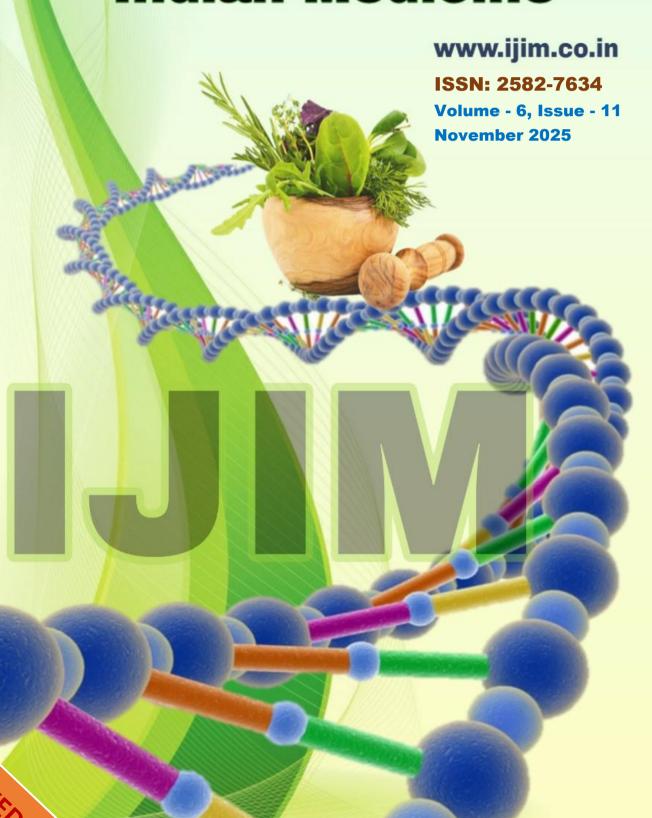


International Journal of Indian Medicine



International Journal of Indian Medicine, 2025; 6(11):83-90



International Journal of Indian Medicine



ISSN: 2582-7634

An Ayurvedic Perspective on Neurological Balance with Special Reference to Vata Dosha Pimparkar P.¹, Parekh G.²

- Assistant Professor, Kriya Sharir Department, Ahinsa Institute of Ayurveda, Dondaicha, Dhule, Maharashtra
- 2. Professor, Kriya Sharir Department, Ahinsa Institute of Ayurveda, Dondaicha, Dhule Maharashtra

ABSTRACT:

The meaning of the word Ayurveda is "Knowledge of Life." Our body is rooted in Dosha, Dhatu, and Mala. The doshas function by means of dhatus and malas. The dhatus and malas are the structural components and the Doshas are the energy forms. Each concept in Ayurveda is based the Panchmahabhutas; the Dosha represent the physical form of Panchmahabhutas in our body Ayurveda, the ancient science of life, classifies physiological functions into three doshas: Vata, Pitta, and Kapha. Among these, Vata Dosha is primarily responsible for movement, communication, and nervous system regulation. This article explores the intricate relationship between Vata Dosha and neurological balance, correlating Ayurvedic principles with modern neurophysiology. The nervous system, particularly the autonomic and central nervous systems, exhibits characteristics akin to Vata, such as rapid transmission of impulses, sensory perception, and motor control. Imbalances in Vata Dosha are often linked to neurological disorders like anxiety, insomnia, and neurodegenerative conditions. Ayurveda emphasizes the use of dietary modifications, lifestyle practices, herbal formulations, and therapies such as Abhyanga Shirodhara, and Nasya to restore Vata equilibrium and promote nervous system health. This, Article aims to provide a holistic perspective on neurological wellness by integrating Ayurvedic wisdom with contemporary scientific insights.

KEYWORDS: Ayurveda, Vata, Dosa, Pitta, and Kapha. Panchmahabhutas Nervous system, CNS Abhyanga, Shirodhara, and Nasya

CORRESPONDING AUTHOR:

Dr. Pallavi Prakash Pimparkar

Assistant Professor, Kriya Sharir Department, Ahinsa Institute of Ayurveda, Dondaicha, Dhule, Maharashtra Email - <u>pallujoshi89@gmail.com</u>

How to cite this article: Pimparkar P., Parekh G. An Ayurvedic Perspective on Neurological Balance with Special Reference to Vata Dosha. Int J Ind Med 2025;6(11):83-90

DOI: http://doi.org/10.55552/IJIM.2025.61112

INTRODUCTION:

The three-fold management system known as Tridosha theory, which consists of Vata, Pitta, and Kapha Dosha, is the foundation for all Ayurvedic principles pertaining to physiology, pathology, diagnosis, prognosis, medicine, and treatments. Every Dosha is represented by many physiological and physical characteristics. Of the three, vata is without a doubt the most crucial and vital dosha for survival. The word Vata is formed by combining the essential concepts Gati (movement) and Gandhana (senses).

- 1. The vata dosha is represented by Daruna (with severe implications), Bahu-Ighra, and Anavasthita, similar to how nerve impulses rapidly transfer information from one part of the body to another (always changing).
- 2 Vata is the sign that governs many kinetic and physiological characteristics, such as respiration, circulation, voluntary action, etc. It is also the sign that governs psychological characteristics, such as enthusiasm, concentration, etc.
- 3 Vata is the principal energy responsible for maintaining homeostasis, or normal sensory and motor processes necessary for survival. Notably, there is a direct correlation between significant neurological problems and deficient Vata Dosha
- 4 The "homeostatic" or "Tantra Yantra Dhara" functions of the Vata Dosha preserve normalcy. The ANS maintains survival and homeostasis an unconscious "automatic") manner. The reproductive, digestive, excretory, and circulatory systems are all under control by the ANS. The Ayurvedic concept of Vata Dosha is deeply intertwined with the functions of the Tantrika Tantra (nervous system). Vata is responsible for all physiological movements, including neural transmission, sensory perception, cognition, and motor coordination. The Majjavaha Srotas (nervous system pathways) and Manovaha Srotas (mental channels) are

directly influenced by Vata. When in equilibrium, Vata maintains Sharira Kriya (bodily functions) and Manas Prakriti (mental stability). However, its vitiation leads to Vata Vyadhi (neurological disorders) affecting both physical and mental health.

Aim and Objective

Aim: To explore the Ayurvedic perspective on neurological balance with special reference to Vata Dosha, highlighting its physiological role, pathological manifestations, and holistic management.

Objectives:

- 1. To understand the correlation between Vata Dosha and the nervous system (Tantrika Tantra) based on Ayurvedic principles.
- 2. To analyze the role of VATA in regulating neurological functions.
- 3. To explore Ayurvedic treatment modalities for Vata-related neurological disorders.

Material and Method

Material:

Ayurvedic Classical Texts – Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya

Modern Research – Studies on Vata Dosha and the nervous system

Therapeutic Modalities – Ahara, Vihara, Aushadhi, Panchakarma, Yoga, Pranayama Methodology:

Literature Review of Ayurvedic and modern neurological concepts

Data Collection from classical texts and modern research

Therapeutic Approach involving Ayurvedic treatments for Vata disorders

PHYSIOLOGICAL FUNCTIONS AND QUALITY OF VATA

Though Vata is all pervading and responsible for all activities in our body, basing on the names, site and functions. The sharir Vata is divided into five categories.

1 PRANA VATA: the word Paraná is related derived from the Sanskrit Root "AN" with a prefix "PRA" means to Breath, to live. Therefore Parana Vata is responsible for all

vital functions like Respiration, Heart rate and other vegetative functions which essential for human existence. According to Charka and Vagbhatta the Parana Vata is located in the Head and it is stated to traverses in the region of oral cavity, nose, neck and chest for the proper control and discharges its function. The function like Buddhi Dhahran, Mano Buddhi, Tatwa ganana, Dhahran, grahan, Indrias Buddhi knowledge), smriti (sensory (memory), (knowledge through anubhava direct perception, inference. analogy, verbal testimony). The anatomical relation with nervous system is Hippocampus, Cerebral cortex, Wernick's area, Physical cortex, anterior thalamic group. In physical function site of working memory helps in complex intellectual activities like judgment, decision making. Helpful in retention and recollection of recent and past experiences. Chital Dhahran function holds the function of Manas (indriabhigraha-initiates and withdraws indrias (ganana- intellectual, karma-motor) from perceiving their objectives and sends information to Atma. The anatomical relation with nervous system is Heschl's gyrus, post central gyrus, insural cortex, amygdale, cerebellum, hypothalamus dorso medial associating with prefrontal gyrus, primary motor area, pre motor area, basal ganglion. Physiological function like Intellectual, Emotional, Motor activities. The other function like Hridaya dharana, Swasa, Anna pravesana, Sneezing, Spitting, Belching. The anatomical relation with nervous system neuron lie in dorsal motor nucleus of the Vagus nerve in reticular formation of medulla, Caudal hypothalamus, Vasomotor centre in medulla, Respiratory centers located in the reticular formation of Brain stem, Nuclei of Trigeminal, Facial, Gloss pharyngeal, Vagus, other parts of brain, Sneezing centre of CNS stimulated by impulses through Trigeminal nerve from the nasal mucosa, nucleus of facial nerve located in caudal portion of Pons, Medulla (a poly synaptic visceral reflex).

UDANA VATA: Acharya Vagbhatta considered that the Prana Vata is essential for the life and Udana Vata is for the strength of a person. If they are disturbed there is danger both life and strength. The Vata is situated in Uras (chest) and circulates between Nostrils. neck and nabhi. The function of this Vata is Production of speech, work, mental stamina, zeal, colour and smriti. The function again divided be into: **Psychic** physiological, Urja and smriti are psychic and speech, prayatana, Bala, Varna physiological. Anatomical relation nervous system the motor fibers of the cranial nerves- facial, gloss pharyngeal, Vagus and accessory, hypoglossal as a whole can be compared to cervical plexus as it is

formed by these along with nerves arising from vertebrae C1-C4.

3 VYANA VATA: Vata is concerned with motor and sensory function of body. The life of an indivisual is dependent upon these two functions. The movements may be visible or invisible. Both Prana and Udana concerned with some of visible and invisible movement in the body. The locomotion is a visible movement and it is one of the most important functions of living body. All movements are effected through contraction and relaxation of the muscles. Vyana Vata controls the voluntary movement of the body. This Vata is situated in the Hridaya and circulates in the whole body through the medium of Rasa Dhatu. The function of Vyana Vata are Rasa samvahana (circulation of blood), Gamana (walking), Apakshepana (downwards movements of limb), Utkshepana (elevation), Nimesha and Unmesha (movements of eye lids). Vyana Vata is described as Mahajwa (highly powerful). Therefore it keeps the Rasa Dhatu in circulation (yugapath) i.e. continuously throughout the life. Anatomical relation with

nervous system CNS, motor nerve supply to the cardiac muscle, Thoraco lumber sympathetic division and vasomotor centre of ANS and parasympathetic, Hypothalamus, sympathetic division and vasomotor centre of ANS.

4 SAMANA VATA: some of the important function of a living being to ingest food, digest and assimilate to maintain the life and also the mass of the body. This Vata is situated near the Jatharagni and moves about all through the Kostha (Alimentary canal). The function of Samana Vata are Annagrahanam (reception of food that is swallowed), Agni sandhukshana (stimulation of stomach and intestines to screat digestive juices), Annapachana (digestion indirectly through digestive juices), Sara kitta vibhajana (sorting of digested, undigested, indigestible and excretory parts of ingested food materials), Facilitates absorption of digested food and excretion of waste products, control over Sweda Vaha, Dosa Vaha and Udakavaha Srotas. Anatomical relation with nervous system Vagal, Gloss pharyngeal supply of the GIT (gastrointestinal tract), ENT (entric nervous system), Sympathetic, sympathetic supplyof glands of digestive system, myo entric plexus, parasympathetic innervations of colon, Aurbach's plexus of Autonomic nervous system.

5 APANA VATA: The Vata which has a special tendency to moves downwards is called Apana Vata. This Vata is situated in the pelvic and sacral regions. It circulates through Shroni (pelvic region), Vasti (bladder), Medra (penis and vagina in case of females) and Uru(thighs). The function of Apana Vata is Shukra Pravrutti (ejaculation of semen), Pravrutti (menstruation Artava ovulation), Pureesha Pravrutti (evacuation of bowels), Muttra Pravrutti (micturation) and Garbha nishkramana (parturition-labor). Anatomical relation with nervous system sensory fibers of the pelvic nerves, motor branches of the pudendal nerve, pontine, spinal regions which can be considered as indrias Dhahran of (Parana), parasympathetic supply, sympathetic supply in L1-L2 level, nerve supply to the muscles of uterus and abdomen, hypothalamus, plexus of autonomic nervous system.

Ayurvedic Management of Neurological Disorders

1. Nidana Parivarjan (Eliminating the Cause)

The first step in Ayurvedic management is identifying and avoiding the root causes (Nidana).

Factors aggravating Vata dosha include:

Excessive fasting and irregular eating habits, Overuse of dry, light, and cold foods Chronic stress, anxiety, and overthinking, Excessive travel and lack of proper rest Cold exposure and excessive physical exertion, Avoiding these triggers helps in stabilizing Vata and preventing neurological dysfunctions.

2. Shodhana Chikitsa (Detoxification & Purification Therapy)

Detoxification therapies play a significant role in balancing Vata and clearing Avarana (blockages) in nerve channels.

- a) Panchakarma for Neurological Disorders
 Panchakarma therapies help in Vata pacification and nerve rejuvenation.
- b) Snehana (Oleation Therapy): Use of medicated oils like Maha Narayana Taila, Bala Taila, Ksheerbala Taila for external and internal lubrication.
- c) Swedana (Sudation Therapy): Steam therapy using Dashmoola Kwath or Bala Mooladi decoctions to reduce stiffness and increase blood circulation.
- d)Basti (Medicated Enema Therapy):

Anuvasana Basti (Oil-based enema): Nourishes nerve tissues. (e.g., Ksheerbala Taila, Sahacharadi Taila)

Niruha Basti (Decoction enema): Eliminates toxins and balances Vata (e.g., Dashmool Kwath Basti, Erandmooladi Basti).

- e) Nasya (Nasal Therapy): Nasal administration of medicated oils (e.g., Anu Taila, Shadbindu Taila) supports brain function and nerve rejuvenation.
- f) Shirodhara (Oil Streaming Therapy): A continuous stream of warm oil on the forehead helps relieve stress, anxiety, and neurodegenerative conditions.

3. Shamana Chikitsa (Pacification Therapy)

After detoxification, internal medicines are given to balance Vata and nourish nerve tissues.

a) Medications & Herbs

Brahmi (Bacopa monnieri): Enhances memory, reduces anxiety, and strengthens the nervous system.

Ashwagandha (Withania somnifera): Acts as a nerve tonic and stress reliever.

Shankhpushpi (Convolvulus pluricaulis): Supports cognitive functions and mental clarity.

Jatamansi (Nardostachys jatamansi): Calms the mind and prevents neurodegeneration. Vacha (Acorus calamus): Useful in speech disorders and improving neural communication. Ksheerbala Taila & Mahamasha Taila: Used for Abhyanga (oil massage) and Basti therapy for nerve nourishment.

b) Classical Formulations

Vata Chintamani Rasa – Used in neurological disorders like paralysis and epilepsy.

Brahmi Ghrita – Improves cognitive function. Saraswatarishta – Beneficial in neuropsychiatric disorders.

Dashmoola Kwath – Reduces inflammation and nerve-related pain.

4. Rasayana Therapy (Rejuvenation & Nerve Strengthening)

Rasayana therapy helps in restoring neurological strength and regenerating damaged nerve tissues.

Medhya Rasayana (Cognitive Enhancers): Brahmi, Shankhpushpi, Ashwagandha, Swarna Bhasma is used in degenerative neurological disorders.

Vata-Pacifying Rasayana: Chyawanprash, Ashwagandha Lehyam

5. Ahara (Dietary Management)

A Vata-pacifying diet includes warm, nourishing, and unctuous foods.

Recommended Foods:Milk, ghee, sesame oil, nuts (almonds, walnuts) for nerve nourishment. Mung dal, rice, wheat, and root vegetables for stability. Warm herbal teas (ginger, cinnamon, ashwagandha) for calming Vata. Foods to Avoid:Dry, cold, processed foods. Excessive caffeine, alcohol, and smoking. Excessive bitter, pungent, and astringent foods.

6. Vihara (Lifestyle Modifications)

Regular Oil Massage (Abhyanga): Applying warm oil helps in calming Vata

Yoga & Pranayama:

Bhramari Pranayama – Calms the nervous system. Nadi Shodhana Pranayama – Balances Vata and improves mental clarity. Asanas: Vrikshasana, Shavasana, and Balasana enhance neurological stability. Adequate Sleep: Proper rest is essential to avoid Vata aggravation.

DISCUSSION:

The Ayurvedic concept of Vata Dosha shows a strong correlation with the functions of the modern nervous system. Each subtype of Vata—Prana, Udana, Vyana, Samana, and Apana—reflects specific neurological and physiological functions such as respiration, sensory perception, motor control, digestion, and elimination. These functions closely resemble the roles of the central, autonomic, and enteric nervous systems described in contemporary science. Imbalance of Vata is linked with neurological and psychological including anxiety, disorders insomnia, neuropathies, and degenerative conditions. Ayurvedic texts emphasize restoring Vata balance through Nidana Parivarian, Panchakarma therapies such as Basti, Nasya,

Yoga and Pranayama provides a comprehensive strategy for managing Vatarelated neurological disorders.

and Shirodhara, and the use of Medhya Rasayana like Brahmi and Ashwagandha. Diet, lifestyle modification, yoga, pranayama further support Vata stability and neurological harmony. Overall, discussion highlights that integrating principles Avurvedic modern with neurophysiology provides a holistic approach to understanding and managing neurological disorders, demonstrating the relevance of Vata Dosha in maintaining nervous system health.

CONCLUSION:

The following statement indicates the relative levels in the CNS of the functional regions an aspect of the five sub divisions of the Sharir Vata certain overlapping may be noticed.

- 1 PRANA VATA: Reticular formation from the brain stem to medulla oblongata with connections to the brain and higher centers.
 2 UDANA VATA: reticular formation from the lower part of Pons to the spinal cord up to the cervical segments 3, 4, 5 and upper thoracic segments 2 to 6. The motor nuclei of the facial, glossopharngyal, Vagus, spinal, accessory, hypoglossal nerves are also included.
- 3 VYANA VATA: the anterior lateral horn cells of the spinal cord T1 TO L2 or L3 segments.
- 4 SAMANA VATA: myo enteric and sub mucous plexus of the GIT track.
- 5 APANA VATA: Lower lumber and sacral segments of the spinal cord.

As a whole all the five sub divisions of vata are facilitated by coordination of Parana and Vyana Vata with each other. Hence these can be correlated to basic functions of nervous System The Ayurvedic concept of Vata Dosha aligns closely with the modern understanding of the nervous system. Vata pacification through Panchakarma, Medhya Rasayana, and lifestyle modifications offers a holistic approach to neurological health. The integration of Ayurvedic treatments with

REFERENCES:

- 1. Charaka Samhita, Text with English Translation, Chowkhamba orientalia, Varanasi Sixth Edition 2000.
- 2. Charaka Samhita of Agnivesha, Revised by Charaka and Dridhbala, with Ayurveda Dipika Commentary of Chakrapanidatta's with Vidyotini Hindi Commentary by Pt. Kasinath Shastri, Published by Chaukambha Sanskrit Sansthan, Varanasi. Eighth Edition, 2004.
- 3. Charaka Samhita of Agnivesha, Revised by Charaka and Dridhbala, with Vaidyamanorama Hindi Commentary by Acharya Vidyadhar Shukla and Prof. Ravi Dutt Tripathi, Published by Chaukambha Sanskrit Pratishthan, Delhi. Edition 2004.
- 4. Sushruta samhita, Text with English translation, by Kaviraj Kunjalal Bhishagratna, prologued and edited by Dr.Laxmidhar Dwivedi, Chowkhamba Sanskrit Series office, Varanasi (India). Third Edition 2005.
- 5. Sushruta Samhita of Acharya Sushruta, edited with Ayurveda Tattva Sandipika by Kaviraj Ambikadutta Shastri, Published by Chowkhamba Sanskrit Sansthan, Varanasi. Seventeenth Edition 2003.
- 6. Ashtanga Hridayam of Vagbhata, edited with Vidyotini Hindi commentary by Kaviraj Atrideva Gupta, Chaukambha Prakasha, Varanasi. Edition 2009.
- 7. Ashtanga Hridayam of Vagbhatta, a, translated by Prof.K.R.Srikantha Murty Chowkhamba Krishnadas Academy, Varanasi. Edition 2003.
- 8. Vagbhatta, Ashtanga Sangraha: with Hindi commentary by Kaviraj Atrideva

- Gupta, Krishnadas Academy, and Varanasi. Edition 2002.
- Ashtanga Samgraha of Vagbhata, Translated by Prof. K. R. Srikanthamurty, Chowkhamba Orientalia, Varanasi. Ninth Edition 2005.
- 10. Madhava Nidana of Sri Madhavakara, with Madhukosha Sanskrit commentary by SriVijayarakshita and Srikantha Datta, Vidyotini Hindi commentary by Sri Sutrasthana Shastri, Chowkhamba Sanskrit Sansthan, Varanasi, reprint Edition 2005.
- 11. Ayurvedic Clinical Diagnosis, based on Madhava Nidana, by G.D.Singhal, Published by Chaukambha Sanskrit Pratishthan, Delhi. Edition 2004.
- 12. Madhava Nidana of Acharya Madhavakara, with Madhukosha Sanskrit commentary by Vijayarakshita and Srikanthadutta, Saroj Hindi commentary by Dr.Ravi Dutt Tripathi, Chowkhamba Sanskrit Pratishthan, Delhi. Edition 1993.
- 13. KayaChikitsa by Dr. Vidyadhar Shukla, Chowkhamba Surabharati Prakasha. Edition 2004.
- 14. KayaChikitsa by Prof. Ramaharsha Singh, published by Chowkhamba Sanskrit Pratishthan Delhi. Edition 2004.
- 15. Sushruta Samhita of Acharya Sushruta, with Nibandhasangraha Commentary of Sri Dalhanacharya edited by Vaidya Jadavji Trikamji Acharya, Published by Chowkhamba Orientalia, Varanasi. Edition 2005.
- 16. Baghel M S, Research in Ayurveda, Mridu Ayurvedic publications & sales, Jamnagar 1997.
- 17. Yogaratnakara Vidyotini Hindi commentary by Vaidya SriLaksmipati Shastri, Chaukambha Sanskrit Sansthan, Varanasi. Seventh edition 1999.

- 18. Chakrapanidatta of Chakradatta with Vaidayaprabha Hindi commentary by Dr. Indradeva Tripathi, Chowkhambha Sanskrit Sansthan, Varanasi. Edition 1997.
- 19. Kashyapa Samhita, By Vriddha Jivaka, Revised by Vatsya with Vidyotini Hind commentary by Sri Satyapala Bhishagacharya, Chaukambha Sanskrit Sansthan, Varanasi. Edition 2000.
- 20. Madhava Nidana of Sri Madhavakara, with Madhukosha commentary by Vijayarakshita and Srikantha Datta, Vimala Madhukara Hindi commentary by Dr Brahmananda Tripathi, Chaukamba Surabharati Prakashana, Varanasi.
- 21. Kashyapa Samhita or Vriddha Jivakiya Tantra, edited by Prof. P. V. Tiwari, Chaukambha Vishwabharti, Varanasi. First Edition 1996.
- 22. Basic Principles of Ayurveda, By V.B. Athavale, Published by Chowkhambha Sanskrit Pratishthan, Delhi. Edition 2004.
- 23. Sharma Shri Sadananda, Rasatarangini (1998), Hindi commentary by pt Kashinath Shastri, Motilal Banarasidas. Delhi.
- 24. Bhaisajyaratnavali of Sri Govinda dasji, Commentry By Kaviraja Sri Ambikadatta Shastri, English translation by Dr. Kanjiv Lochan, Chaukhambha Sanskrit Bhawan, Varanasi. Edition 2006.
- 25. Ayurved ka Vaigyanika Itihasa, by Prof. P. V. Sharma, Chaukambha Orientalia, Varanasi. Ninth Edition 2007.
- 26. Ayurved ka Itihasa evam Parichaya, by Dr. Vidyadhar shukla and Dr. Ravidutt Tripathi, Chaukhambha Sanskrit Pratishthan, Delhi. Edition 2007.
- 27. Ayurvediya Vikriti Vijnana by Dr. Vidyadhar Shukla, Chaukhambha Sanskrit Pratisthan. Delhi.

- 28. Concise Medical Physiology, By Sujit K. Chaudhuri.; New Central Book Agency (p) Ltd, Kolkata. Sixth Edition, Reprint 2008.
- 29. Essentials of Medical Physiology, By K. Sembulingam and Prema Sembulingam, Jaypee Brothers Medical publishers, Delhi. Fifth Edition, Reprint 2010.
- 30. Davidson's Principles and practice of Medicine, By Sir Stanley Davidson, Published by Churchill Livingstone, Elsevier. 20th Edition, 2006.
- 31. Ayurvediya Kriya Shareera, Vaidya Ranjitraya Desai, Shri Baidyanath Ayurveda Bhavan Ltd. Edition 2007.
- 32. Taber's cyclopedic Medical Dictionary, edited by Clayton L. Thomas, Jaypee Brothers Medical publishers, Delhi. Seventeenth Edition.
- 33. Essentials of Medical Pharmacology, By K. D. Tripathi, Jaypeee Brothers Medical publishers (p) Ltd, New Delhi. Edition 2003.
- 34. Williams Sir Monier, A Sanskrit English Dictionary, Motilal Banarasidas publishers Pvt. Ltd, Delhi.1999.
- 35. The Ayurvedic Formulary of India, part-I, Government of India, Ministry of Health & Family Planning, Department of Health.
- 36. Robbin's Basic Pathology, By Vinay Kumar, Abul Abbas, Nelson Fausto, Richard Mitchell, Saunders Elsevier, Eighth Edition 2007.
- 37. De Gruchy's Clinical Haematology in Medical Practice, Published by

- Blackwell Science Ltd., France. reprint Edition 2008.
- 38. Oxford Handbook of Medicine, By Murray Longmore, Wilkinson, Rajagopalan, Published By Oxford University Press, 6th Edition, 2004.
- 39. Practical Medicine, By P. J. Mehta, Published By The National book Depot, 18th Edition, 2008.
- 40. Hutchinson's Clinical Methods, By Michael Swash and Michael Glynn, Published By Saunders Elsevier, 22nd Edition 2007.
- 41. AYU (A Quarterly Peer Reviewed Journal of Research in Ayurveda); Jan-June 2007, Gujarat Ayurveda University, Jamnagar.
- 42. Wintrobe's Clinical Haematology, Published by Lippincott Williams and Wilkins Company, 10th Edition, 1999.
- 43. Essentials of Haematology, By Shirish M Kawthalkar, Published by Jaypee Brothers Medical publishers (p) Ltd., New Delhi 2006.
- 44. Gheranda Samhita edited by Swami Digambarji and Dr. M.L. Gharote published by Kaival Yadhama S.M.Y.M. Samiti Lonavla (India) 410403.
- 45. Tortora Gerard J & Gra Bowki Sandra R. Principles of anatomy and physiology. 10th edition 2003. John Wiley and sons, Inc.Ny.
- 46. Amarkosha, Vachspatayam,
 Sabdakalpadruma Sanskrit
 dictionaries.

Source of Support: None declared

Conflict of interest: Nil

© 2025 IJIM (International Journal of Indian Medicine)

An Official Publication of ARCA- AYURVEDA RESEARCH & CAREER ACADEMY

Website: www.ijim.co.in Email: ijimjournal1@gmail.com