins, during which patients are encouraged to practice the techniques learned in the instruction session daily and gradually incorporate them into their daily lives. The number of instruction sessions needed for effectiveness varies between patients, depending on the severity of their asthma. The normal process of breathing typically involves breathing in through the nose or mouth. Nasal breathing serves the purpose of filtering, warming, and humidifying the air we breathe in. Any issues with the nasal passages can disrupt these processes, potentially impacting asthma, according to the ‘united airways’ hypothesis.²⁰ This is supported by the common co-occurrence of allergic rhinitis and asthma, which can affect the course of asthma.²¹ Studies have found that during acute asthma attacks, mouth breathing is common while nasal breathing is associated with a reduction in nighttime symptoms and exacerbations as well as a decrease in the rate of air intake.²² Therefore, it is important to consider and manage both mouth and nasal breathing as part of breathing training.²³

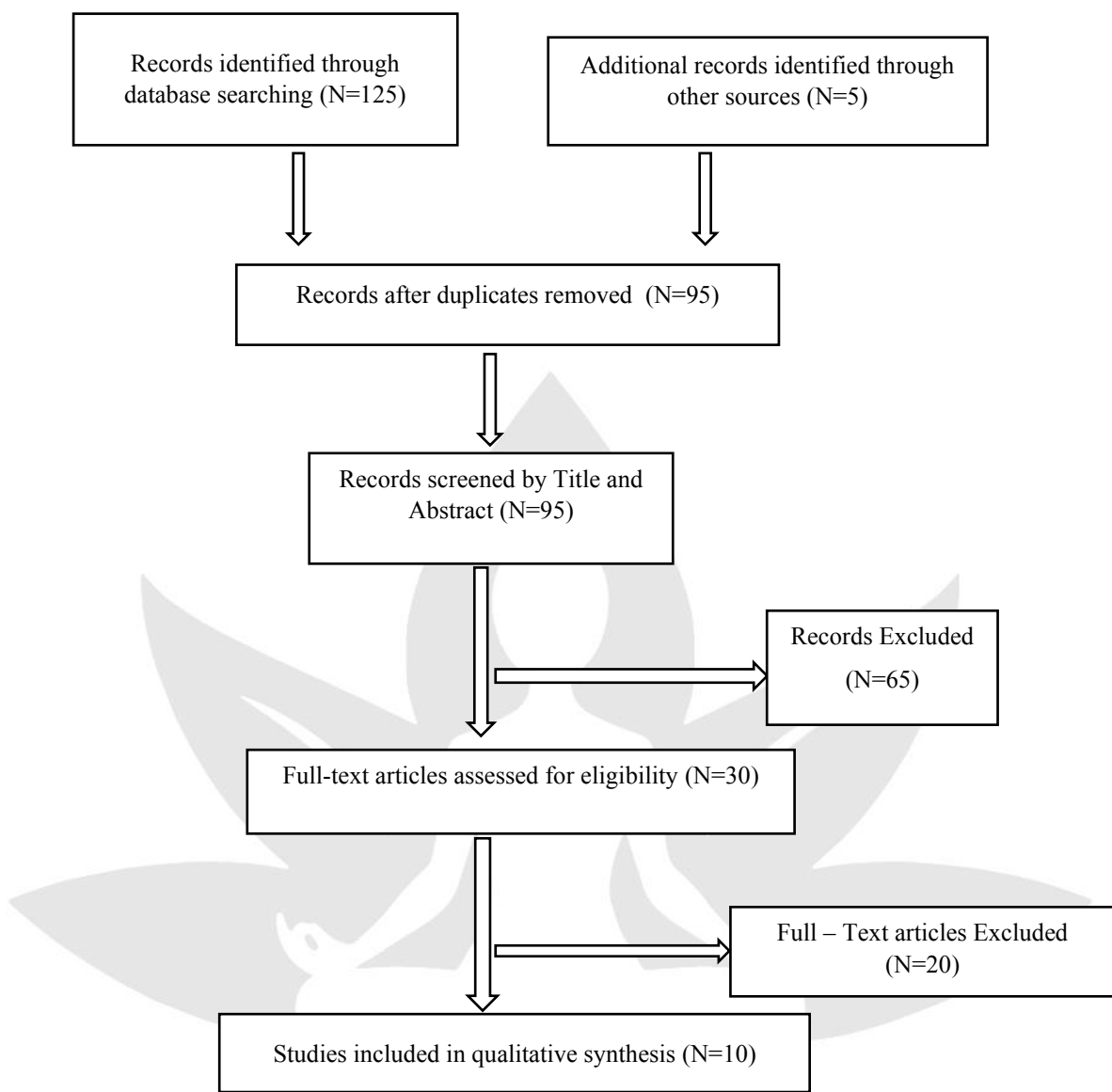
Results

The initial database (PubMed, Google Scholar) search indicated 125 potentially eligible articles, of which 95 remained after pooling the articles from the three databases and removing the duplicate articles (four additional articles were included from other sources). Of these, 65 were excluded by screening





the title and the abstract for failure to meet the inclusion criteria. Of the remaining 30 articles a full-text review yielded, 10 studies satisfying the inclusion/exclusion criteria. [Figure 1](#)





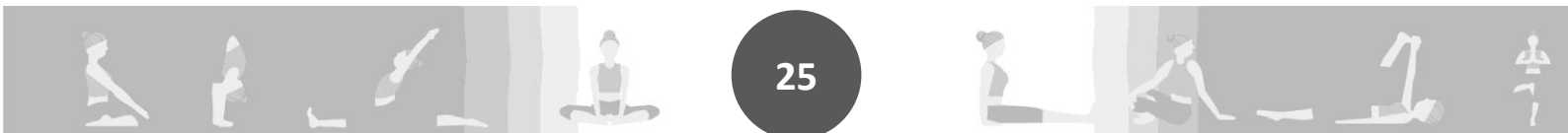
The article offers valuable perspectives from previous studies that contribute to a well-rounded understanding of Pranayama (breathing practices). Several studies have investigated the effects of Pranayama on patients with bronchial asthma. In one trial from India, 120 children aged 8–14 with moderate nasobronchial allergy (asthma and allergic rhinitis) were divided into two groups - one receiving Pranayama and the other acting as a control.²⁴ The group receiving Pranayama underwent breathing exercises every morning for 35 minutes over 3 months, which resulted in improved pulmonary function. Another trial from India involved 30 children aged 10–14 with moderate asthma, where one group received Pranayama sessions with joint exercises over 3 months leading to improved pulmonary functions.²⁵ Lastly, a trial from Turkey included 20 children aged 6–17 with asthma and provided Hatha Yoga techniques resulting in improved pulmonary functions and positive asthmatics becoming exercise-response-negative.^{26,27} Additionally, Bhatt and Rampallivar evaluated the effects of Pranayama on ventilatory functions in asthma patients. They included 80 patients with asthma divided into two groups - one receiving Pranayama in addition to medication for 3 months. Test results revealed significant improvement in post-test values compared to pretest values in the intervention group. No significant changes were reported in the control group.²⁸ Another study by Saxena and Saxena evaluated the effect of Pranayama in patients with mild-to-moderate bronchial asthma, showing a significant reduction in symptoms and improvement in FEV1 (Focal expiratory Volume in 1 second) and PEF (Peak expiratory flow rate) in the intervention group compared to the control group after the practice of Pranayama.²⁹

Discussion

The present review article is the first to systematically evaluate the literature on the beneficial health effects of Pranayama Yoga practice. We observed a significant effect on the cardio-respiratory functions, in patients with bronchial asthma, with the improvement of FVC (Forced Vital capacity), FEV1, and PEF. Furthermore, a reduction in the frequency of attacks, severity, and medication requirement was also observed, in addition to improved QOL (Quality of life). The predominant beneficial effect of Pranayama practice was observed in patients with respiratory illnesses such as bronchial asthma. Several mechanisms are thought to be responsible for the beneficial respiratory effects of Pranayama. Pranayama may allow bronchial dilatation by correcting abnormal breathing patterns and reducing the muscle tone of respiratory muscles. Furthermore, Yoga training is likely to improve the strength of expiratory as well as inspiratory muscles, with resultant improvement in pulmonary function. For example, 'Bhastrika' Pranayama is a type of breathing, in which one breath rapidly and forcefully, exercising both inspiratory and expiratory muscles. The slow and gentle breathing in some of the Pranayama techniques reduces frictional stress, thereby stabilizing the mast cell degranulation, thereby reducing airway inflammation and airway obstruction. The deep inspiration, retention of air, and slow expiration increases the overall capacity of the lungs and gradually improve pulmonary functions.^{24,25,26,27,28,29} This improved pulmonary function is likely to be responsible for the observed reduction in severity, frequency, and medication requirement in patients with bronchial asthma, which ultimately is responsible for the enhanced QOL in these patients.

Conclusions

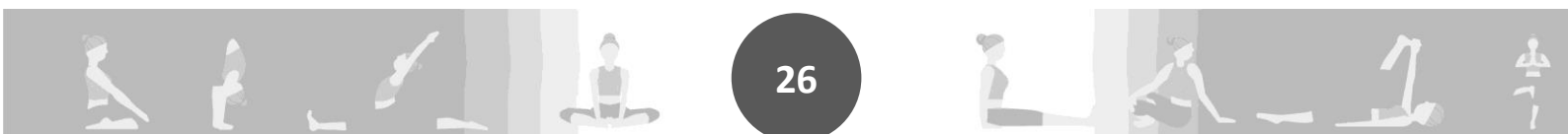
Pranayama is a simple and cost-effective method that has shown evidence of therapeutic benefits for people with various diseases. The evidence suggests that Pranayama has both physiological and psychological benefits. It has been particularly effective in improving conditions for patients with respiratory diseases like bronchial asthma. Additionally, it has been found to reduce fatigue, anxiety, and other emotional responses in cardiovascular disease patients. However, the studies have varied in their methodological quality, Pranayama techniques, and sample sizes. As a result, further high-quality randomized controlled trials (RCTs) are required to establish definitive evidence and gain a deeper understanding of the therapeutic benefits of Pranayama and its underlying mechanisms.





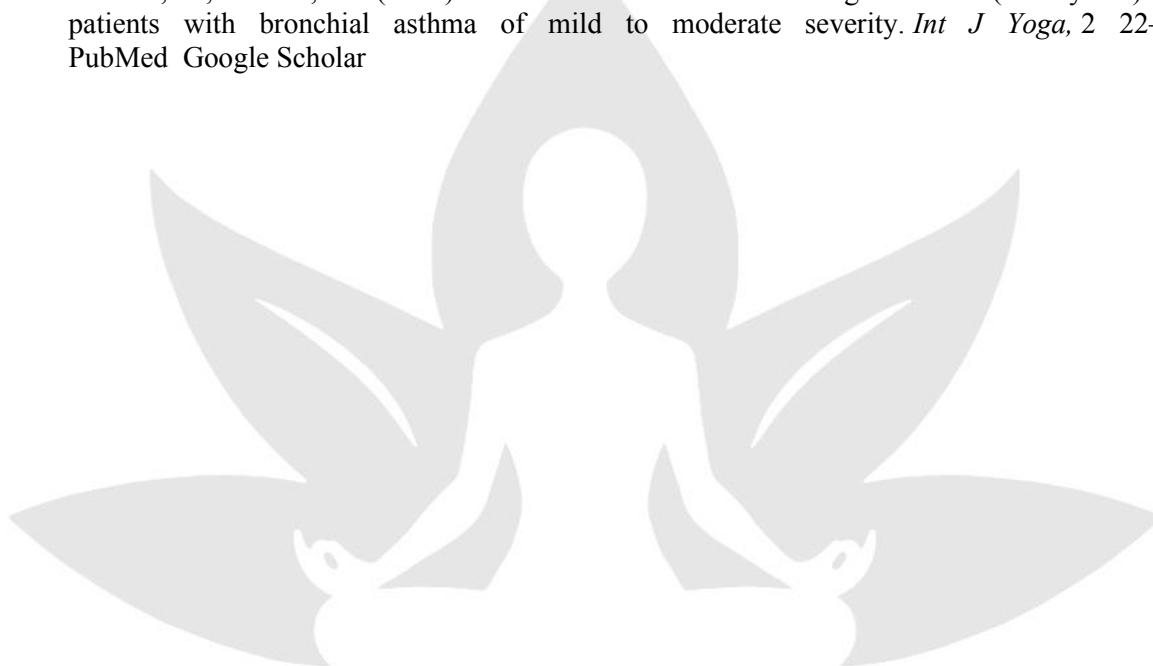
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PSYCHO-NEURO-IMMUNO-ENDOCRINOLOGICAL PERSPECTIVES OF AJNA CHAKRA AND MANAGING DEPRESSION THROUGH ITS ACTIVATION

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ABSTRACT

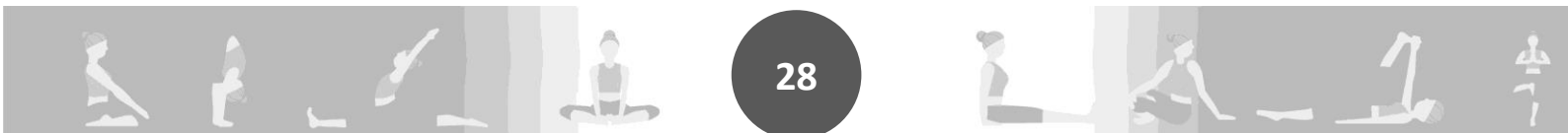
Depression is a mental health disorder that develops as a result of complex psycho-neuro-immuno-endocrinological disturbances. This disease presents with mood disturbances, persistent sadness, loss of interest and impaired cognition, which causes distress to the patient and significantly affects the ability to function and have a satisfying family, social and professional life. The Ajna chakra is situated in the middle of the forehead, between the eyebrows. It is one of the most important among the seven chakras of our body and sequentially sixth one in the order. The Ajna chakra is the center of clarity and wisdom. It forms the boundary between human and divine consciousness. It is the meeting point of the three principal Nadis Ida (moon Nadi), Pingala (sun Nadi) and Sushumna Nadi (central Nadi). The Energy of these three Nadis unite at this place and when it rises further one can attain samadhi, supreme consciousness. The qualities of this chakra are unity(ekata), emptiness(shunya), truth (sat), consciousness (chitt) and bliss (Ananda). The eye of knowledge opens within us and with the awakening of this chakra, one is able to see the reality of inner self (atman), hence the term third eye (ajna chakra). It is like a psychic doorway opening into deeper and higher realms of awareness. Stimulating ajna chakra develops all the faculties of the mind, such as intelligence, memory and concentration. When energy becomes blocked in a chakra, it triggers physical, mental, or emotional imbalances that manifest either in psychological symptoms such as depression, anxiety, lethargy, or physical symptoms such as poor digestion.

Key Words – Kundalini, Ajna chakra, Depression and Anxiety.

INTRODUCTION

The World Health Organization identifies major depression as the second most disabling medical condition in the United States, accounting for more years lived with disability than heart disease, stroke or diabetes. Major depression contributes not only to disability but also to mortality. There are more than 49,000 deaths by suicide annually in the United States and it is estimated that major depression accounts for 20–35% of these deaths. Major depression also increases the risk of death from other medical conditions such as coronary artery disease and diabetes mellitus. According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), a diagnosis of MDD requires the presence of at least five of the following symptoms concurrently for a minimum of two weeks: depressed mood, loss of interest or pleasure in previously enjoyed activities, feelings of guilt or worthlessness, recurrent thoughts of death or suicide, psychomotor agitation or retardation, changes in appetite, disturbances in sleep, low energy, and impaired concentration. One of these symptoms must be either a depressed mood or a loss of interest in activities. MDD can be categorized into mild, moderate, or severe based on the level of functional impairment, with severe cases often involving suicidal ideation or psychotic symptoms.¹

MDD must be differentiated from normal bereavement and other depressive disorders such as dysthymia, cyclothymia, bipolar disorder, premenstrual dysphoria, or mood disturbances resulting from physical illness or substance misuse. Without treatment, an episode of MDD typically lasts between six to twelve months, although 20% of cases may persist for two years or more. Moreover, over half of those who experience one episode of MDD will have recurrent episodes, contributing to the high





disability associated with the disorder.² The Ajna Chakra is the sixth chakra of the Kundalini Seven Chakra System. The Ajna chakra (also called the third eye, mind's eye or inner eye) is the gateway to reaching a state of thoughtless awareness or mental silence. It is the chakra related to the qualities of forgiveness, humility and compassion. Forgiveness is the power to let go of anger, hatred and resentment. It is also related with humility, nobility and generosity of the spirit.³ Ajna chakra is the sixth chakra and it is located in the area of the third eye which is found in the space between the eyebrows.⁴ It is the center of perception, consciousness and intuition. Every Chakra is also associated with certain traits and characteristics of the personality and forms a bridge between mind, body and spirit.⁵ The Ajna Chakra is a highly spiritual chakra that relates to one's psychic abilities. The balanced state of this chakra gives individuals a sixth sense or strong intuition. These psychic powers or inner guidance can support experience in the real world by allowing people to have trust in their own instinct and inner voice. This ability helps people experience the physical world around them with inner wisdom and light.⁶ Yoga as an ancient Indian system of thought as well as practice is very pertinent to the treatment and prevention of psychological disorders as well as the maintenance and promotion of physical and psychological well-being.⁷ The junction of the two eyebrows and the base of the Nose in our body is called as Avimukta Ksetra (free region) by the Yoga science regards that the three Nerves called Ida, pingla and sushamna unite in the site of this Avimukta Ksetra (free region) which contains Ajna chakra.⁸ The first five chakra namely 1- Muladhara chakra, 2- Swadhishtana chakra, 3- Manipura chakra, 4- Anahata chakra, 5- Vishuddhi chakra have no direct contact with the brain and they are indirectly connected to the brain through the Nerves in the spinal cord. But this sixth chakra Yogic Ajna chakra is directly connected with our brain.⁹ It is regarded that all the external functions of mind are performed by the Ajna chakra. One can't perform even the small movement of the body without his mental desire which is under the control of ajna chakra. Hence if one concentrates on Ajna chakra with shambhvi mudra, he can easily achieve ajna chakra dhyana.

CHARACTERISTICS OF AJNA CHAKRA

- **Location**

Adnyanata bhruwo madhye dwidalam chakram uttamam'

Yogoshikhopaniashada 1/175¹⁰

The greatest Ajna chakra is situated in the middle of the two eyebrows and has two branches

'Bhrumadhye dwidalam tatha'

Yoga Chudamani 1/61¹

Ajna chakra is in the middle between the eyebrows and has two branches.

- **Mulatwa (basic element):**

Mahat tatwa is regarded as the basic element of Ajna chakra.

- **Dala (petal – branches);** Ajna chakra has got only two branches (hamm and kshamm): It is considered that one branch of ajna chakra controls the function of our five sense organs namely Eye, Ears, Nose, Tongue, and Skin while the other branch controls the function of our five functionary organs namely Hands, Legs, reproductive organs (penis in men and vagina in women), Anus and speech.

Strikingly the modern medical psycho- neuro- immunology regards that one can control the function of his sense organs if he can well concentrate over the centre of the eyebrows (Ajna chakra)¹²

- **Mulabeejmantra – OM**
- **Aradhya Devata (Deity) –** The Deity of Ajna chakra is regarded as Guru.
- **Devshakti (Energy of the Deity) –** Hakini is regarded to be the energy of the Deity of the Ajna chakra.
- **Devata Wahan (Vehicle of the Deity) –** Nada (resonance) is regarded as the Vehicle of the Deity Guru of Ajna chakra.
- **Yantra (figure of Ajna chakra) –** The figure of ajna chakra is thought to be the Ideal of Lord Shiva Lingakara.¹³





FUNCTION OF THE AJNA CHAKRA

It is regarded that all the internal and external actions of our body are due to and controlled by Ajna Chakra.¹⁴

Important Yogic practices for activation of Ajna Chakra

Activating the Ajna Chakra involves practices that enhance inner vision, concentration, and clarity. Here are some important Yogic practices for activating the Ajna Chakra.¹⁵

1. Yogic Postures (Asanas)
Some Asanas practices for Ajna chakra like- Balasana, Singhasana, Paschimottanasana, Bhujangasana, Halasana, Matsyasana (fish pose)
2. Pranayama (Breathing Techniques)
Nadi Shodhana (Alternate Nostril Breathing): This balances the left and right hemispheres of the brain, promoting mental clarity and calmness.¹⁶ Kapalbhata (Skull Shining Breath): This powerful breathing technique energizes the mind and helps in clearing mental clutter.
3. Yogic Mudras
Shambhavi Mudra: Involves gazing at the point between the eyebrows while keeping the eyes closed. It stimulates the Ajna Chakra directly.¹⁷
4. Mantra Chanting
AUM (Om) Chanting: The vibration of the OM mantra resonates with the Ajna Chakra. Chanting OM helps in harmonizing and balancing this energy center.
Ajna Bija Mantra: The bija (seed) mantra for the Ajna Chakra is 'OM'. Repeating this mantra during meditation can help in its activation.
5. Meditation (Dhyana)
Trataka (Candle Gazing Meditation): This involves focusing on a candle flame without blinking until tears flow from the eyes. It enhances concentration and clears the mind.
Third Eye Meditation: Focus your attention on the space between your eyebrows. Visualize an indigo or violet light in this area to stimulate the Ajna Chakra.
6. Diet and Nutrition
Indigo and Violet Foods: Consuming foods like blueberries, grapes, and purple cabbage can support the energy of the Ajna Chakra.
Balanced Diet: Maintaining a diet that nourishes the brain and nervous system is essential for mental clarity.
Incorporating these practices into your daily routine can help in activating and balancing the Ajna Chakra, leading to heightened intuition, clarity, and spiritual awareness.

Achievement of Meditation on Ajna chakra

- Supernatural power in speech (Vaksidhi), it means that whatever a person's speaks comes to be true.
- Dominance over organs – One gets dominance over all the functions of different parts of the body.
- Achievement of sharp intellect (Kushagra Buddhi)–if one concentrates his vision in the centre of the eye brows on Ajna chakra and performs meditations on Ajna Chakra by loudly uttering 'OMM' he can definitely attain sharp Intellect.¹⁸
- Healthy people practicing Ajna chakra meditation have reported it to reduce stress and improve sleep, and helping them to become more positive, conscious and happy in life.

Psycho-Neuro-Immuno-Endocrinological Perspectives

Depression, as a complex disorder involving psycho-neuro-immuno-endocrinological disturbances, presents with a range of symptoms, including mood disturbances, persistent sadness, loss of interest, and impaired cognition. These symptoms not only cause significant distress to individuals





but also affect their ability to function in various aspects of life. The holistic perspective of the Ajna chakra provides an integrative approach to understanding and managing these symptoms.

Energy Flow and Chakra Imbalance

In the context of energy medicine, the blockage of energy in the Ajna chakra can result in both psychological and physical imbalances. From a psychological perspective, blockages in this chakra can manifest as depression, anxiety, and lethargy. Physically, such blockages might present as poor digestion and other somatic complaints. By stimulating the Ajna chakra, one can potentially restore the flow of energy, thereby alleviating these imbalances.

Mechanisms of Action

The mechanisms through which the Ajna chakra influences mental health especially Depression can be understood through several lenses:

1. **Psychological Mechanisms:** The Ajna chakra is associated with the development of intelligence, memory, and concentration. By enhancing these faculties, individuals may experience improved cognitive function, which can counteract the cognitive impairments commonly associated with depression.
2. **Neurological Mechanisms:** The Ajna chakra's position near the pineal gland, which regulates circadian rhythms and melatonin production, suggests a potential link between chakra stimulation and improved sleep patterns. Given the strong correlation between sleep disturbances and depression, this connection is particularly relevant.
3. **Immunological Mechanisms:** The holistic perspective of energy medicine posits that balanced chakras contribute to overall health and well-being, potentially influencing the immune system. This can be crucial for individuals with depression, as chronic stress and depression are known to adversely affect immune function.
4. **Endocrinological Mechanisms:** The interaction between the Ajna chakra and the endocrine system, particularly through the hypothalamic-pituitary-adrenal (HPA) axis, may play a role in regulating stress hormones. Proper functioning of the HPA axis is essential for maintaining mental health, and imbalances can lead to or exacerbate depressive symptoms.

Therapeutic Applications

Practices Yoga such as Asana, pranayama (breathing exercises) and meditation that focus on the Ajna chakra can be integrated into therapeutic interventions for depression. These practices not only help in stimulating the Ajna chakra but also promote overall mental and physical relaxation, reduce stress, and enhance emotional resilience.

Discussion

The interconnection between the Ajna chakra and mental health, specifically depression, is a profound area of exploration within the realms of holistic and integrative medicine. The Ajna chakra, situated between the eyebrows, is considered the seat of wisdom and clarity, playing a crucial role in the integration of physical, mental, and spiritual health. The unique position of the Ajna chakra as the confluence of the three principal Nadis viz. Ida, Pingala, and Sushumna—underscores its importance in balancing and harmonizing the body's energy systems.

Conclusion

The Ajna chakra, as the center of clarity and wisdom, holds significant potential in the management of depression through its integrative approach to balancing mind, body, and spirit. By addressing the energy imbalances associated with the Ajna chakra, individuals may experience





improved mental health outcomes, including reduced symptoms of depression. Future research should continue to explore the specific mechanisms through which the Ajna chakra influences mental health and develop standardized protocols for its stimulation. Integrating traditional chakra-based practices with contemporary psychological and medical treatments could offer a holistic and effective approach to managing depression, ultimately enhancing the quality of life for those affected by this pervasive disorder.

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योग निद्रा के वैज्ञानिक आयाम एवं स्वास्थ्योन्नयक प्रभाव

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सार संक्षेप

इस आधुनिक वैज्ञानिक युग में हर इंसान आगे बढ़ना चाहता है, वह अपने जीवन को अच्छे से जीने के लिए हर तरह से प्रयास कर रहा है। अपनी इच्छा तथा अपने सपनों को पूरा करने के लिए वह अतिरिक्त मेहनत कर रहा है, जिसके कारण उस पर काम का दबाव पड़ रहा है और उसकी शारीरिक और मानसिक स्थिति प्रभावित हो रही है, इस कारण से उनके व्यावहारिक, सामाजिक, व्यावसायिक और पारिवारिक संबंध खराब हो रहे हैं। जिससे वे मानसिक बीमारियों से ग्रस्त होते जा रहे हैं। मानसिक और शारीरिक स्वास्थ्य हेतु योगनिद्रा एक बहुत महत्वपूर्ण एवं उपयोगी अभ्यास है। योग निद्रा वस्तुतः यौगिक निद्रा या गहन विश्राम व ध्यान की पूर्व अवस्था प्रत्याहार की विधि है। यह एक प्राचीन तकनीक है, जहां अभ्यासकर्ता सचेत विश्राम की गहरी अवस्था में प्रवेश करता है। योग निद्रा की अवस्था में, बेचैन मन में स्थिता आती है एवं एकाग्रता बढ़ती है, जिससे हम अत्यधिक तनाव के कारण होने वाली शारीरिक और मानसिक स्थिति पर बेहतर नियंत्रण पाते हैं, जिसका इंद्रियों, बुद्धि और मन पर अच्छा प्रभाव पड़ता है, साथ ही मूड, जीवन की गुणवत्ता और स्वास्थ्य में सुधार होता है और मानसिक तनाव के कारण होने वाली बीमारियों से बचा जा सकता है। योग निद्रा का लक्ष्य विश्राम की गहन अवस्था को बढ़ावा देना है।

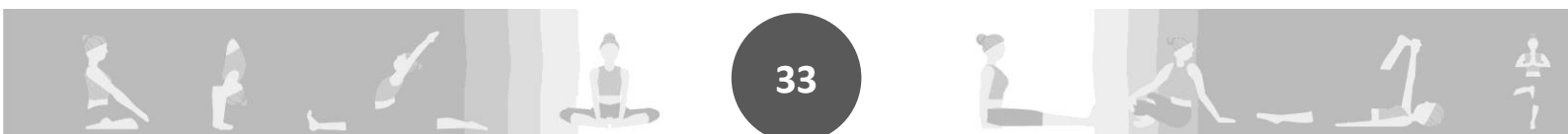
विशेष शब्द: - मानसिक स्वास्थ्य, शारीरिक स्वास्थ्य, योग निद्रा

परिचय

योग निद्रा एक योगिक अभ्यास या योगिक नींद के साथ साथ एक चिंतन शील अवस्था भी है। योग निद्रा पूर्ण शारीरिक, मानसिक और भावनात्मक विश्राम को प्राप्त करने की एक क्रमबद्ध प्रणाली है। योग निद्रा के अभ्यास के दौरान, व्यक्ति सोया हुआ प्रतीत होता है, लेकिन सजगता गहन ध्यान की स्थिति में कार्य कर रहा होता है। इस कारण से, योग निद्रा को अक्सर मानसिक नींद या आंतरिक ध्यान के साथ गहन विश्राम के रूप में जाना जाता है। नींद और अनिद्रा के बीच की इस दहलीज की अवस्था में, अवचेतन और अचेतन सीमाओं के साथ संपर्क सहज रूप से होता है। योग निद्रा एक अभ्यास है जिसका उद्देश्य सजकता को बनाए रखते हुए मन और शरीर को विश्राम की सबसे गहरी अवस्था तक पहुँचने देना है।^{1,2} योग और भारत की अन्य महान दार्शनिक परंपराओं के अनुसार, हम शुद्ध चेतना हैं जो शरीर और मन के माध्यम से जीवन जीते हैं। हमारे शरीर में 72000 सूक्ष्म नाड़ियाँ हैं। उनमें से अधिकांश नाड़ियाँ शरीर और मन के कार्यों से संबंधित हैं। एक हद तक, हम सभी इन नाड़ियों के भीतर एक निश्चित मात्रा में रुकावट देखते हैं। यह रुकावट हमें आत्मा के रूप में अपने सच्चे स्वरूप और वास्तविकता में आवश्यक संपूर्णता को भूलने का कारण बनती है। परिणामस्वरूप, हम अलगाव और पीड़ा देखते हैं। योग निद्रा का अभ्यास इन चैनलों को शुद्ध करने का एक सक्रिय अभ्यास है जो कम सचेतनता की वापसी लाता है। जबकि उन्नत सचेतनता इस अभ्यास की सबसे महत्वपूर्ण चीज है, लाभ केवल सचेतनता के चैनलों में ही नहीं बल्कि सभी 72000 नाड़ियों में महसूस किए जाते हैं। योग निद्रा का अभ्यास स्वर-सुधार के लिए सबसे लाभकारी अभ्यासों में से एक है।

योग निद्रा की उत्पत्ति³

योग निद्रा शब्द दो संस्कृत शब्दों से लिया गया है, योग जिसका अर्थ है मिलन या एक-दिशा वाली जागरूकता, और निद्रा जिसका अर्थ है नींद।⁴ यह शब्द अपेक्षाकृत प्राचीन है। यह शब्द सबसे पहले भगवत गीता में और बाद में पुराणों में दिखाई देता है। बल्कि, वे किसी विशेष भगवान की पारलौकिक नींद और देवी के नींद के रूप में अवतार का वर्णन कर रहे हैं। बाद की मध्ययुगीन





सचेत अनुभव होता है, चेतन और अचेतन के बीच का अंतर मिट जाता है और विचलित करने वाली छवियाँ उत्पन्न होना बंद हो जाती हैं। चरण 7- संकल्प: अब चरण संख्या 2 को दोहराने का समय है और इसे पूरी चेतना और भावना के साथ तीन बार दोहराएँ। चरण 8- बाह्यीकरण: सभी प्रयासों को आराम दें, अपने मन को बाहरी दुनिया से जोड़ें, साँस लेने और छोड़ने की प्रक्रिया पर ध्यान केंद्रित करें, कल्पना करें कि आप एक कमरे में हैं, आस-पास के बारे में जागरूक रहें, शरीर को हिलाएं और खींचें, जब आपको लगे कि आप जाग रहे हैं तो अपनी आँखें खोलें, अब योग निद्रा का अभ्यास पूरा हो गया है।

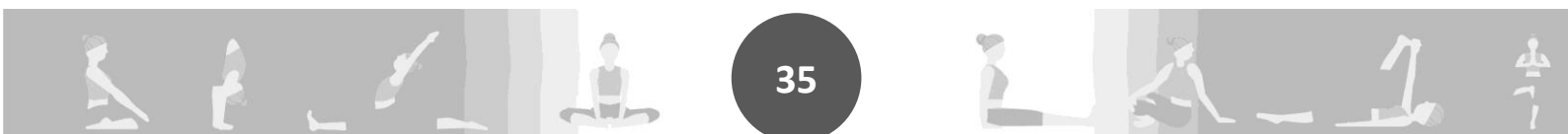
विभिन्न वैज्ञानिक अध्ययन

योग निद्रा, चिंता के स्तर को कम करने और मानसिक और शारीरिक विश्राम के स्तर को बढ़ाने में मदद करती है। एक अनुवर्ती अध्ययन में, शोधकर्ताओं ने प्रदर्शित किया कि योग निद्रा का अभ्यास स्ट्रिएटम में डोपामाइन के स्नायु में मदद करते हैं, शारीरिक विश्राम को बढ़ाता है और मोटर नियोजन में सुधार के साथ निरंतरता बनाए रखते हैं।⁸ शोध के अनुसार, योग निद्रा तकनीक तंत्रिका संरचना की एकीकृत सहयोगी प्रतिक्रिया की नकल करती है, जिसके परिणामस्वरूप सहानुभूति सिम्पैथेटिक (उत्तेजना) तंत्रिका गतिविधि में कमी और पैरासिम्पैथेटिक (विश्राम) तंत्रिका गतिविधि में वृद्धि होती है⁹। परिणाम बताते हैं कि योग निद्रा समूह के भीतर सकारात्मक कल्याण, सामान्य स्वास्थ्य और जीवन शक्ति में बड़ा सुधार हुआ। योग निद्रा का पैरासिम्पैथेटिक प्रभुत्व की ओर बदलाव के साथ जुड़ाव उच्च आंतरिक अंग और कपाल तंत्रिका प्रबंधन के साथ भी जुड़ा हुआ है, जिसके बदले में, चिंता को कम करने और व्यक्तिपरक और वस्तुनिष्ठ नींद की गुणवत्ता में सुधार करने के लिए कहा जाता है।⁹ नींद पर योग निद्रा के प्रभावों पर एक अध्ययन में, सुबह के अभ्यास से रात में पैरासिम्पैथेटिक ड्राइव में वृद्धि पाई गई है, जिससे नींद अधिक आरामदायक हो जाती है, जो नींद की गुणवत्ता रेटिंग में महत्वपूर्ण सुधार की व्याख्या कर सकती है।¹⁰

योग निद्रा के चिकित्सीय अनुप्रयोग¹¹

- मनोवैज्ञानिक विकार
- अवसाद
- चिंता
- अनिद्रा
- नशीली दवाओं की लत और शराबखोरी
- जीर्ण अपक्षयी रोग
- जीर्ण दर्द
- अस्थमा, कोलाइटिस और पेट्टिक अल्सर, आईबीएस जैसे मनोदैहिक विकार
- कैंसर चिकित्सा
- उच्च रक्तचाप, कोरोनरी वासोस्पाज्म जैसे हृदय संबंधी रोग।
- कोलेस्ट्रॉल और लिपिड के स्तर पर प्रभाव।
- गर्भावस्था, प्रसव और मासिक धर्म संबंधी विकार।

योग निद्रा का अंतिम लक्ष्य एक विश्राम प्रतिक्रिया उत्पन्न करना है जो चिंता और अवसाद के साथ असंगत है और जिसके परिणामस्वरूप उनकी विघटनकारी आंतरिक प्रक्रियाओं का मुकाबला होता है।^{12,13} योग निद्रा पुनर्वास और जराचिकित्सा के क्षेत्रों में एक महत्वपूर्ण उपशामक भूमिका निभाती है, जहाँ असहनीय दर्द, प्रेरणा की कमी और मनोवैज्ञानिक अवसाद पारंपरिक उपचार में बड़ी बाधाएँ खड़ी करते हैं।¹⁴ इसके अलावा, योग निद्रा का सबसे व्यापक अनुप्रयोग एक निवारक उपाय के रूप में है, जिसका अभ्यास स्वस्थ, सक्रिय लोगों द्वारा संचित तनावों से राहत पाने, तनाव प्रतिरोध और समग्र दक्षता बढ़ाने और मनोदैहिक रोगों के विकास को रोकने के साधन के रूप में किया जाना चाहिए।¹⁵ योग निद्रा चिकित्सा इन अंतर्निहित मनोवैज्ञानिक कारकों की सचेत और अवचेतन पहचान और विश्लेषण की ओर ले जाती है, और दबे हुए संघर्षों की रिहाई शुरू करती है।¹⁶ इसलिए यह सभी





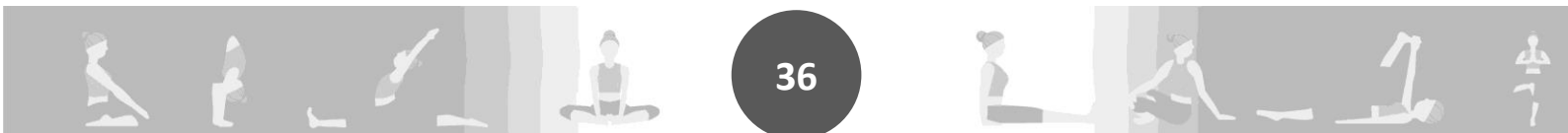
मनोदैहिक स्थितियों के योगिक और चिकित्सा प्रबंधन का एक महत्वपूर्ण हिस्सा है। ये रुकावटें तनाव पैदा करती हैं। जैसे ही अभ्यासी तनाव को दूर करने में सफल होता है, प्राण स्वतंत्र रूप से प्रवाहित होता है और उच्च संज्ञान विकसित होता है। शुरुआती अहसासों में से एक यह है कि शरीर एक दृढ़ संरचना नहीं है, बल्कि वैकल्पिक रूप से ऊर्जा का एक घनीभूत क्षेत्र है। इस क्षण अभ्यासी को पता चलता है कि वह न तो उसका शरीर है और न ही उसके विचार। तब अभ्यासी खुद से सबसे मौलिक और प्रमुख प्रश्न पूछता है: "मैं कौन हूँ?" इसका उत्तर मन से नहीं बल्कि ज्ञान से मिलता है। हम वह हैं जो शरीर और बुद्धि से ऊपर हैं। हम जागरूकता की प्राप्ति से बढ़कर कुछ नहीं हैं। चेतना की इस अवस्था का परिणाम पुण्य आनंद है।¹⁷

निष्कर्ष

योग निद्रा में हम शरीर और विचारों के बीच सामंजस्य की भावना का आनंद लेते हैं। तब व्यक्ति में अचेतन बाधाएं और रुकावटें, जो हमारी नकारात्मकता के कारण मौजूद होती हैं, समाप्त हो जाती हैं और मन की उपचारात्मक शक्ति उत्पन्न होने लगती है। विशेष रूप से, योग निद्रा न केवल शारीरिक और मानसिक विश्राम लाती है बल्कि आध्यात्मिक विकास के लिए विचारों को भी तैयार करती है। यह विशेष रूप से प्रत्याहार और धारणा से संबंधित है। योग निद्रा का अभ्यास गहन, समग्र विश्राम और संज्ञान की व्यापक ध्यानात्मक स्थिति दोनों को आमंत्रित करता है। नतीजतन, यह निवारक, प्रोत्साहक और उपचारात्मक मूल्य के साथ एक चिकित्सीय दृष्टिकोण का गठन कर सकता है।

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YOGA FOR CARDIOVASCULAR DISEASE: A REVIEW OF ITS PREVENTATIVE BENEFITS

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ABSTRACT

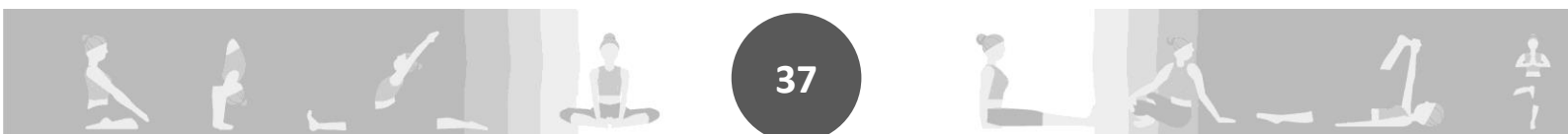
Heart diseases often referred to as cardiovascular diseases (CVDs), encompass a range of conditions affecting the heart and blood vessels. This review explores how Yoga can be integrated into heart disease prevention and management. Preventive measures are crucial for reducing the risk of heart disease. By adopting a proactive approach to heart health, individuals can mitigate risk factors, improve quality of life, and enhance longevity. Given the positive effects observed in various studies, integrating Yoga into cardiovascular disease prevention strategies can be beneficial. Yoga can complement traditional preventive measures such as diet and exercise, providing a holistic approach to cardiovascular health. By practicing physical posture (Asanas), deep breathing exercises (Pranayama), relaxation, and meditative exercises Yoga helps to improve flexibility, hormonal balance, metabolism, autonomic balance by reducing sympathetic nervous system (SNS) and increasing the parasympathetic nervous system (PNS) activity, and reducing systematic inflammation. All this prevents cardiovascular diseases through improving lipid profile, heart rate variability (HRV) glucose metabolism, blood pressure, inflammatory markers and stress reduction etc.

Keywords- Yoga, Heart Health, Cardiovascular Disease

INTRODUCTION

Preventive health emphasizes the importance of maintaining wellness before the onset of illness, focusing on lifestyle choices that support long-term health. Heart disorders, often known as cardiovascular diseases are a group of illnesses that impact the heart and blood arteries. Globally, 17.7 million fatalities are attributed to CVDs, which include ischaemic heart disease and cerebrovascular accidents (stroke)¹. According to estimates from the World Health Organisation, India accounts for one-fifth of all deaths worldwide, especially among the younger population. According to the worldwide Burden of Disease study, India has an age-standardized CVD death rate of 272 per 100,000 people, which is much higher than the 235 worldwide averages. Indians are more prone to CVDs ten years earlier than Westerners². These diseases can have serious implications for overall health and quality of life. Heart diseases are one of the major factors of mortality and morbidity globally, often influenced by factors such as stress, sedentary life style, high blood pressure, poor diet, and lack of exercise. Yoga addresses these factors by promoting relaxation, improving cardiovascular function, and encouraging healthier lifestyle choices.

Yoga stands out as a comprehensive approach to maintaining and enhancing well-being. Yoga is a traditional way to harmonize the body, mind, and spirit through physical postures (Asana), breathing exercises (Pranayama), relaxation and meditation practices. Yoga originating in India thousands of years ago and gradually evolved into diverse and widely practiced discipline known for its numerous health benefits and ability to promote overall well-being. This practice not only aims to improve physical fitness but also fosters mental and emotional balance. Whether Yoga practiced as a form of exercise, a method for stress relief, or as spiritual journey, it offers a versatile and enriching experience. By integrating into modern life, it highlights its timeless relevance and enduring appeal, making it a valuable tool for promoting a balanced and healthy lifestyle. Research suggests that regular Yoga practice can positively impact heart health in several ways. It helps reduce stress and anxiety, which are closely linked to heart disease, and can aid in managing blood pressure and cholesterol levels. Yoga also enhances physical fitness and flexibility, contributing to better overall cardiovascular function³. By understanding the benefits of Yoga for heart health, individuals and healthcare providers can make informed decisions about incorporating this ancient practice into modern healthcare strategies. This





review evaluates the impact of Yoga on various cardiovascular markers and its potential role in enhancing heart health.

EFFECT OF YOGA ON VARIOUS PARAMETERS

• Blood Pressure

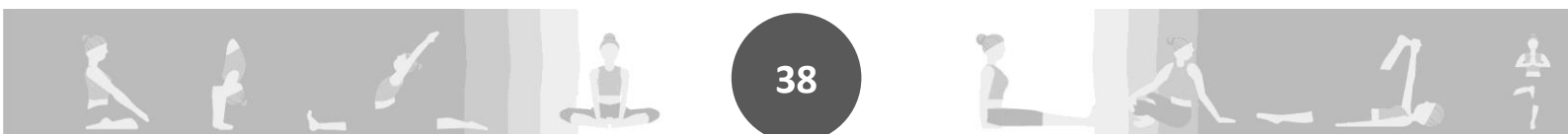
Hypertension is a widespread condition characterized by elevated blood pressure, which increases the risk of cardiovascular diseases and contributes to adverse outcomes such as heart attack, stroke, and heart failure. Effective blood pressure management is essential for preventing cardiovascular events and improving long-term health outcomes. Yoga, known for its holistic approach to physical and mental well-being, has gained attention as a potential adjunct therapy for hypertension. Practicing Yoga (specially breathing exercises, relaxation and meditation practices) have demonstrated potential benefits for managing blood pressure, including reductions in both systolic blood pressure and diastolic blood pressure. Yoga exerts a beneficial effect on the autonomic nervous system (ANS) by reducing activity in the SNS while simultaneously enhancing the function of the parasympathetic nervous system PNS⁴. Moreover, regular Yoga practice enhances baroreceptor sensitivity and autonomic tone⁵, and aids in regulating circadian rhythms by lowering cortisol and increasing melatonin levels^{6,7}. Together, these effects lead to a decrease in blood pressure (BP) and promote overall cardiovascular health. Evidences suggest that Yoga can be a valuable adjunct to traditional hypertension treatment and contribute to a better cardiovascular health. There is significant space to do research in this field and understand the mechanisms of Yoga on blood pressure and its implications in the prevention of CVDs^{8,9}.

• Stress Reduction

Globally CVDs remain a major cause of mortality and morbidity, which often exacerbated by chronic stress¹⁰. Stress contributes to the pathogenesis of CVDs through mechanisms such as hypertension, inflammation, and dysregulation of the autonomic nervous system. The prevalence of stress-related CVD has prompted interest in complementary and alternative therapies such as Yoga. It is well-known for its ability to lower stress levels. High stress can affect the heart by negatively influencing CVDs risk factors. Stress is a complex physiological and psychological response to perceived challenges or threats. Chronic stress can lead to detrimental health effects, including mental health disorders, cardiovascular problems, and compromised immune function. During stress, the body secretes stress hormones such as cortisol and adrenaline, that temporary increases blood pressure and heart rate as a part of the fight-or-flight response. Chronic stress can cause to dysregulation of the HPA (hypothalamic-pituitary-adrenal) axis, increased cortisol levels, and activation of the SNS¹¹. Prolonged stress can lead to sustained high blood pressure, contribute to hypertension. Persistent hypertension increases the risk of heart diseases and damage blood vessels. Yoga fosters a strong mind-body connection through mindfulness and self-awareness. This connection helps individuals better manage stress by promoting relaxation and cognitive reframing. Yoga practice has been shown to modulate the HPA axis, leading to reduced cortisol levels and improved stress response¹². Regular Yoga practice can help balance the stress hormone system and reduce the physiological impacts of stress. Yoga offers a promising approach for managing stress by enhancing relaxation, improving emotional regulation, and modulating stress hormone levels¹³. The evidence supports the integration of Yoga into stress management programs, highlighting its potential to complement traditional stress reduction techniques.

• Heart Rate Variability (HRV)

HRV is influenced by the balance between the SNS and the PNS. A high HRV generally indicates a healthy balance with strong parasympathetic (rest and digest) activity and efficient modulation of sympathetic (fight or flight) responses. Low HRV suggests an overactive sympathetic nervous system and/or reduced parasympathetic activity¹⁴, which can indicate poor adaptability to stress and potential health issues. Prolonged stress can reduce HRV by enhancing sympathetic activity and diminishing parasympathetic function. Long term short HRV has been link with an elevated risk of cardiovascular events such as heart attacks and heart failure¹⁵. It reflects impaired autonomic regulation, which can contribute to the cardiovascular diseases. HRV can be a predictive marker for cardiovascular disease outcomes. Lower HRV is linked with a greater risk of mortality and adverse CVD in various populations. High HRV is associated with better recovery from stress and physical exertion, indicating





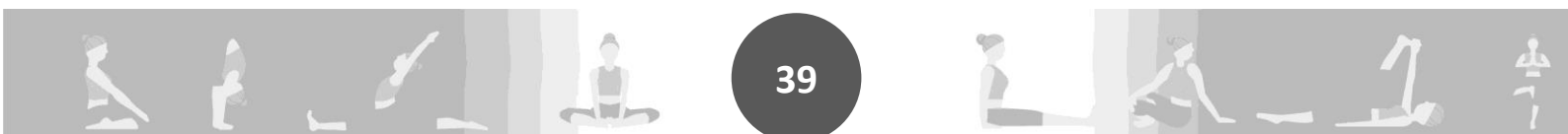
a robust autonomic nervous system capable of effectively managing and recovering from stress¹⁶. Yoga can have a positive effect on HRV, that is a measure of the variation in time between every heartbeat. Studies generally show that Yoga practitioners tend to have higher HRV compared to non-practitioners, indicating a more balanced autonomic nervous system. Various studies found that Yoga practice significantly increases HRV compared to control groups¹⁷. While the exact mechanisms through which Yoga affects autonomic activity remain unclear, certain Yoga practices seem to directly activate the vagus nerve and boost parasympathetic output¹⁸. This stimulation may promote parasympathetic dominance, resulting in improved cardiac function, mood, and energy levels, along with enhanced neuroendocrine, metabolic, cognitive, and immune responses^{19,20}. Consequently, heart rate variability (HRV) seems ideally suited to represent the emotional and cognitive effects on organ function, as well as the mind-body integration achieved through various Yoga practices, by establishing a direct connection between the input and output of the central nervous system¹⁹

- **Lipid Levels**

Dyslipidaemia, which refers to abnormal levels of lipids (fats) in the blood, significantly impacts heart health. The main components of dyslipidaemia include low levels of high-density lipoprotein (HDL) cholesterol, high levels of low-density lipoprotein (LDL) cholesterol, and elevated triglycerides. High levels of LDL cholesterol, often referred to as bad cholesterol, which cause to the buildup of cholesterol in the walls of arteries. This accumulation forms plaques that narrow and harden the arteries, a condition known as atherosclerosis^{20,21,22}. Atherosclerosis restricts blood flow and cause to the formation of blood clots, that elevated the chance of CVD. As plaques build up in the coronary arteries, they reduce blood flow to the heart muscle, potentially leading to heart attack (myocardial infarction) and chest pain (angina). Dyslipidaemia can also contribute to chronic inflammation within blood vessels, metabolic syndrome, disturb the functioning of the endothelial cells lining the blood vessels, which also includes insulin resistance, abdominal obesity, and hypertension. This cluster of conditions further amplifies the risk of heart disease^{23,24}. Regular practice of Yoga not only enhances flexibility but also significantly impacts the functioning of both the endocrine and exocrine glands in the body²⁵. It increases the sensitivity of pancreatic B-cells to glucose signals²⁶ and improves insulin sensitivity while reducing insulin resistance²⁷. These changes lead to lower fasting blood glucose levels, decreased postprandial glucose levels, and improved glycemic control^{25,28}. Additionally, studies have shown that levels of high-density lipoprotein (HDL) increase in patients with metabolic syndromes. The enhancement of the lipid profile associated with Yoga practice may result from elevated hepatic lipase and lipoprotein lipase, which facilitate the uptake of triglycerides by adipose tissue and influence lipoprotein metabolism²⁹. Furthermore, Yoga promotes the sensitivity of low-density lipoprotein (LDL) receptors, enhancing receptor-mediated endocytosis and receptor recycling³⁰. Research on Yoga's impact on HDL and LDL cholesterol has shown mixed results. The variability in results may be attributed to differences in Yoga practices, study designs, and participant characteristics^{31,32}.

- **Glucose Metabolism**

Glucose metabolism is essential for maintaining cardiovascular health. Every muscle of body relies on a continuous provide of energy to function well. It is basic source of this energy, and efficient glucose metabolism ensures that heart muscle cells (cardiomyocytes) have the fuel they need to maintain normal contraction and relaxation. Insulin resistance can lead to elevated blood glucose levels (hyperglycemia). High glucose levels can disrupt the function of endothelial cells lining the blood vessels, leading to reduced vasodilation and elevated chance of hypertension and atherosclerosis (hardening and narrowing of the arteries). Elevated blood sugar can lead to inflammation and oxidative stress, which are also harmful to cardiovascular health including coronary artery disease (CAD) and heart failure²⁴. Traditional management strategies for glucose metabolism involve pharmacological treatments, lifestyle changes, and dietary modifications. Yoga, with its multifaceted approach to physical and mental well-being, has emerged as a potential adjunct to traditional interventions. Yoga has demonstrated potential benefits for improving glucose metabolism, including reductions in fasting glucose, enhanced insulin sensitivity, and lower HbA1c levels. The evidence suggests that Yoga can be





a valuable adjunct to traditional glucose management strategies and contribute to better cardiovascular health³³.

- **Inflammatory Markers**

High levels of inflammatory markers are associated with adverse cardiovascular outcomes, including heart attacks, strokes, and progression of heart disease. Reducing inflammation is a key target in the prevention and management of cardiovascular diseases. Inflammatory markers such as interleukin-6 (IL-6), tumour necrosis factor-alpha (TNF-alpha) and C-reactive protein (CRP) are commonly used to assess inflammation levels and cardiovascular risk. Yoga, a multifaceted practice combining physical postures, breath control, and meditation, has been suggested as a potential intervention to modulate inflammatory responses and improve cardiac health. Yoga may help reduce systemic inflammation. Studies demonstrated that Yoga practice was associated with decreased levels of interleukin-6 (IL-6), tumour necrosis factor-alpha (TNF-alpha) and C-reactive protein (CRP) markers of inflammation³⁴. By mitigating inflammation, Yoga could potentially reduce cardiovascular risk and support overall heart health.

- **Improved Circulation**

Yoga encourages movement and stretching, which can enhance blood flow and circulation. This can help reduce the risk of conditions like atherosclerosis (buildup of plaque in the arteries) and improve general cardiovascular health.

- **Weight Management**

Having a healthy weight is good for heart health. Yoga, combined with a balanced diet, can aid in weight management by increasing physical activity and promoting a mindful approach to eating³⁵.

- **Enhanced Flexibility and Strength**

Yoga improves flexibility and strengthens the muscles around the heart, including the core and back muscles. This can support better posture and alignment, which can contribute to overall cardiovascular well-being³⁶.

- **Better Breathing**

Breathing exercises in Yoga (Pranayama) can improve lung capacity and efficiency. Effective breathing supports better oxygenation of the blood, which is essential for cardiovascular health³⁷.

CONCLUSION

Yoga has demonstrated positive effects on various biomarkers related to cardiovascular health, including HRV, blood pressure, cholesterol levels, glucose metabolism, and inflammatory markers. The effectiveness of Yoga can vary based on individual health conditions, adherence levels, and the type of Yoga practiced. More research is necessary to fill the gap to understand the mechanisms and long-term benefits of Yoga, the existing evidence suggests that Yoga can be a valuable adjunct therapy for managing and preventing cardiovascular diseases. Future studies should focus on large-scale trials and explore the specific components of Yoga that are most beneficial for cardiovascular health. Currently integrating Yoga into preventive care strategies can offer a complementary approach to cardiovascular health by addressing physical fitness, stress management, and mental well-being. These combined benefits contribute to its potential as a preventive intervention for cardiovascular diseases

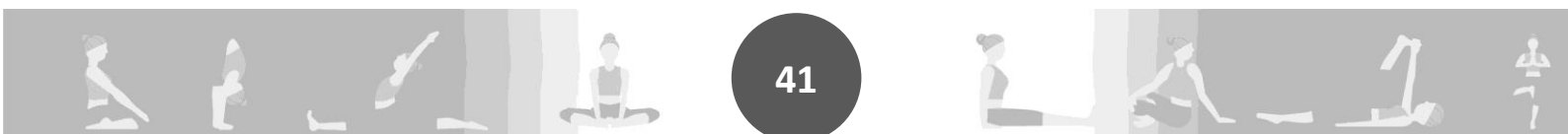
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POTENTIAL YOGIC INTERVENTION IN *KAPHAJA UNMADA* (DEPRESSIVE DISORDER): AN OVERVIEW

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ABSTRACT

Depression and related disorders affect 121 million people globally, which is a substantial burden. It is the primary cause of incapacity and has a two-week duration of generalized boredom. Developing a therapy strategy necessitates a comprehension of psychopathology via basic ayurvedic principles. The challenges of treating patients without side effects have sparked interest outside of the conventional medical system. According to Ayurveda, *kaphaja unmada* is likely to be connected to the ailment, depending on its stage. Therapeutic techniques are based on the stages of the illness and the symptomatology. The basic Unmada management concepts guide the treatment of all mental illnesses. Ayurvedic psychotherapy known as *Satvavajya chikitsa*, together with non-pharmacological therapy, *Daivavyapashraya chikitsa*, and pharmaceutical therapy are all used in the holistic treatment of depression disorders. Traditional medicinal systems such as yoga and ayurveda claimed to be able to cure ailments of the body and mind caused by stress and to provide complete physical, mental, and spiritual health.

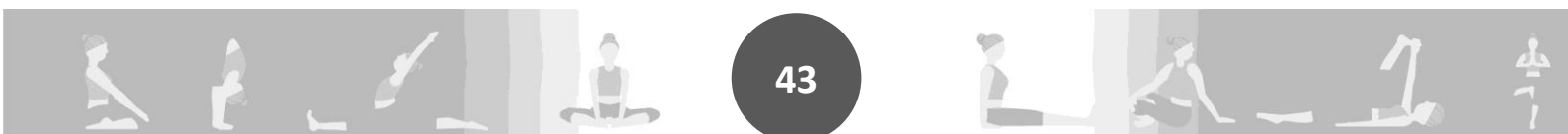
Keywords: Ayurveda, Depressive disorders, *Yoga*, *Pranayama* and *Kaphaja Unmada*.

INTRODUCTION

Depressive disorder has been estimated by the World Health Organization (WHO) to outnumber all other diseases as the third most common cause of disease burden globally by 2030.¹ The indicators are a persistently low or depressed mood, anhedonia, or a diminished interest in pleasurable activities, feelings of guilt or worthlessness, exhaustion, difficulty concentrating, changes in appetite, psychomotor sluggish or agitation, insomnia, or suicidal thought.² The abnormal mental state known as *Mano Vikara* is indicated by vitiation of the doshas *Sharirika* and *Manasika*. *Manokarma* impairment comprises deviant *Uha* and *Sankalpa*, as well as aberrant *Buddhi*, *Achara*, *Bhakti*, and *Chesta*.³ Treatment options for depressive disorder include pharmacological, psychological, interventional, and lifestyle modification. Initially, either medication or psychotherapy is used to treat MDD. Combination therapy, which incorporates both medication and psychotherapy, has been found to be more effective than each of these treatments by itself. Electroconvulsive therapy has been shown to be more effective than all other therapies combined for severe depression.⁴ The term '*Unmada*' is commonly used in Ayurveda to refer to a variety of mental diseases. *Unmada* is synonymous with insanity, lunacy, madness, mental derangement, mental diseases, and mental aberration or estrangement. It encompasses a broad spectrum of psychiatric problems. All of these words refer to the mental illness in which a person is unable to control their behaviour and actions in order to live up to the standards of their community. All mental illnesses fall within the domain of '*Unmada's*' domain.⁵

UNMADA

The perversion of mind (*Manas*), intellect (*Buddhi*), consciousness (*Sangyagyan*), memory (*Smriti*), desire (*Bhakti*), manners (*Sheela*), behavior (*Chesta*), and conduct (*Achara*) are the characteristics of the state known as *unmada*. A psychiatric disorder called *Unmada* develops when a person with a timid personality and a weak, disordered mind suffers from a variety of emotional dysregulations that may be caused by endogenous or exogenous factors. The typical symptoms of the condition include diminished





intelligence, an agitated expression, incoherent speech, loss of memory, decision-making, orientation, and responsiveness, as well as wandering thoughts.⁵

Specific Symptoms of *Kaphaja Unmada*

- Prefers to live at one place (doesn't move/ immobility)
- Meek and mum, prefers not to speak;
- Excessive salivation and nasal secretions;
- Disinclination for food
- Prefers loneliness
- Frightening appearance;
- Aversion for cleanliness;
- Always drowsy;
- Edematous face;
- White and timid eyes full of dirt;
- Aggravation of the signs & symptoms by kapha provoking factors
- Pacification by factors which are opposite to kapha⁵

MANAGEMENT

As per Ayurveda, *Unmada* is treated with *Snehapana*, *virechana* and *vamana*. Various medicines such as *Vacha* (*Acorus calamus* Linn), *Brahmi* (*Bacopa monnieri*), *Shankapushpi* (*Convolvulus pluricaulis*), *Mandukaparni* (*Centella asiatica*), *Sarpagandha* (*Rauvolfia serpentina*), *Ashwagandha* (*Withania somnifera*), *Jyotishmati* (*Celastrus paniculatus* Willd.), *Jatamamsi* (*Nardostachys jatamansi*), *Shirisha* (*Albizia lebbek*), formulations such as *Kalyanaka Ghrita*, *Mahakalyanaka Ghrita*, *Panchagavya Ghrita*, *Brahmi ghrita*, *Unmada Gaja Kesari Rasa*, *Unmada Gajankusha Rasa*, *Smritisagara rasa*, *Manasmitra vati* are effective in the management of *Unmada* of dosic origin⁵.

Depressive Disorders

The incidence, misery, dysfunction, morbidity, and financial impact of depression make it a major public health concern. Women experience depression at a higher rate than men. Millions of individuals suffer emotionally and have their lives disrupted by depression. Individuals avoid seeking psychiatric consultations due to the stigma around them. It has a detrimental impact on friends' and family's lives, lowers productivity at work, and increases absenteeism, all of which have a negative impact on the economy².

Clinical features of depression

Core symptoms

- Depressed mood- the most important feature is the sadness of mood or loss of interest or pleasure in almost all activities (pervasive sadness), present throughout the day (persistent sadness). This sadness of mood is qualitatively different from the sadness encountered in normal sadness or grief. The depressed mood varies little day to day and often not responsive to the environmental stimuli. The loss of interest in daily activities results in social withdrawal, decreased ability to function in occupational and interpersonal areas and decreased involvement in previously pleasurable activities. In severe depression there may be a complete anhedonia.
- Weight change- loss of weight when not desiring or weight gain (eg. Change of more than 5% of body weight in a month), associated with decreased or increased appetite.
- Disturbed sleep- insomnia (with early morning wakening 2 to 3 hours sooner than usual) or hypersomnia
- Psychomotor agitation or retardation- observable by others, not just subjective feelings of restlessness or being slowed down. In younger patients (<40 years old), retardation is more common characterized by slowed down thinking and activity, decreased energy and monotonous voice. In a severe for, the patient can become stuporous. In older patients, agitation





is commoner. It often presents with marked anxiety, restlessness and a subjective feeling of unease.

- Fatigue or loss of energy
- Reduced libido
- Feelings of worthlessness or excessive or inappropriate guilt- sadness of mood is usually associated with pessimism which can result in three common types of depressive ideas. Hopelessness. Helplessness and worthlessness
- Diminished ability to think or concentrate - or indecisiveness.
- Recurrent thoughts of death or suicide- suicidal ideation in depression should always be taken very seriously.

Somatic symptoms

- Loss of emotional reactivity
- Diurnal variation
- Anhedonia
- Early morning waking
- Psychomotor agitation or retardation
- Loss of appetite and weight
- Loss of libido

Psychotic symptoms

- Delusions eg. Poverty, personal inadequacy, guilt over presumed misdeeds, responsibility for world events
- Hallucinations eg. Auditory, defamatory or accusatory voices, cries for help.

Management

Pharmacotherapy, requires psychotherapy, and other alternative therapies like deep brain stimulation, vagus nerve stimulation, aerobic exercise, etc. are used to treat depression. Pharmacotherapy includes antidepressants, SSRIs, SNRIs, MAO inhibitors, and so on. Psychotherapy includes CBT, REBT, and so forth. Researchers are currently looking into the usefulness of mind-body therapies, like yoga, as a supplemental and alternative treatment for depression. Yoga is acknowledged as an alternative medicine that uses mind-body techniques, and it has its roots in ancient India. The eight limbs of yoga philosophy are more accurately characterized as moral guidelines for a meaningful and purposeful existence. The goal of yoga's meditative and relaxation techniques, as well as its slow, rhythmic breathing techniques, is to promote calmness, wellbeing, stress tolerance, and mental focus, all of which may minimize depression, anxiety, stress, and rumination².

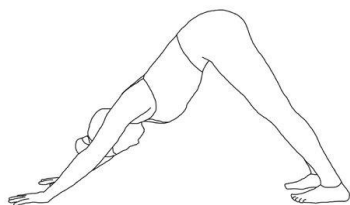
YOGIC INTERVENTION FOR DEPRESSIVE DISORDER

We at the Manas Chikitsa division of Sir Sunderlal hospital BHU, Varanasi recommend yoga sessions that include asana, meditation, *sudarshana kriya yoga*, MSRT, *Yoga nidra*, physical exercises, etc., in accordance with the guidelines of ancient yoga books that promote wellbeing at every level.

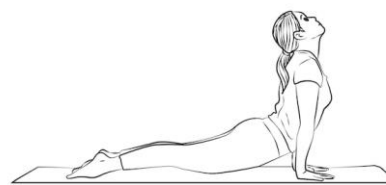
A TAILORED YOGIC PROTOCOL FOR DEPRESSION

1. Breathing exercises (10 minutes).
2. Loosening exercises (sithilikarana vyama, 5 minutes).
3. Physical postures (asanas, which included standing, supine, prone and sitting postures; 20 minutes).
4. Voluntarily regulated breathing (pranayama, 10 minutes).
5. Yoga-based guided relaxation (15 minutes).

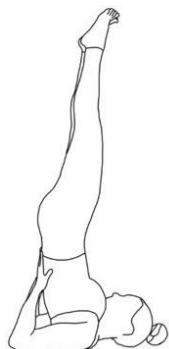




Adho mukha shwanasana



Urdhwa Mukha shwanasana



Sarvangasana



Uttanasana



Shashankasana



Shavasana

Figure 1: Illustration of Yoga asana in Depressive disorders

Preksha Meditation

Preksha Meditation (PM) is a unique form of meditation that was developed in 1978 by the Jain monk Acharya Mahaprajna to treat people who were depressed, anxious, frustrated, stressed, or unwell. It is largely a mindfulness practice, but it also involves some level of focus. The goal is to awaken one's own mind, which will lead to modifications in behavior, attitude, personality, and emotion. It consists of eight parts, which are used in various combinations: *Anupreksha* (contemplation), *Leshya dhyana* (perception of psychic colors), *Shwas preksha* (perception of breathing), *Shareer preksha* (perception of body), *Kayotsarg* (relaxation), *Anteryatra* (internal trip), and *Bhavana* (positive feelings).⁶

MSRT

One of the more advanced mindful relaxation yoga techniques is called mind sound resonance technique (MSRT), which primarily operates through the *Manomaya Kosha* to create deeper relaxation for the body and mind. Mantra is used to generate resonance for the technique. MSRT can be used to enhance wellbeing, focus, willpower, and relaxation when sitting or lying down.⁷

Sudarshan Kriya Yoga

The nonprofit Art of Living Foundation teaches *sudarshan kriya yoga* (SKY), a form of cyclical controlled breathing exercise with origins in classical yoga that relieves depression. There are four separate parts to it⁸.

Detailed descriptions of the four main SKY breathing techniques are as follows.





1. Ujjayi or "Victorious Breath": This involves experiencing the conscious sensation of the breath touching the throat. This slow breath technique (2–4 breaths per minute) increases airway resistance during inspiration and expiration and controls airflow so that each phase of the breath cycle can be prolonged to an exact count. The subjective experience is physical and mental calmness with alertness.
2. During Bhastrika or "Bellows Breath," air is rapidly inhaled and forcefully exhaled at a rate of 30 breaths per minute. It causes excitation followed by calmness.
3. "Om" is chanted three times with very prolonged expiration.
4. Sudarshan Kriya which is a Sanskrit term meaning "proper vision by purifying action" is an advanced form of rhythmic, cyclical breathing with slow, medium, and fast cycles.⁸

Yoga Nidra

Yoga nidra is a streamlined version of an age-old tantric relaxing method, sometimes referred to as "Yogic sleep." Shavasana, also known as "corpse pose," is a particular yoga posture that is combined with guided mental imagery to describe the practice in its broadest sense. In contrast to sleep, yoga nidra aims to induce a deep level of relaxation in which the practitioner is still cognizant of their surroundings. A "systematic method of inducing complete physical, mental, and emotional relaxation, and in this state, the relaxation is achieved by turning inwards, away from outer experiences," is how Swami Satyananda Saraswati defines yoga nidra.⁹

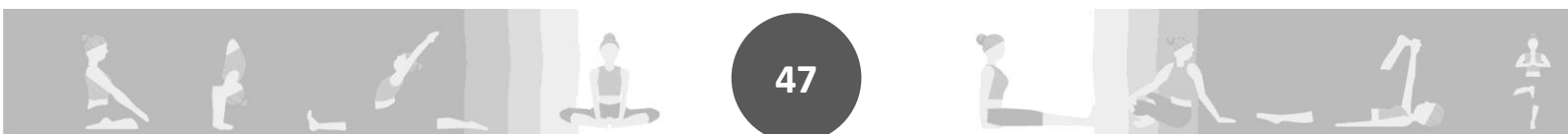
Vipassana Meditation

Vipassana, literally "to see things as they really are," is an age-old meditation method that enhances awareness of oneself and focus. There have been numerous reviews on Vipassana philosophy and theory elsewhere. Vipassana meditation practices self-observation, in which the practitioner pays focused attention to the bodily sensations that constantly influence and interact with the mind in order to achieve self-transformation.¹⁰

Discussion

Yoga is one of the most often used mind-body therapies. Mind-body medical interventions, which focus on the interconnections among the brain, the rest of the body, the mind, and behaviour, are regularly used to cope with a wide spectrum of depression severity. There are now several varieties of yoga that emphasize different aspects of the physical and mental disciplines. Numerous research studies have demonstrated that yoga can help with mental health conditions like anxiety, sadness, and possibly schizophrenia. According to studies, yoga raises GABA levels, reduces anxiety, relaxes muscles, promotes flexibility, and strengthens the immune system. It has also been demonstrated to alleviate tense muscles, lessen emotional stress, boost confidence, and raise stress tolerance. Additionally, yoga practice was linked to higher plasma serotonin levels in individuals with depression.¹¹

A clinical investigation including patients with mixed anxiety and depression illness was conducted at the Sir Sundar Lal Hospital, IMS, BHU, Varanasi, and the Manas Chikitsa Division, Dept. of Kayachikitsa. According to the study's findings, preksha meditation is a non-pharmacological method that effectively reduces depression. Its effects become apparent quickly—patients' depression only goes away after four weeks of practice. Therefore, it can be concluded that if this strategy were to be used more frequently, it would have a more significant and positive impact on the management of depression.⁶ According to an unpublished study, there was a significant reduction in STAI scores in 32 patients who were healthy volunteers immediately following MSRT, as well as a significant rise in gamma brain wave coherence (a marker of deep relaxation) compared to controls. Additionally, MSRT intervention improved the reduction of pain, discomfort, impairment, and anxiety in individuals with persistent neck pain.⁷ Sudarshana Kriya Yoga improves autonomic function, neuroendocrine release, emotional processing, and social bonding following SKY practices may be attributed to VNS and activation of the limbic system, hippocampus, hypothalamus, amygdala, and stria terminalis.⁸ Research has shown that applying Yoga Nidra (YN) as a therapeutic intervention can lessen symptoms of anxiety, rage, sadness, PTSD, and other psycho-physiological abnormalities. Apart from Yoga-Nidra's function as an intervention technique, it also promotes mental catharsis, self-improvement, positive thinking,





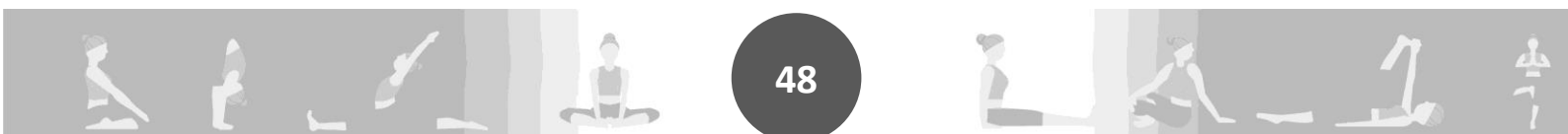
and personality development. Simultaneously, YN enhances focus, memory, and additional cognitive abilities such as attention and thoughts⁹. According to conventional and clinical research, practicing vipassana raises awareness, encourages the integration of subjective experience, and makes it easier to accept and tolerate discomfort in order to effectively lessen it on both a physical and psychological level. There is evidence that changes from non-invasive assessment measures are associated with changing physiological parameters, which has been made possible by the development of invasive measurement methods.¹²

Conclusion

Depressive illness is a crippling condition that significantly impairs day-to-day functioning. There is a significant risk of morbidity and death from depression. The difficulties with diagnosis, rising prevalence, and complex pathology have made effective management more difficult. Depression is evaluated by Ayurveda based on the degree of etiology to *Kaphaja unmada*. When treating depression, the multifactorial therapy strategy has shown to be helpful. Ayurvedic medicine has demonstrated that a variety of herbal and mineral medications have antidepressant properties and are superior to conventional treatments for depression. Ancient medical systems like yoga and ayurveda made claims about how to achieve perfect physical, mental, and spiritual health as well as how to effectively treat illnesses of the body and mind brought on by stress. More thorough research or protocol in the treatment of depression might boost patient's overall health.

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EVALUATING YOGA PRACTICES FOR LOW BACK PAIN: A CRITICAL REVIEW OF EFFECTIVENESS AND SAFETY

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ABSTRACT

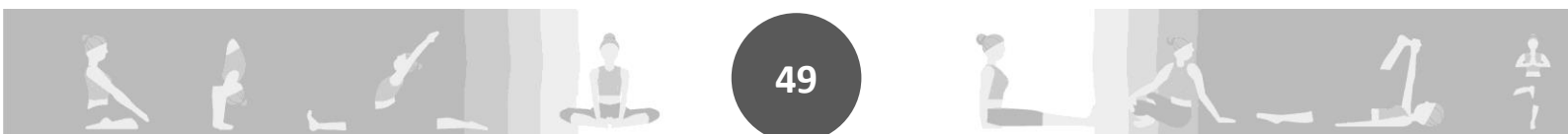
Yoga is a holistic practice from India that integrates physical postures, breathing exercises, and meditation. It is recognized for improving the individual's physical, mental, and overall well-being. It can be used in different diseases and conditions in the body. Various studies prove that Yoga is an effective management of lower back aches. Lower back pain is a prevalent health issue in many populations and its prevalence is increasing. Different types of exercises are found to be effective in this condition. It is found that proper exercise increases the quality of life in such conditions than taking rest. Yoga is an excellent choice in such conditions. Although Yoga benefits everyone, not all types of Yoga suit everyone and every disease. The type of Yoga or asana used is to be selected accordingly considering the state of person and disease condition. In case of lower back ache excessive stretching type of Yoga is to be used with caution. In this review, we analyze the beneficial effects of Yoga in managing lower back pain, evaluate the reported adverse effects, explore the potential risks of improper Yoga practices, and assess the importance of proper guidance and assistance from healthcare practitioners for proper selection and understanding of Yoga procedures.

Keywords- Yoga, Asana, Low backache, Improper Yoga practices, Customization of Yoga,

INTRODUCTION

Yoga is a holistic comprehensive health practice that emerged in India over 5000 years ago. According to the National Center for Complementary and Integrative Health, it is one of the most widely practiced complementary therapies.¹ Maharshi Patanjali was the first to mention Yoga philosophy and detailed 196 sutras as asanas along with other components such as conscious breathing, meditation, and lifestyle.² Yoga includes eight components namely,

Yama, Niyama, Asana, Pranayama, Prathyahara, Dharana, Dhyana and Samadhi. Yama is the first of Patanjali Ashtanga Yoga and are ethical principle. It explains things to be avoided or kept in control. Niyama is the rule of conduct and explains things to follow to develop a good personality. Asanas are the specialized postures that provide strength and health to the body. Pranayama is the mindful breathing technique that helps to control prana. Dharana is concentration and controlling the mind in one place, dhyana is meditation, and samadhi is the super consciousness, a stage where yogi attain super sensual knowledge.^{3,4} The physical and mental cleansing and maintenance of health are the main aims of Yoga. Among these Asanas, are the steady physical poses and are one of the commonly utilized ones among Ashtanga. One can control the mind only if the body is controlled, hence asana is essential for attaining moksha. Asanas can help reduce the metabolic rate and relax the vital organs. It trains the muscles to relax and strengthens them.⁵ It is recommended to do asanas daily as part of life. It combines muscular activity with a mindful focus, on attention to the breath, self-awareness, and energy.⁶ The practice of asanas integrates the body and the mind. These help to attain physical health and help to control the mind along with it. It needs a greater degree of concentration and coordination to perform higher asanas and all asanas cannot be done by everyone without proper practice and guidance.





Material and methods

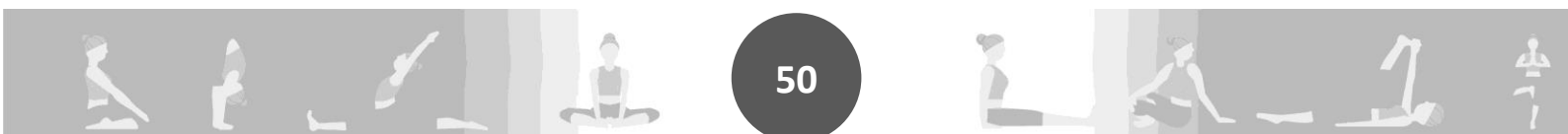
Relevant Ayurvedic and contemporary books and literature related to the title were reviewed from reliable online journals.

OBSERVATION

Low back pain is a significant health concern. According to WHO, impacted 619 million people worldwide in 2020, and is estimated that the number of cases is expected to be 843 million cases by 2050.⁷ In the Indian population, prevalence rates of Low backache are higher compared to global and other ethnic populations.⁸ Thus it is a major concern in the present era. Low back aches can be classified into three according to duration. It is acute if the duration is less than 2 to 4 weeks, subacute, from 4 to 12 weeks, and chronic if more than 12 weeks.⁹ It can originate from different parts of the body like nerve roots, muscles, tendons, fascia, bone joints, or abdominal organs.¹⁰ It can be also found to be associated with psychological problems like stress, and depression.¹¹ Hence assessing and finding the source of pain is an important one in determining the management. Proper diagnosis using imaging techniques is to be used judiciously.¹² Different varieties of treatment modalities are recommended for Low backaches. While managing these conditions, currently, available biomedical therapies are often costlier, have limited long-term efficacy, and may cause adverse side effects.¹³ Nowadays, exercise is a highly recommended treatment option because it is an economically effective one and has proven effectiveness in alleviating pain.¹⁴ The Canadian guidelines recommended beginning with gentle exercise and gradually increasing intensity based on the limits of pain tolerance. It is also recommended to consult a qualified physician or therapist if pain worsens with exercise.¹⁵ Alternative treatment options like Yoga are increasingly recognized as effective and are one of the desirable methods for managing these conditions. It helps to strengthen back muscles and improves the extension, flexibility, and balance of spinal vertebrae and surrounding tissues.¹⁶ Various clinical studies and meta-analyses demonstrate the effectiveness of Yoga in managing Low back aches.¹⁷

YOGA FOR LOW BACK ACHE

Different types of Yoga postures are used for the management of such conditions. Backward bending asanas like bhujangasana, shalabhasana, dhanurasana, ardha chandrasana, sethubandhasana, Forward bending asanas like paschimottasana, janu sirshasana, padahasthasanas and Spinal twisting asanas like meru vakrasana, ardha matsyendrasana, etc are commonly used in management of Low back ache.¹⁸ Bhujangasana, the cobra pose, can help to relieve Low back aches, increase the flexibility of the back, and keep the spine healthy. but the person having sciatica or more disc protrusion should do this asana with caution. Shalabhasana, the locust pose strengthens the Low back and the muscles of the buttocks and it needs a great deal of physical effort. It can be used in mild sciatica and slipped discs. Dhanurasana, the bow pose also helps muscles and ligaments of the Low back and helps to relieve stiffness. Ardha chandrasana, half moon pose, can provide a good stretch to the muscles of the back. Setu bandasana, bridge pose particularly can tone the lumbar region of the spine and can stretch the chest, neck, and spine while strengthening the back, glutes, and legs. In the case of forward bending poses, Paschimottasana, Seated Forward Bend, and janu sirshasana, head to knee pose, mainly stretches the hamstrings, Low back, and calves, enhancing flexibility in these regions. But it needs intense Stretch dorsally hence those with severe back or spinal injuries, such as herniated discs or sciatica, as well as individuals with hamstring injuries, should avoid this pose. Padahasthasana, known as Hand to Foot Pose, is a deep forward bending Yoga posture that also primarily stretches the hamstrings, calves, and Low back. It should also be used cautiously in severe sciatica. Spinal twisting postures like Meru vakrasana, can stretch the muscles, loosen vertebrae, and help in toning nerves. Ardha matsyendrasana, the half spinal twist can also do the same and can be used to relieve lumbago and muscle spasms. It is also found to be effective in neck aches, headaches, and general body stiffness. It can help to bring spinal muscles and nerves into optimal health.¹⁹ All these poses specifically focus on strengthening and correcting the imbalance in the muscles of the Low back. All these can also provide multi-system benefits including protection of internal organs and their function. They will benefit not only as prevention but as treatment in a cost-effective way. In patients with Low back aches, abnormal posture is characterized by mild modifications of the spine curves along the sagittal plane or scoliotic





deviations.²⁰ To correct these and to reduce pain, continuing regular activities within the pain limits results in a faster recovery compared to bed rest.²¹ Thus making Yoga a part of life and a daily practice can help to reduce such conditions. While considering and selecting Yoga postures, it is crucial to consider the underlying cause and identify red flags. Identifying the red flags in back pain is an integral part of primary care and timely evaluation and proper management is needed for such cases.²² It is important to understand that not all Low back aches can be treated with Yoga. Yoga postures that need more stretching are to be selected cautiously or avoided in some cases. Being the fact that stretching of the body and muscles is the primary thing in these poses, doing these with sudden intense stretches, in a hurry, in improper body position, etc may cause further injury or exacerbation of the condition. These poses should be avoided by patients with intense Low back aches or complications. The same Yoga pose that can treat the condition can itself exacerbate if not used cautiously without following proper guidance.

ADVERSE EFFECTS OF YOGA

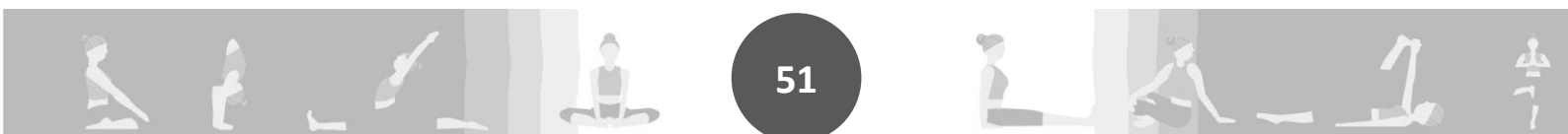
The works of literature conclude that Yoga is effective in reducing pain and disability and helps to improve both physical and mental function. It has been found that Yoga participation carries some risks, but most participants tend to experience considerable benefits with relatively few issues. In a recent study, it was found that approximately 10-15% of cases experience a temporarily increased low back pain, with two recognized cases of herniated disc.²³ In another study with 87 Yoga class participants, one individual reported a serious event of a herniated disc. Despite this, the overall outcomes for the Yoga group were moderately improved.²⁴ 8% of 156 Yoga participants in another study experienced adverse events. Some patients with a history of severe pain in reaction to physical activity developed severe back pain that was probably related to Yoga.²⁵ Some studies also presented a patient withdrawal due to a herniated disc and in another one patient withdrew because some postures precipitated a migraine headache.^{26,27} While evaluating trials, there is a moderate chance that the risk of adverse events primarily increased back pain, is higher in Yoga compared to non-exercise controls but might carry similar risks of adverse events as other exercises that focus on the back.²⁸ Some research also shows mild or moderate adverse events, primarily increased back pain in both the exercise and Yoga groups.²⁹ Despite there being some exceptional adverse events like Yoga exacerbating low-back pain, studies generally conclude that there are no significant adverse events due to Yoga.³⁰

DISCUSSION

Yoga plays a crucial role in the management of Low backache. Even though it is usually associated with no adverse effects, improper administration and vigorous Yoga without following the rules can result in aggravation of the condition and adverse events. Just like Ayurveda, Yoga is also an individualized concept. Factors such as age, physical condition, and personal health issues should always be assessed while selecting Yoga practices and consider a customized approach. Conditions like severe pain, severe muscle spasms with inflammation, severe radicular symptoms with nerve compression, neuronal symptoms, herniated discs, and poor core strength are red flag signs in the case of the Low back and are to be approached with Care.³¹ In such condition Yoga should be practiced with extreme caution, it may otherwise it leads to adverse effects. Yoga should always be started with gentle, and relaxing postures in a Low back ache patient. Especially in the case of forward bending postures, there should be a gradual introduction of the posture. The person should always listen to their body and assess the pain. Pain should be used as guidance and discontinue the procedure if there is aggravation of pain. It is always best to consult a medical professional regarding health conditions and assess the possibility of complications and experienced Yoga practitioners should be assisted in doing the procedure.

CONCLUSION

It is evident from clinical and meta-analyses that Yoga has a significant role in reducing and even curing Low backache. However, the type of Yoga should be selected and practiced according to the individual and the patient's condition. Yoga is for everyone, but not all Yoga practices suit everyone. The





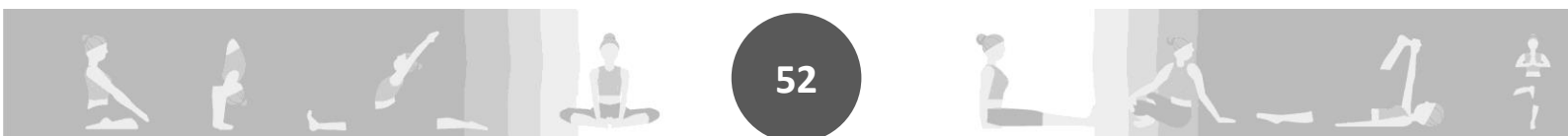
appropriate use of Yoga helps in not only physical but also mental and overall health. Although some adverse effects have been reported while practicing Yoga, detailed high-quality research to provide further insight into the benefits of Yoga, and comparisons between Yoga and other exercises, and clinical studies are needed to assess these adverse effects and their possibilities. It is also important to assess what types of Yoga postures cause these effects and under what conditions. Such kind of further studies will help to improve the acceptance of Yoga's contemporary practice.

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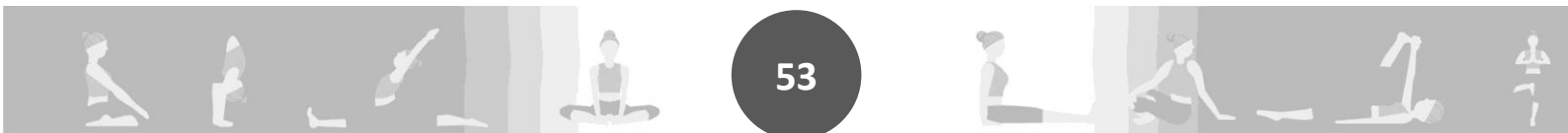
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ROLE OF YOGIC DIET THERAPY IN THE MANAGEMENT OF PRE-DIABETES

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ABSTRACT

Pre-diabetes is a metabolic disorder that is considered as early stage of Type-2 diabetes mellitus. From last few decades, the cases of Pre-diabetes are increasing rapidly all over the world and has become an epidemic. The global prevalence of Pre-diabetes was estimated 7.3% of the adult population in 2017, equivalent to 352 million individuals. By 2045 the prevalence is anticipated to increase to 8.3% of the global adult population, equivalent to an estimated 587 million individuals. It is multifactor disorder and is associated with variety of causative factors such as genetic, environmental, mental stressors etc. that may lead to develop Pre-diabetes and its related consequences. Holistic health is the basic need of all human life. If health is good, anybody can get success in his life. But health depends on many things such as thinking, exercise, Yogic way of lifestyle, Yogic diet and other aspects of life. Yogic Diet plays a very important role in health care and cure of Pre-diabetes. Yogic diet is believed to exert long-term glycemic control. However, reduction in weight, optimal glucose levels and wellness can be achieved by following the Yogic dietary guideline. In this way Yogic diet not only cures the Pre-diabetes but also minimize the chances of occurrence of Type-2 diabetes mellitus and its related complications.

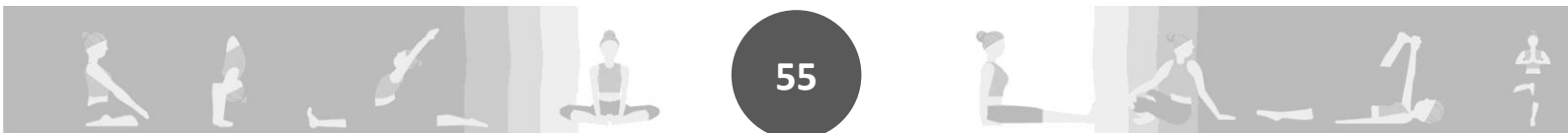
INTRODUCTION:

Pre-diabetes is a grey area between normo-glycemia and Type-2 diabetes mellitus, characterized as metabolic disorders of carbohydrates, fats and protein. It is caused by improper act of genetic, environmental, social and mental factors. Pre-diabetes and diabetes have now emerged as a greater health concern in 21st century and is associated with major risk factors for cardio vascular disease (CVD), Fatty liver, polycystic ovarian disease (PCOD) etc. The approaches for management of Pre-diabetes are still not up to the mark in modern medicine and is associated with adverse consequences.¹ Increasing westernization of lifestyle in past few year imparts significant role in the occurrence and genesis of obesity, Pre-diabetes, cardiac problems, hypertension etc. Occurrence of one disease may act as a risk factor for the development of other condition too and vice-a-versa. In these conditions, diet and regular practice of Yoga acts as complementary therapy for the management of lifestyle disorders. In this ways, Yogic dietary therapy is emerged as a feasible cost effective tool to manage Pre-diabetes and prevent the chances of occurrence of type 2 diabetes mellitus.² Therefore, the highly evolved description of Yogic diet therapy in the line of cure and care can be utilized for the management of Pre-diabetes, which not only provides new dimension for the management of Pre-diabetes but also emerged as an important preventive tool for Type-2 Diabetes mellitus.³ The Yogic diet not only affects the body but also the mind. In this way it maintains the physical, mental health and develops a positive attitude in a person.⁴

सुस्निग्धमधुराहार श्रुतार्थाशिविवर्जितः । भुज्यते शिवसंप्रीत्यै मिताहारः स उच्यते॥

हठयोग प्रदीपिका 1.58

Mitahara is defined as agreeable and sweet food, leaving one-fourth of the stomach free and eaten (as an offering to please Shiva). The quantity and quality of the Yogic diet should be decided based on the digestive capacity & vital power of the body and weight.⁵





Consequences of Pre-diabetes:

Recent evidences suggest that consequences of Pre-diabetes and diabetes arises since the very beginning of genesis of disease and it continues throughout the life. Following are the important complications noticed at the time of patient assessment and examination.

Neuropathy-Pre-diabetes is found to be associated with hyperglycemia, metabolic syndrome and at same time it has been associated with pathogenic mechanisms of Pre-diabetes induced neuropathy dysfunction.⁶ In this condition, reduced heart rate variability, dizziness, laziness, affect bowel movement, decreased parasympathetic activity of the brain and increased prevalence of erectile dysfunction in male and vaginal dryness in female individuals are seen.⁷

Nephropathy- Clinically, Pre-diabetic nephropathy is characterized by a progressive increase in proteinuria and decline in glomerular filtration rate (GFR), hypertension and high risk of cardiovascular morbidity and mortality.⁸

Retinopathy - Nearly 8% of participants with Pre-diabetes in the Diabetes Prevention Program (DPP) study were found to have evidence of diabetic retinopathy. Measures of retinal vascular changes, such as lower arteriole to venular ratio and increased retinal arteriole, have also been shown to be related to Pre-diabetes or increased risk of diabetes, but the evidence is not entirely consistent.⁹

Macro Vascular Disease - Pre-diabetes has been associated with an increased risk of developing macro vascular disease. A cross-sectional study has shown an increased prevalence of coronary heart disease in individuals with Pre-diabetes but this relationship may be confounded by the common risk factors present between cardiovascular diseases and Pre-diabetes.¹⁰

Cardiovascular Risks Associated with Pre-diabetes- Insulin resistance associated with Pre-diabetes is known to be an important risk factor for cardiovascular disease. Details of Large epidemiological studies have shown that subjects with no diabetic hyperglycemia such as impaired fasting glucose and impaired glucose tolerance are at high risk for developing Pre-diabetes and cardiovascular disease (CVD) which results in mortality.^{11,12}

Yogic Approach for Pre- Diabetes:

Yogic Texts like *Gheranda Samhitha* and *Hatha Yoga Pradipika* have been advocated regarding various food articles and diet for the balancing of bio-humors and the same may be applicable for metabolic disorders. In this way the Yogic diet not only help to sustain life, maintain health but also use Yoga practitioner (Sadhaka) to achieve the highest level of consciousness.

मिताहारं विना यस्तु योगारम्भं तु कारयेत्। नानारोगो भवेत्स्यकिञ्चिद्योगो न सिध्यति॥

घेरण्ड-संहिता 5.16

He who begins the practice of Yoga without controlling the diet suffers from many diseases and does not make progress in Yogic practices. A Yoga practitioner should eat fresh butter, ghee, milk, fruits, pomegranate juice, cardamom, nutmeg, cloves, apple, haritaki and controlled adequate diet.¹³

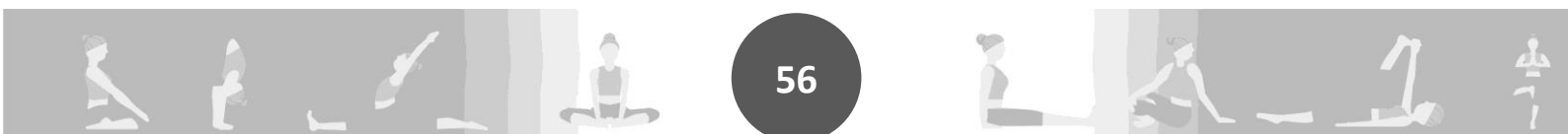
Diet and Food avoided in Pre-Diabetes:

In the beginning of Pre-diabetes patients should avoided white rice, white bread, some cereals and sugar sweetened beverages. He should avoid food that are hard, polluted, putrid, producing heat inside the body, stale extremely cold and extremely hot.

भोजनमहितं विद्यात्पुनरस्योष्णीकृतं रुक्षम्। अतिलवणमम्लयुक्तं कदशनशाकोत्कटं वर्ज्यम्॥

हठयोग प्रदीपिका 1.60

Eating the food which is excess bitter, sour, pungent, salty or hot, oil (mustard and seasma) and consuming alcohol, fish, meat, curds, buttermilk, kulattha, (wood apple), berries, oil-cakes, asafetida, garlic (even in small quantities) are said to be unwholesome. Similarly, food that is heated over and





over again, dry and excessively salty, sour and unwholesome should be avoided.¹⁴ Yogic diet is full of nourishment and is vital for improving physical, mental and emotional well being. It gives vigor and stamina for enjoying daily activities. The concept of contemporary foods are moving around balanced diet that contains carbohydrates, proteins, fats, vitamins, minerals and water; while Yogic diet lays great emphasis on green leafy vegetables, fruit, milk and cheese. All these foods and vitamins are possessing metabolic activity and these are helpful in such type of metabolic disorder.¹⁵ Food is the basic need of our life and in all the lifestyle disorder faculty diet plays a major role. It is the first line of defense against Pre-diabetes. The quantity and quality of the Yogic diet should be decided based on the vital power of the individual body and weight. Meals should be taken regularly and there should be adequate amounts of green vegetable salads, sprouts, fenugreek, turmeric and gourd. There should be the minimum amount of sugar in the diet and it should have adequate protein and calcium that are present in fruits and low-fat dairy products. It is important to maintain good hydration and therapists need to address that loss of few kilograms of body weight will help reduce blood sugar level and enhance insulin sensitivity.¹⁶ Yogic diet is a balanced diet that ancient yogis believed that it has a huge influence on physical well-being, ultimately emotional and spiritual well-being. Yogic diet aims to promote health through preventive measures and further manage the lifestyle disorder. Regular Yogic practice and Yogic lifestyle modification can help to prevention and management Pre-diabetes. Lifestyle modification and dietary regulation are mentioned in Yogic text *Hatha Yoga Pradipika*, *Gheranda Samhita* and *Bhagwada Geeta*, which have been mentioned above.¹⁷

According to *Bhagwada Geeta*:

आयुः सत्त्वबलारोग्यसुखप्रीतिविवर्धनाः। स्याः स्निग्धाः स्थिराहृद्या आहाराः सात्त्विकप्रियाः॥

भगवद् गीता 17.8

In the Bhagwad Geeta, the ancient Yogis divided foods into the following three main categories Sattvic foods, Rajasic foods and Tamasic foods of all three, Sattvic food is considered as the healthiest.

- Rajasic foods (Related to Rajasic Quality)
- Sattvic foods (Related to Sattvic Quality)
- Tamasic foods (Related to Tamasic Quality)

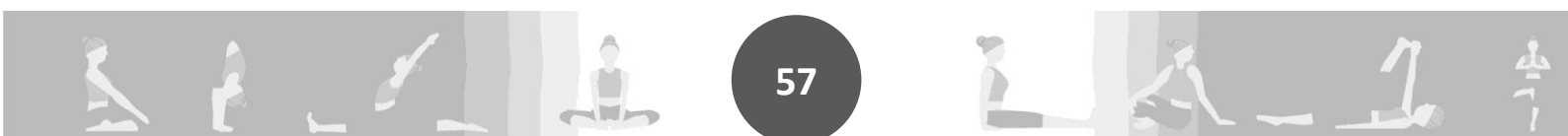
Benefits of *Yogic* diet Since the Sattvic Diet is pure, it gives the body innumerable health benefits. Here are some of the benefits of the Sattvic diet:

- A good and healthy *Yogic* diet plan promotes digestion and provides energy.
- It helps in keeping cleanliness in the abdomen.
- As Sattvic foods help in detoxifying circulatory toxins and activate insulin activity at periphery.
- Undoubtedly, eating Sattvic foods can help to lose weight and reduce breakouts.
- Tamasic and Rajasic food is the cause of blockage in the body and is auto-reactive in nature. Eating such type of diet persons is more prone to develop obesity and lifestyle disorders (like-hypertension, stress, Pre-diabetes etc.).
- Sattvic foods combined with *Yoga* practices helps to open these blockages, empower anti-oxidant property and increase the insulin sensitivity.¹⁸

A Sattvic guna, is calmer and more harmonious, with more tendency to meditate and live a healthy life. A Rajas guna, is more passionate and restless, with a tendency to search for power, possessions and dominations or Tamas guna, is more passionate and restless, with a tendency toward inertia and darkness.¹⁹ The Sattvic diet increases our physical and mental vitality making it easier to experience clarity and peace of mind. If we try to eat only Sattvic diet as much as possible we can see biological changes in our body chemistry renewing the digestive system.²⁰

Dietary guidelines for Pre-diabetic Patients are given below:²¹

- Reducing high-calorie intake will improve insulin sensitivity and lower blood sugar.
- Avoid fast food like burgers, cheese, ground meats, pizza etc.





- Eat the right amount of carbohydrates from unprocessed and unrefined foods as much as possible. Weight loss through the Yogic diet, which is rich in fruits, vegetables and encourages the use of fat-free or low-fat milk and milk product.
- Reduce high carbohydrate food in diet.
- Maintain adequate intake of dietary fiber and protein for Pre-diabetes health.
- A high-fiber diet improves insulin sensitivity by slowing down the digestion of carbohydrates. Good source of fibers are beans, lentils, vegetables.²²
- Avoid overeating to prevent overweight and obesity.
- Maintain intake of protein rich diet.
- Intake of complex food items at divided interval.

Discussion:

Yogic diet is vital and viable for physical and emotional well being. It gives us vigor and stamina to enjoy our daily activities. Food contains the nutrients such as protein and vitamins, while Yogic diet therapy lays great emphasis on green leafy vegetables, fruit, milk and cheese. Persons suffering from any metabolic disorder should take those vegetables, fruits, and dry fruits which are rich sources of vitamins, iron, magnesium and tyrosine. Yogic diet measures as described in the classical texts have significant input in the management of Pre-diabetes and it has emerged as an adjuvant therapy in the management of pre-diabetes and prevention of Type-2 DM.

Conclusion:

Recent evidences shows that Yogic diet therapy described in the texts have a significant role in the cure Pre-diabetes. Yogic Diet therapy, especially multigrain chapatti and vegetables helps in delayed digestion and thus reduces the peripheral glucose load. We can say that there is a need for systematic evaluation of the health outcomes of Pre-diabetes under the influence of Yogic measures & diet and to get appropriate dietary plan for further research. In current perspective, Yogic Dietary therapy can emerge as a potent tool to manage Pre-diabetes and also as an adjuvant along with ongoing management of Type-2 DM and its associated disorders.

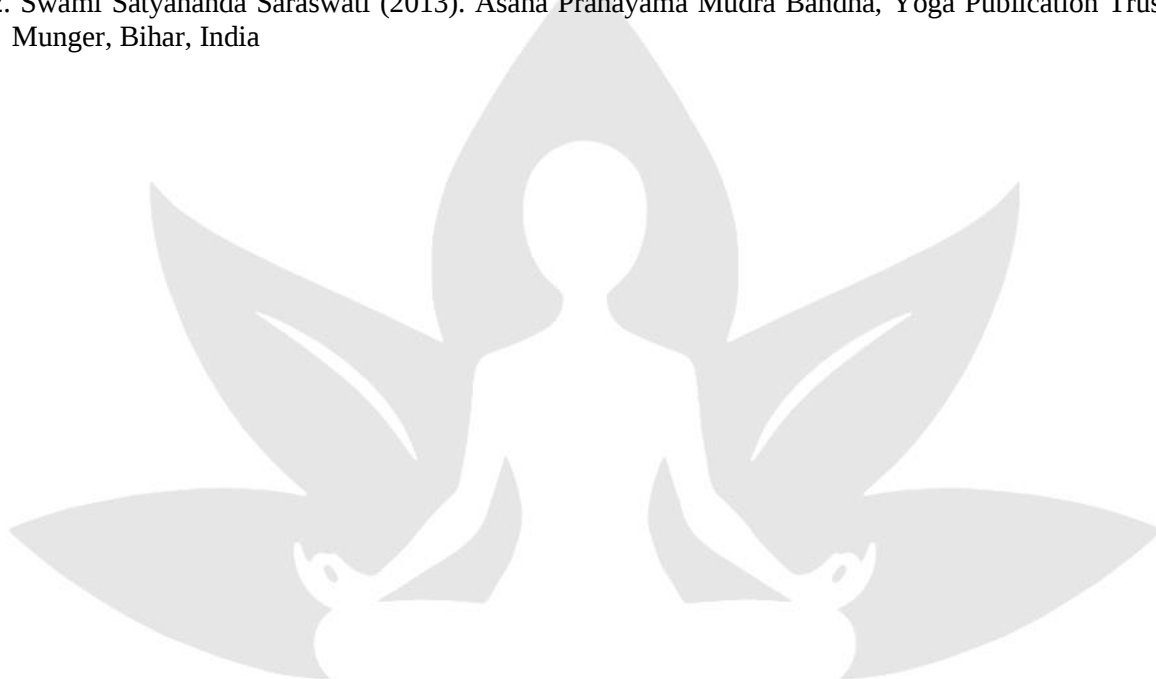
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SPECIALIZED *YOGIC* PRACTICES IN GERIATRIC POPULATION: AN OVERVIEW

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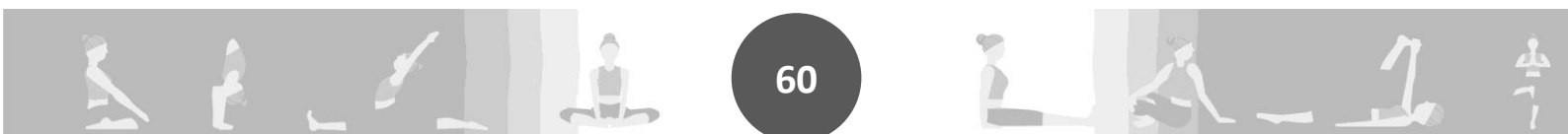
ABSTRACT

Geriatrics is a specialized field of healthcare that focuses on the well-being of elderly individuals and those experiencing the aging process. Its primary goal is to enhance health by preventing and managing diseases and disabilities among older adults. India is undergoing a significant demographic shift, with a noticeable increase in the elderly population from 1991 to 2001. Projections suggest that by 2050, the number of elderly individuals in India will reach approximately 324 million. *Yoga*, a spiritual discipline that promotes integrated and holistic development of the physical, mental, and spiritual aspects of our being, offers substantial benefits for older adults. It enhances strength and flexibility, helps in preventing age-related ailments, and supports overall well-being. Ancient *Yoga* texts provide detailed practices and *kriyas* designed to maintain good health even in advanced age. This article explores how various aspects of *Yoga*—such as *Yama* and *Niyama*, which impact social, emotional, and spiritual health; *Asana* and *Pranayama*, which strengthen the body and mind; and meditative procedures, which build resilience and delay aging, contribute to geriatric health care. *Yoga* not only makes aging more manageable but also more enjoyable. The effectiveness of *Yoga* in elderly care is increasingly supported by evidence, which shows that *Yoga* practices can improve muscle strength, enhance body flexibility, boost the immune system, and elevate both physical and psychological well-being.

Keywords: Geriatric healthcare, *preksha* meditation, *Yoga*, mind, *Yoga* therapy aims to promote health, *pratyahara*.

INTRODUCTION

Yoga is an ancient practice aimed at achieving harmony and wellness across the physical, mental, emotional, and spiritual dimensions of an individual. Often symbolized as a tree, *Yoga* encompasses eight key aspects or "limbs": *Yama* (universal ethics), *Niyama* (personal ethics), *Asana* (physical postures), *Pranayama* (breath control), *Pratyahara* (sense withdrawal), *Dharana* (concentration), *Dhyana* (meditation), and *Samadhi* (bliss). Geriatrics, or *Jara Chikitsa*, is the branch of medicine that focuses on the health issues and diseases associated with aging. According to *Acharya Charak*, the aging process, or *vridhnavastha*, begins at around 60 years of age. *Acharya Sushruta* and *Vagbhata* extend this range to 70 years and beyond. However, signs of early aging and the onset of geriatric diseases are increasingly appearing at younger ages. Aging is a natural, unavoidable process characterized by a gradual decline in physiological and physical functions. Biological aging results from the accumulation of molecular and cellular damage, leading to a gradual decline in physical and mental capabilities. In later years, the prevalence of non-communicable diseases such as hypertension, heart disease, type 2 diabetes mellitus, osteoporosis, osteoarthritis, sensory loss, and falls is notably high among the elderly. Additionally, aging often brings cognitive and mental health challenges, contributing to disability and a diminished quality of life. Cognitive decline is a common issue that significantly impacts the quality of life, while mental health problems; including anxiety, affective disorders, and substance-related disorders, are also prevalent. As the population of elderly individuals grows, there will be an increasing range of medical challenges, including sleep disturbances and other health issues associated with the aging process.¹ Further, there are some references which discuss the occurrence of somatic diseases in psychological illness and vice versa.² *Yoga* offers significant benefits for older adults





by enhancing strength, flexibility, and preventing pain and injuries. As a gentle form of exercise, *Yoga* positively impacts physical, mental, and emotional well-being in seniors. It combines meditation, breathing techniques, and physical postures to create a holistic approach to health. The potential benefits of *Yoga* for older adults include increased muscle strength, flexibility, and range of motion, along with improved energy, relaxation, and overall well-being. Additionally, *Yoga* can reduce pain, enhance sleep quality, lower stress levels, and help manage physiological parameters. Research increasingly supports *Yoga*'s role in promoting healthy aging.³ It may help mitigate age-related disorders such as cardiovascular disease and metabolic syndrome,⁴ alleviate anxiety and depression,⁵ ease back pain⁶ and improve the mental and physical health of sedentary individuals with arthritis.⁷ *Yoga* is highly beneficial for elderly care as it fosters balance and harmony between the mind, *brain*, and body through its mental, physical, and emotional practices. Increasing evidence indicates that *Yoga* enhances muscle strength, improves flexibility, and boosts the immune system, while also benefiting both physical and psychological health.

Multidimensional benefits of *Yoga* practices:

The literature includes numerous studies on the benefits of *Yoga* for various conditions, such as multiple sclerosis, osteoarthritis, posturing balancing, rheumatoid arthritis, breast cancer, low back pain, migraine, insomnia and epilepsy. Additionally, reviews highlight the positive effects of *Hatha Yoga* in rehabilitation following myocardial infarction, managing menopausal symptoms, diabetes, and hypertension. *Yoga asana*, which range from simple to complex postures, combined with controlled breathing techniques, have been associated with improved muscle strength, endurance, flexibility, range of motion, and cardiopulmonary endurance. Practicing *Yoga* enhances body awareness and proprioception, which contributes to better balance in older adults.

Yoga, as a study of life, encompasses an understanding of your body, breath, mind, intellect, memory, and ego. Its physical benefits include increased strength, flexibility, and overall health, while its mental benefits involve enhanced mindfulness and breathing practices. This improved mind-body connection fosters a sense of presence and self-satisfaction.

- **Enhanced Strength and Confidence:** *Yoga* increases muscle tone and fortifies the body. By holding poses, muscle fibers are activated and work intensively to maintain strength and stability.
- **Improved Posture and Balance:** Balance issues in the elderly often stem from a combination of age-related and disease-related declines in the balance system. *Yoga* helps address these multifactorial conditions, leading to better posture and improved balance.⁸
- **Improved Posture and Balance:** *Yoga* is well-known for enhancing posture and balance, and consistent practice can help you achieve these benefits. This improved stability helps you feel more grounded and reduces the risk of falls.
- **Increased Mobility:** *Yoga* significantly improves range of motion and flexibility. It keeps your body supple and alleviates joint pain and general aches, especially those associated with prolonged sitting.
- **Encourages a Positive Outlook:** As people age, physical activity often decreases, which can affect mood and energy levels. *Yoga*, despite being a gentle, low-impact exercise, boosts your mood and energy, enhances overall well-being, and promotes a sense of positivity and improved quality of life.
- **Reduced Blood Pressure and Better Sleep:** *Yoga* induces a profound sense of calm during and after practice. This relaxation helps lower blood pressure and supports restful sleep, improving the balance between deep sleep and a healthy sleep pattern. Sleep disturbances negatively affect daytime functioning and overall quality of life in the elderly.⁹ Insufficient sleep can lead to significant socioeconomic and health repercussions, including increased morbidity, cognitive impairment, and reduced quality of life.^{10,11} Factors such as insufficient physical activity, poor sleep hygiene, and excessive daytime napping also contribute to sleep problems in older adults.





Evidence indicates that *Yoga* practice positively affects the cardiorespiratory system.^{12,13,14,15} Slow-paced breathing has been shown to reduce both heart rate and systolic and diastolic blood pressure.¹⁶ In contrast, fast-paced breathing results in a more modest, yet consistent, increase in heart rate.^{17,18,19,20}

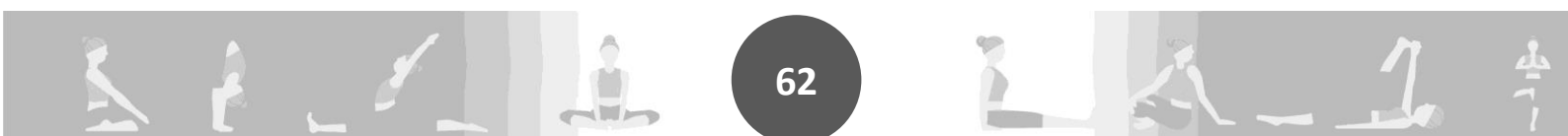
- **Improved Respiratory Function:** *Yoga* enhances respiratory function in older adults by teaching full, deep, and slow breathing into the belly. This technique maximizes lung capacity, allowing more oxygen to circulate throughout the body and creating a calming effect on both body and mind.
- **Enhanced Cognitive Function:** *Yoga* encourages present-moment awareness by focusing on breath and body positioning, which fosters mental clarity and concentration.
- **Improved Circulation:** The gentle, flowing movements in *Yoga* stimulate increased blood flow throughout the body.
- **Better Digestion:** As aging can weaken organs and slow down bodily functions, *Yoga's* detoxifying effects, particularly from abdominal twists, boost the digestive system and aid in toxin elimination, leaving you feeling refreshed.
- **Improved Mindfulness:** *Yoga* benefits the mind as well as the body. With 20% of people over 55 experiencing mental health issues such as depression, anxiety, or mood disorders, *Yoga's* emphasis on breath and meditation helps maintain mental focus and calm, enhancing overall quality of life.

Yoga Asanas for Geriatric Health

- ***Trikonasana* (Triangle Pose):** *Trikonasana* is effective in reducing hypertension, a prevalent issue among the elderly. It facilitates fat reduction in the waist and thighs, contributing to a lighter and fitter physique. This *asana* enhances stability and balance, mitigating fidgetiness and instability. Additionally, it strengthens and stretches the arms and legs, thereby aiding older adults in performing daily activities with greater ease.
- ***Kati Chakrasana* (Waist Rotating Pose):** *Kati Chakrasana* alleviates stiffness in the back, shoulders, and neck muscles, promoting flexibility in senior citizens. It fortifies the back, neck, and shoulders while expanding the chest and improving lung capacity.
- ***Baddha Konasana* (Bound Angle Pose):** *Baddha Konasana* stimulates the bladder and kidneys, alleviates fatigue and anxiety, and improves posture. It also helps in relieving sciatica and supports the smooth transition through menopause.
- ***Shishuasana* (Child's Pose):** This pose is highly effective in relieving back pain and enhancing blood circulation by calming the nervous system. It provides significant relaxation to the back, making it a commonly practiced *asana* among older adults.
- ***Bhujangasana* (Cobra Pose):** *Bhujangasana* helps to loosen a stiff lower back and stretches the muscles in the chest, abdomen, and shoulders, promoting flexibility. Most importantly, it strengthens the spine.
- ***Shalabhasana* (Locust Pose):** *Shalabhasana* tones the neck and back muscles, enhancing flexibility. It also stimulates the abdominal organs, thereby improving digestion.
- ***Pawanmuktasana* (Wind-Relieving Pose):** This *asana* strengthens the abdominal muscles and massages the intestines and digestive organs, facilitating the release of trapped gases and improving digestion. It also fortifies the back muscles and tones the arms and legs.

Specific *Pranayama* procedures for elderly population:

As the elderly population grows, maintaining health and well-being becomes increasingly important. *Pranayama*, or controlled breathing practices, has garnered attention for its potential benefits in this age group. *Pranayama* refers to breathing techniques utilized in *Yoga*. For seniors, *Pranayama* can be a valuable practice for enhancing both mental and physical well-being. Research indicates that a *Yoga* program, including *Pranayama*, can help mitigate symptoms of hypertension, osteoporosis, and arthritis—three prevalent conditions in the aging





population.²¹ Additionally, other studies have demonstrated that Yoga can positively impact mental health in older adults.²² Some popular *Pranayama* practices are:

- **Dirgha Pranayama (Three-Part Breath):** *Dirgha Pranayama's* focus on deep, slow breathing helps in improving lung capacity and promoting a state of relaxation, both of which are beneficial for the elderly.
- **Ujjayi Pranayama (Ocean Breath):** *Ujjayi Pranayama* aids in mental clarity and stress reduction by regulating the autonomic nervous system, offering cognitive and emotional benefits.
- **Nadi Shodhana (Alternate Nostril Breathing):** *Nadi Shodhana* supports cardiovascular health and emotional stability by balancing the autonomic nervous system and reducing stress.
- **Bhramari (Bee Breath)** *Bhramari* enhances relaxation and cognitive function while reducing anxiety and stress, offering several benefits for older adults.

Specific *Pratyahara* based relaxation procedure:

- **Yoga nidra:**
During *Yoga nidra*, practitioners achieve a state that resembles sleep while maintaining deeper levels of awareness. This practice facilitates access to subconscious and unconscious dimensions, which can help elderly individuals, address psychological issues such as loss of confidence, diminished self-esteem, depression, unmet dependency needs, loneliness, boredom, and fear of the future. *Yoga nidra* is particularly beneficial for those who convert psychological difficulties into physical symptoms related to aging.

Specific meditative procedures:

- **Preksha dhyana :**
Preksha dhyana, a form of meditation involving breath control and mindfulness, is a safe and cost-effective method for promoting health with minimal risk of adverse effects. This practice enhances mental focus, alleviates restlessness and anxiety, and improves overall mental and physical efficiency. Research shows that *Preksha dhyana* can reduce stress, balance the autonomic nervous system²³ it is a powerful tool for expanding consciousness and strengthening both vital and psychic energy.
- **Vipassana:**
Vipassana is one of the oldest meditation practices aimed at enhancing mindfulness. It plays a crucial role in health management for the elderly, addressing well-being, illness prevention, and condition management. *Vipassana* has shown promise in alleviating loneliness, emotional and physical stress, and depression in older adults. This practice can lead to significant improvements in psychosocial well-being, contributing to a better quality of life and enhanced social functioning.
- **Mindfulness:**
Mindfulness training has emerged as a popular method for reducing psychological distress and maintaining emotional health. Interventions based on mindfulness have been effective in decreasing stress and managing physical health issues such as pain, cancer, rheumatoid arthritis, and other chronic conditions.²⁴ Studies have found that mindfulness-based interventions lead to significant reductions in loneliness, depression, anxiety, stress, sleep problems, and rumination, while improving mood and overall positive affect.²⁵

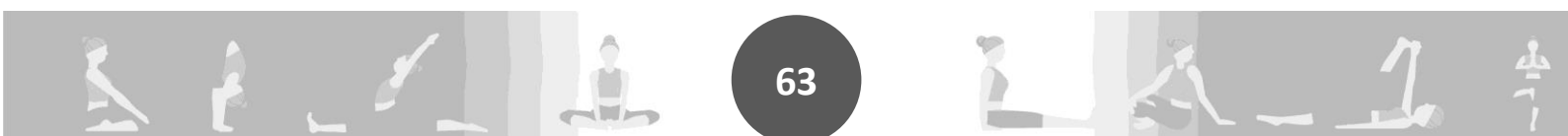




Table no.1: Some important previous studies with *Yogic* practices

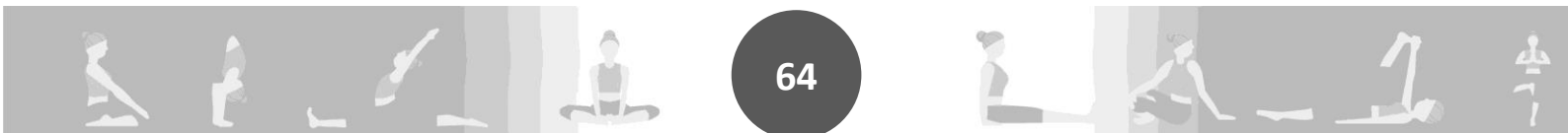
Sr. no	Previous Studies	Reference
1	The impact of <i>Yoga</i> practices on muscular strength for preventing symptoms of multiple sclerosis.	(Sarbaz et al., 2020)
2	Effects of <i>Yoga</i> practices on immune responses, counteracting autonomic changes and cellular immunity impairment.	(Gopal et al., 2011)
3	Improvements in respiratory and cardiovascular functions through <i>Yoga</i> practices, including strengthened inspiratory and expiratory muscles, regulated breathing, and reduced systolic blood pressure, pulse pressure, and mean arterial pressure to support blood circulation and prevent related diseases.	(Loganathan et al., 2019)
4	Enhanced physical health in chronically ill patients, with notable improvements in health status and quality of life, particularly for those with arthritis, through <i>Yoga</i> practices.	(Cramer et al., 2013)
5	Benefits of daily <i>Yoga</i> exercises for at least one hour in elderly individuals, leading to better sleep quality and fewer sleep disturbances.	Bankar et al., 2013)
6	<i>Anuloma-Viloma Pranayama</i> for three months significantly reduced anxiety and depression among senior citizens.	(Pranay Kumar Gupta et al., 2010)
7	Twelve-Minute Daily <i>Yoga</i> Regimen Reverses Osteoporotic Bone Loss	(Lu, Y. H. et al., 2016)
8	<i>Yoga</i> -based exercise improves balance and mobility in people aged 60 and over:	(Youkhana S, et al., 2016)
9	The effect of <i>Yoga</i> on balance and fear of falling in older adults	Nick N et al., 2016)
10	<i>Yoga</i> as a Preventive Intervention for Cardiovascular Diseases and Associated Comorbidities	(Sharma, K et al., 2022)

Conclusion

Yoga is an optimal form of psychophysical exercise for elderly individuals, as it can be readily adapted to meet their specific needs and effectively reduce the risk of injury. It plays a crucial role in decelerating the aging process by promoting muscle flexibility, maintaining mental alertness, encouraging relaxation, and enhancing the strength of muscles and joints. The multifaceted approach of *Yoga* supports the overall health of the body, mind, and spirit, addressing a range of age-related issues. Aging is influenced by both physiological and psychological factors, and *Yoga* contributes to a positive mental state. Thus, *Yoga* has the potential not only to extend lifespan but also improve the quality of life in later years. Incorporating *Yoga* into daily routines should be considered an essential component of maintaining health and well-being in the elderly population.

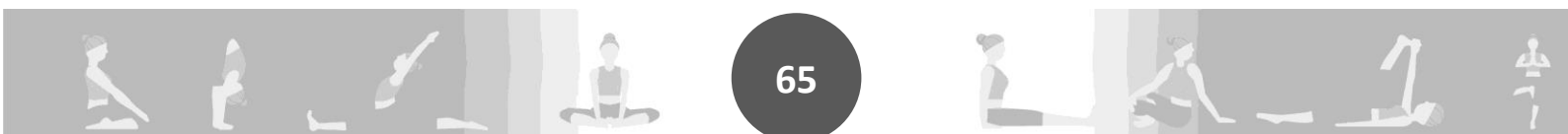
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