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***Withania somnifera* (L.) Dunal (Ashwagandha): A promising Rasayana as preventive and curative for the management of human disorders**

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Abstract

Paper deals with a review on the application of Ashwagandha (*Withania somnifera* (L.) Dunal) in the *Rasayana therapy*. Its root plays a vital role in the management of disorders related with Rasayana therapy. Commonly lifestyle diseases like diabetes, hypertension, neural weakness, joint pains and arthritis are managed by the use of Ashwagandha root in the form of powder, capsule of various combination form. Studies have been carried out its role in the management of disorders occurring after cancer treatment through chemotherapy. Its leaves are used in diabetes and obesity whereas seed oil is useful in management of various kind of skin diseases. Its antibiotic, anti-convulsive, anti-hyperglycaemic, anti-inflammatory, antioxidant, immunomodulatory, morphine tolerance, musculotropic activities are well known. The presence of phytochemical compounds *viz.* withaferine A, withanone, withanolide A, B, C and D withanoside V, sominone, ashwagandhanoid etc, and various action of Withaferin A on various types of cancers are well known. The use of ashwagandha as Rasayana on regular basis maintains the health and acts as preventive and curative medicine.

Keywords: Rasayan therapy, Ashwagandha, diabetes, neural diseases, cancer

Introduction

Rasayana therapy is a preventive healthcare by the use of ayurvedic medicines, which is helpful in delaying the process of aging by helping to live longer, and longer having good health and work capacity and immunity. In human body digestion is the major functional action to retail the body healthier, besides, metabolic activities and the mental and cardiac functioning and any kind of above disorders may lead to obesity by the deposits of excess fats in the body.

Rasayana is the mode of application of medicines and lifestyle changes etc. This is helpful in maintaining high quality of body tissues and functioning in optimum and required quantity in the body system. The good quality dhatus in appropriate quantity develops the foundation of good quality immune system and leads to develop a disease free life. In terms of Ayurveda Rasayana is included in *Jara chikitsa* a category of *Ashtang Ayurved*, however, it forms essential types of medicines and activities for comprehensive body and mind setting in eight branches of Ayurveda. It belongs to *Swasthasya Urjaskara* or *Swasthya Ojasskarm* type *Bheshaj* it means in *Ayurvedic classics*, *Rasāyana* is a term used for unique therapeutic measures intended to improve cognition, memory, physical strength and delay the degenerative processes. *Ayush Rasayana A & B* are developed from extracts of herbs pertaining rasayana property. Aims & Objectives: To assess the safety and effectiveness of 'Ayush Rasayana A and B' in improving physical endurance, quality of life and cognition of elderly ^[1].

Classification of Rasayana

As per scope of use, *Rasayana* is classified into:

1. *Kamyā Rasayana* used to fulfil the desire for some specific condition. e.g., prana (vitality), Aayu (longevity), Smriti (memory), medha (intellect) where ashwagandha root powder plays a vital role as said to be the memory-enhancing tonic.

2. **Naimittika:** It hastens the recovery from prevailing diseases and promotes the vitality in specific diseases. e.g. Ashwagandha, Shilajatu in Prameha, Bhallataka in Amavata. *Dhatri Rasayana, Mandookaparni Rasayana, Brahmi Rasayana, and Triphala Rasayana.*
3. **Ajastrika:** Regular use of nutritious foods for the endorsement of health e.g. Ksheer Ghrita abhyas and Ashwagandh root churna with milk.

As per method of use *Rasayana* is used in *Vata-tapika* (therapy in outdoor (OPD) basis) and the *Kuti-praveshik* (the therapy in indoor (IPD) basis) and the Ashwagandha churna is vigorously used both in OPD and IPD.

As per content of *Rasayana* it is used as (i.) *Ausadha Rasayana*-the drug therapy (ii.) *Ahara Rasayana* the dietary therapy and (iii) *Achara Rasayana*- Code of conduct and daily habits.

Nutraceutical vis a vis Rasayana therapy

Nutraceuticals are all about the nutritional fulfilment of the body requirement. There are many reasons for nutritional deficiencies, which lead to ailments and degenerative processes. Nutraceutical product provides nutritional supplement, which cures the symptoms and prevents from further degeneration. *Rasayana therapy* is a broad aspect and more than nutraceuticals because it not only provides nutrition but also increases longevity, vitality, immunity and body strength. Phytochemicals, probiotics, nutraceutical enzymes and dietary fibres play major role for nutraceuticals. Various alkaloids flavonoids and steroids plays vital role in various kind of health management.

Medicinal plants may influence weight reduction through a variety of methods, including elevated leptin levels, hypolipidemic and hypoglycemic effects. Plants as *Rasayana* in health management are procured from both wild and cultivated plants. Amongst the cultivated plants the plants of *Allium sativum* L., *Curcuma longa* L., *Phyllanthus emblica* L., *Terminalia arjuna* (Roxb. ex DC.) Wight & Arn., *T. bellirica* (Gaertn.) Roxb., *T. chebula* Retz., *Piper longum* L., are cultivated in the tropical parts of India, whereas remaining plants are used from wild sources in different climatic conditions of India. *Viz. Bacopa monnieri* (L.) Wettst., *Tinospora cordifolia*, (Willd.) Hook.f. & Thomson are from tropical part of India whereas the *Ashtavarga* plants from temperate and alpine hills of Himalaya.

Ashtavarg plants also play vital role as *Rasayana*. These plants are *Roscoeia purpurea* Sm., *Lilium polyphyllum* D. Don, *Crepidium acuminatum* (D. Don) Szlach., *Malaxis muscifera* (Lindl.) Kuntze, *Polygonatum verticillatum* (L.) All., *Polygonatum cirrhifolium* (Wall.) Royle, *Habenaria intermedia* D. Don., *Herminium edgeworthii* (Hook.f. ex Collett) X.H.Jin, Schuit., Raskoti & Lu Q.Huang [2].

Among the mineral *Rasayana Shilajeet* is only to manage health for multidisciplinary disorders. The prepared

ayurvedic medicines under *Rasayana* are *Haridrakhanda Rasayana, guduchi Rasayana, Rason Rasayana, Pippali Vardhaman, Triphala Rasayana, Pippali Rasayana, Rason Kshirpak, Arjuna Kshirpak, Triphal Ghrita, Brahmi Rasayan.* Besides, single or combined medicines *Ahara* (food articles), and *Vihara* (lifestyle), along with *Achara Rasayana* (self-discipline with social etiquette) to achieve the optimum state of tissues and systems of the body the part of *Rasayana* [3].

The plant Ashwagandha i.e. *Withania somnifera* (L.) Dunal is commonly called as winter cherry, or the Indian ginseng is an erect, evergreen, tomentose shrub 30-75 cm in height. Its roots are stout, fleshy, cylindrical, 1-2 cm in diameter, and whitish brown in color. Leaves are simple, ovate, glabrous, and opposite. Flowers are bisexual, inconspicuous, greenish or dull yellow in colour, born on axillary umbellate cymes, and comprise five sepals, petals, and stamens each; the two-celled ovary has a single style and a bilobed stigma. The petals are united and tubular. The stamens are attached to the corolla tube and bear erect anthers that form a close column or cone around the style. Pollen production is poor. The fruit is a small, globose, orange-red berry when mature and is enclosed in a persistent calyx. The seeds are small, flat, yellow, and reniform in shape and very light in weight [Figure1]. The cultivated plants have sizeable differences from the wild forms not only in their morphological characteristics but also in their therapeutic action, although the alkaloids present are the same in both [4-8].

Methodology

The literature survey was made from various published literature in past till present. The plants was explored in various part of the country as well as the distributional records in the world. Under a project sponsored by National Medicinal Plants Board, Ministry of AYUSH, Government of India, plants were collected from various nurseries as well as attempt have been made for the germination of seeds.

Distribution and Cultivation

Withania somnifera is native to Afghanistan, Algeria, Angola, Assam, Bangladesh, Botswana, Burundi, Cameroon, Canary Is., Cape Provinces, Cape Verde, Chad, China North-Central, China South-Central, Cyprus, Djibouti, East Aegean Islands, Egypt, Eritrea, Ethiopia, Free State, Greece, Gulf States, India, Spain, Sri Lanka, Sudan, Swaziland, Tanzania, Tunisia, Turkey, Uganda, West Himalaya, Yemen, Zambia, Zaïre, Zimbabwe etc. In India it is distributed in sub-tropical and tropical parts of dry regions from Rajasthan to Tamilnadu and commercially cultivated in dry parts in sub-tropical regions, Rajasthan, Punjab, Haryana, Uttar Pradesh, Gujarat, Maharashtra and Madhya Pradesh are the major a producing states of Ashwagandha in India. However, its cultivation is mostly done in Madhya Pradesh, wherefrom Nagori Ashwagandha is traded.



Fig 1: Ashwagandha- a) Whole plant b) Fruit, c) Seeds, d) root

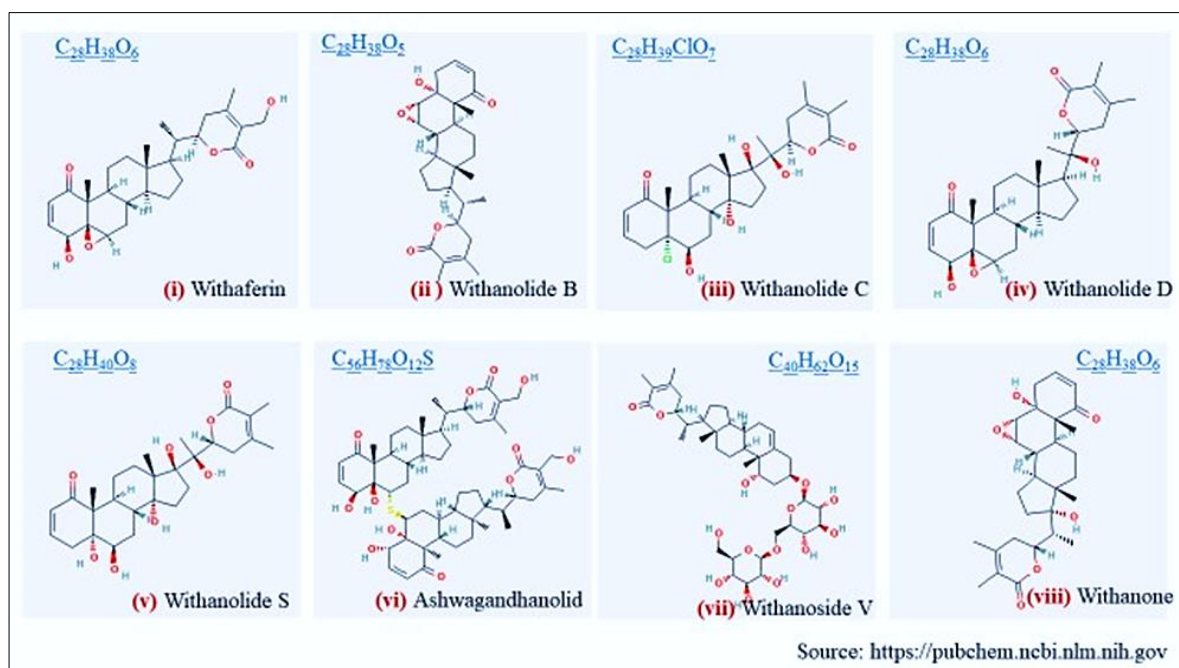


Fig 2: Important constituents from the roots of *Withania somnifera*

Ashwagandha as a *Rasayana*, plays a vital role in the management of health both as preventive as well as curative [1, 9-16]. Its phytochemistry, antibiotic, anti-convulsive, anti-hyperglycaemic, anti-inflammatory, antioxidant, immunomodulatory, morphine tolerance, musculotropic and other activities have been described [17, 18].

Phytochemical profiles of roots of *W. somnifera* (L.) Dunal shows the presence of withaferine A, withanone, withanolide A, B, C, and D withanoside V, sominone, ashwagandhanoid etc, and various action of Withaferin A was reported [Figure 2] [19].

It has shown anti-microbial, anti-inflammatory, anti-tumour,

anti-stress, neuroprotective, cardio protective and anti-diabetic properties. It also cures Alzheimer's disease, Parkinson's disease. In addition, it is exhibited to reduce reactive oxygen species, modulate function of mitochondria, regulate apoptosis, and reduction of the inflammatory volumes and enhancement of the endothelial function, the pharmacologic characteristics and the mechanisms of action as well as the potential therapeutic applications of the plant and its active constituents have been described [20]. The methanolic extract of root, leaf and fruits of this plant exhibit antioxidant properties [21].

Various types of mode of action of roots of *W. somnifera* are presented in Figure 3.



Fig 3: Action of Ashwagandha

The antibacterial properties of *Withania somnifera* leaves are well known [22]. The use of seeds for the repair of skin lesions has been proved [23]. Withaferine A has promising various mode of action on lung cancer, leucemia, glioblastomas, breast cancer, neuroblastomas, prostate, ovarian cancer, gastric cancer, HFD- induced obese mice and human umbilical veins, endothelial cells, Mouse murine fibrosarcoma, Human Melanoma cells, Breast cancer cell line, Xenograft Breast cancer and transgenic mice model [19]. Regular inclusion of Ashwagandha in daily diet as nutritional supplement enhances the memory on one hand and reduce the excess fat and weight gain amongst weak persons, insomnia, anxiety and resisting the body from mental stress as anxiolytic efficacy of an ethanolic extract have been studied and proved [24, 25]. Ashwagandha is generally considered a harmless and easily tolerated medication with few adverse effects or withdrawal symptoms. Long-term administration of Ashwagandha root extract has been found to be safe in various studies [26, 27]. Use of Ashwagandha Churna for longer period by including it in daily food showed positive effect from all sides in the body without any side effect like herbal tea, adding in kheer, laddu and other milk preparation. Its use during pregnancy, improves the foetus health condition too.

Formulations

All parts of this plant are useful in the management of lifestyle diseases including obesity causing arthritis, diabetes, neural disability, diabetes and several related disorders. Large number of formulations are available in pharmaceutical market system like Ashwagandha Churna, Ashwagandharisht by almost all the Ayurvedic and Unani pharmaceuticals, Ashwagandha tablets by Himalaya Drugs, Rasayanam Ashwagandha -KSM-66 (Rasayanam Nature's Best). Divya Pharmaceuticals, Haridwar use different parts of ashwagandha in the management of various disorders by enhancing immune systems. Use of roots of Ashwagandha is well known in the World of Ayurveda, however, its leaves are useful in obesity and diabetes. Its seeds are useful in the

management of skin diseases including psoriasis [28]. A formulation Ashwashila with Ashwagandha as a major ingredient, formulated by Patanjali showed promising effects on rheumatoid arthritis [29].

It is used in various nutraceutical preparations by Patanjali herbal food like Nutrela women's superfood, Nutrela men's superfood, Nutrela kid's superfood, Nutrela ashwagandha and melatonin gummies, Chyawanprabha advance no added sugar, Jaggery (Gur) chyawanprash, Balprash, Herbal power vita powder etc. Rasayana medicines prepared by the use of Ashwagandha roots are Ashwagandha Capsules, Ashwashila Capsules, Ashwagandha Churna, Coronil Tablets, Immunogrit Tablets, Immunogrit Gold Capsules, Immunogrit Churna, Youvnamrit Vati Tablets, Hridyamrit Vati Extra Power Tablets, Madhugrit Tablets, Madhunashini Vati Extra Power Tablets, Mukta Vati Extra Power Tablets, Memorygri Tablets, Medha Vati Extra Power Tablets, Orthogrit Tablets where root is used. Leaves have been used in Weightgo Tablets, whereas, seeds are used in, Aloe Kanti Gel, Candifade Anti Itch Cream, Curcumin Gold Tablets, Ashwagandharist, Pancogrit. Tablets, Divya Capsules (Softgel), Ashwagandhadi Ghrit, Ashwagandha Ghanvati Tablets, Ayu Prime Capsules and Divya Taila. In other countries it is mostly, used in capsule form.

Conclusion

The literature survey as well as the constitution of various formulations clearly indicates that the use of Ashwagandha root in the form of powder, decoction, or in any form is fruitful for longer period and it gives physical and mental cure to the body. Leaves are also useful in diabetic management. Seeds are suitable for skin care. It has an immense scope for cultivation to enhance the economic status, as it is available in lesser quantity in respect to demand

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References

- Dey AB, Gambhir IS, Hazra J, Sharma S, Mundada PS, S Mata S *et al.* Safety and efficacy of ayush rasayana A and B in improving functionality of the elderly-A single-arm multicentre study. *Journal of The Indian Academy of Geriatrics* June 2022; 18(2): 49-57. http://doi:10.4103/jiag.jiag_5_22.
- Balkrishna A, Srivastava A, Mishra RK, Patel SP, Vashistha RK, Singh A, *et al.* Astavarga plants-threatened medicinal herbs of the North-West Himalaya. *Int J Med Arom Plants* 2012; 2(4): 661-676. <http://www.openaccessscience.com>
- Gunasekaran V, Mundada P, Chatterjee P, Chakrawarty A, Sharma S, Bharti B, *et al.* AYUSH rasayana improves fitness and quality of life in older adults. *Innov Aging* 2017; 1(Suppl 1): 560. <http://doi:10.1093/geroni/igx004.1971>.
- Kaul KN. The origin, distribution and cultivation of Ashwagandha the so called *Withania somnifera* of Indian literature, Symposium on the utilization of Indian medicinal plants, NBS, Lucknow, New Delhi: Council of Scientific & Industrial Research, 1957; p. 7-8.
- Atal CK, Schwarting AE. Intraspecific variability in *Withania somnifera* I. A preliminary survey, *Llyodia* 1962; 25: 78-87.
- Bharti VK, Malik JK, Gupta RC. Ashwagandha: Multiple Health Benefits. *Nutraceuticals, Efficacy*, 2016, p. 717-33. <https://doi.org/10.1016/B978-0-12-802147-7.00052-8>
- Anonymous. The Ayurvedic Pharmacopoeia of India, New Delhi: Government of India, Ministry of Health and Family Welfare, Department of ISM & H, 1990.
- Hepper FN Old World *Withania* (Solanaceae): a taxonomic review and key to the species. In: Hawkes JG, Lester RN, Estrada N (eds), *Solanaceae III: Taxonomy, Chemistry, Evolution*. RBG Kew, Richmond, Surrey, 1991; p. 211-27.
- Chopra RN, Nayar SL, Chopra IC. *Glossary of Indian Medicinal Plants* (Reprint 2009). New Delhi: NISCAIR, 1956; p. 258.
- Dymock W, Warden CJH, Hooper D. *Pharmacographia Indica*. Vol. II.; Dehradun B & New Delhi: M/s Bishen Singh Mahendra Pal Singh, & M/s Periodical Experts, 1976; p. 566-72.
- Kirtikar KR, Basu BD. *Indian Medicinal Plants*. 2nd ed. Vol. III, Allahabad: Lalit Mohan Basu, 1980; p. 1774-77.
- Anonymous. *The Wealth of India*. Vol. X (Sp-W), New Delhi: Publications and Information Directorate, Council of Scientific and Industrial Research, 1982; p. 580-85.
- Nadkarni KM. *Indian Materia Medica*. 3rd ed. Vol. I, Bombay: Popular Prakashan Pvt Ltd, 1982; p. 1292-94.
- Anonymous. *Standardisation of Single Drugs of Unani Medicine*. Part III, 1st ed. New Delhi: Central Council for Research in Unani Medicine 2007; p. 9-14.
- Khare CP. *Indian Medicinal Plants-An Illustrated Dictionary*. First Indian Reprint, New Delhi: Springer Pvt Ltd, 2007; p. 717-18.
- Hayashi M, Hamada H, Azuma SI, Hayashi K. Painless Thyroiditis by *Withania somnifera* (Ashwagandha). *Cureus* 2024; 16(3): 1-6, 55352. <http://www.doi:10.7759/cureus.55352>.
- Qamar Uddin L, Samiulla, Singh VK, Jamil SS. Phytochemical and Pharmacological Profile of *Withania somnifera* Dunal: A Review. *Journal of Applied Pharmaceutical Science* 2012; 02(01): 170-75.
- Bhattacharya SK, Satyan KS, Ghosal S. Antioxidant activity of glycowithanolides from *Withania somnifera*. *Indian J Exp Biol* 1997; 35(3): 236-39.
- Bhat JA, Akhtar T, Najjar RA, Rasool F, Hamid A. *Withania somnifera* (L.) Dunal (Ashwagandha); current understanding and future prospect as a potential drug candidate. *Front Pharmacol Sec Ethnopharmacology* 2022; 13:1-13. <https://doi.org/10.3389/fphar.2022.1029123>
- Dar NJ, Hamid A, Ahmad M. Pharmacologic overview of *Withania somnifera*, the Indian Ginseng. *Cell Mol Life Sci* 2015; 72(23): 4445-60. <https://doi:10.1007/s00018-015-2012-1>.
- Alam N, Hossain M, Mottalib MA, Sulaiman SA, Gan SH, Khalil MI. Methanolic extracts of *Withania somnifera* leaves, fruits and roots possess antioxidant properties and antibacterial activities. *BMC complementary and alternative medicine*. 2012; 12: 1-8.
- Bisht P, Rawat V. Antibacterial activity of *Withania somnifera* against Gram-positive isolates from pus samples. *Ayu* 2014; 35(3): 330-32. <https://doi:10.4103/0974-8520.153757>. 23.
- Chandrasekhar K, Kapoor J, Anishetty S. A prospective, randomized double-blind, placebo-controlled study of safety and efficacy of a high-concentration full-spectrum extract of Ashwagandha root in reducing stress and anxiety in adults. *Indian J Psychol Med* 2012; 34: 255-262. <https://doi:10.4103/0253-7176.106022>.
- Cooley K, Szczurko O, Perri D, Mills EJ, Bernhardt B, Zhou Q *et al.* Naturopathic care for anxiety: A randomized controlled trial ISRCTN78958974. *PLoS One* 2009; 4(8): e6628 <https://doi:10.1371/journal.pone.0006628>.
- Andrade C, Aswath A, Chaturvedi SK, Srinivasa M, Raguram R. A double-blind, placebo-controlled evaluation of the anxiolytic efficacy of an ethanolic extract of *Withania somnifera*. *Indian J Psychiatry* 2000; 42: 295-301.
- Sandhu JS, Shah B, Shenoy S, Chauhan S, Lavekar GS, Padhi MM. Effects of *Withania somnifera* (Ashwagandha) and *Terminalia arjuna* (Arjuna) on physical performance and cardiorespiratory endurance in healthy young adults. *Int J Ayurveda Res* 2010; 1: 144-49. <https://doi:10.4103/0974-7788.72485>.
- Choudhary D, Bhattacharya S, Joshi K. Body Weight Management in Adults Under chronic stress through treatment with Ashwagandha Root Extract: A Double-

- Blind, Randomized, Placebo-Controlled Trial. *J Evid Based Complementary Altern Med* 2017; 22(1): 96-106. [https://doi: 10.1177/2156587216641830](https://doi.org/10.1177/2156587216641830).
28. Balkrishna A, Nain P, Chauhan, A, Sharma N, Gupta A, Ranjan R, *et al.* Super critical fluid extracted fatty acids from *Withania somnifera* seeds repair psoriasis-like skin lesions and attenuate pro-inflammatory cytokines (TNF α and IL-6) release. *Biomolecules* 2020; 10: 185.
29. Balkrishna A, Sakat SS, Joshi K, Paudel S, Joshi D, Joshi K, *et al.* Herbo-mineral formulation Ashwashila attenuates rheumatoid arthritis symptoms in collagen-antibody-induced arthritis (CAIA) mice model. *Scientific reports* 2019; 9: 1-17.