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EDITORIAL MESSAGE

Strengthening the Scientific Foundation of Ayurveda in Contemporary Health Care through Research-Based Evaluation and Clinical Documentation



Prof. (Vaidya) Rabinarayan Acharya
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Ayurveda, one of the world's oldest practiced systems of medicine, has withstood the test of time through its holistic principles, individual-based treatment approaches, and unique therapeutic interventions. In recent decades, there has been a renewed global interest in Ayurveda as healthcare systems increasingly recognize the value of integrative and individualized approaches to addressing chronic diseases, lifestyle disorders, mental health conditions, and healthy aging. The growing acceptance of Ayurveda is accompanied by a responsibility to generate strong scientific evidence through systematic evaluation, meticulous documentation, and rigorous validation of Ayurvedic interventions. Thus, the future development of Ayurveda depends not only on preserving its rich classical knowledge but also on demonstrating its effectiveness through contemporary scientific methodologies. While the classical texts provide a repository of therapeutic wisdom accumulated over centuries, modern healthcare demands evidence that is transparent, reproducible, and clinically relevant. Therefore, evaluating, documenting, and validating the

efficacy of Ayurveda interventions has become the need of the hour.

Clinical documentation forms the foundation of evidence generation. Every patient treated through Ayurveda presents an opportunity to contribute to the scientific understanding of its therapeutic potential. Due to a lack of information regarding systematic recording practice, a vast amount of valuable clinical experience remains limited to individual practitioners and institutions. Comprehensive documentation of patient history, Prakriti, disease assessment, treatment protocols, outcomes, follow-up observations, adverse events (if any), and patient-reported outcomes can create a valuable evidence base for future research and clinical decision-making. Well-documented clinical data facilitate retrospective analyses, observational studies, multicentric collaborations, and the development of practice-based evidence that reflects real-world clinical settings. The importance of clinical data documentation extends beyond publication. It strengthens transparency, enhances reproducibility, promotes accountability, and enables continuous improvement in clinical practice. Standardized documentation can also enable comparisons of treatment outcomes across institutions and geographic regions, thereby identifying best practices and optimizing therapeutic strategies. With increasing adoption of electronic health records and digital health technologies, Ayurveda practitioners and researchers have unprecedented opportunities to establish comprehensive clinical databases capable of generating meaningful evidence at national and global levels.

Clinical research continues to serve as the cornerstone of evidence generation. Well-planned clinical studies evaluating preventive, promotive, and therapeutic interventions across diverse health conditions can establish the effectiveness of Ayurveda in real-world healthcare. Scientific evaluation using well-designed clinical trials, pragmatic studies, observational research, cohort studies, and real-world evidence enables Ayurveda interventions to be understood in a language widely accepted by the global scientific community. Equally important is the incorporation of quality-of-life assessments, patient satisfaction, functional outcomes, and long-term follow-up that align closely with Ayurveda's emphasis on holistic well-being rather than on disease-specific endpoints alone. The integration of classical Ayurvedic assessment parameters with contemporary biomedical evaluation creates a comprehensive framework for assessing therapeutic effectiveness. Modern diagnostic technologies, validated clinical outcome measures, imaging modalities, biochemical markers, molecular biology techniques, genomics, metabolomics, artificial intelligence, and digital health analytics offer powerful means to objectively assess treatment outcomes without compromising the fundamental principles of Ayurveda. Such tools should not be viewed as replacements for Ayurvedic diagnostic methods but rather as complementary

approaches that objectively demonstrate therapeutic efficacy and mechanisms of action.

The validation of classical Ayurvedic interventions represents another critical step towards the evolution of Ayurveda. Numerous formulations, procedures, dietary regimens, and lifestyle recommendations described in classical literature have demonstrated remarkable clinical utility over generations. However, systematic validation through multidisciplinary research, in light of contemporary lifestyle practices, is essential to establish their safety, efficacy, dosage standardization, mechanisms of action, and therapeutic indications in line with current scientific expectations. Validation does not seek to alter the essence of Ayurveda; rather, it strengthens classical knowledge by demonstrating its applicability through scientifically assessed outcomes. Pharmacological and phytochemical investigations further validate the scientific foundation of Ayurvedic medicines. Pharmacological studies provide insights into biological activities, mechanisms of action, safety profiles, and therapeutic potential of medicinal plants and formulations. Simultaneously, phytochemical research enables the identification, characterization, and standardization of bioactive constituents responsible for therapeutic effects. These investigations are indispensable for ensuring quality assurance, batch-to-batch consistency, and global acceptability of Ayurvedic medicines. Equally significant are surveys and ethnobotanical research, which play a crucial role in documenting India's rich biodiversity and preserving traditional knowledge associated with medicinal plants. Systematic surveys contribute to accurate botanical identification, sustainable utilization, conservation of endangered species, cultivation practices, and the procurement of high-quality raw materials. Such efforts are fundamental for maintaining the authenticity and sustainability of Ayurvedic pharmaceuticals.

As Ayurveda continues to evolve in an increasingly evidence-driven healthcare environment, researchers, clinicians, academicians, and policymakers must collaborate to foster a culture of scientific inquiry without compromising the system's philosophical foundations. High-quality publications, transparent reporting standards, multicentric collaborations, interdisciplinary research, open data sharing, and ethical research practices will collectively strengthen the evidence base of Ayurveda.

The journey from traditional knowledge to global acceptance requires sustained commitment to scientific excellence. Every well-documented case, every carefully conducted clinical study, every pharmacological investigation, every phytochemical analysis, every medicinal plant survey, every demographic assessment, and every exploration of Prakriti-based individualized therapy contribute to this larger vision. Together, these research efforts not only validate the time-tested wisdom of Ayurveda but also position it as a scientifically credible, patient-centered, and globally relevant healthcare system capable of addressing the complex health challenges of the twenty-first century. The need of the hour, therefore, is not merely to practice Ayurveda but to continuously evaluate, document, and validate its interventions with scientific precision to safeguard its rich heritage while simultaneously progressing its future.

Can a Slipped Disc Be Managed Without Surgery? Insights from an Ayurvedic Case Study

A compelling case study highlights the successful management of intervertebral disc prolapse (IVDP), commonly known as a slipped disc, through Ayurvedic treatment. A slipped disc occurs when one of the soft discs between the bones of the spine bulges or slips out of place, causing lower back pain that may spread to the legs. The condition is common, particularly among adults between 30 and 50 years of age. Although medicines and physiotherapy may help some patients, conservative treatment does not always provide satisfactory relief. Surgery may be recommended in severe cases, but its long-term benefits can vary.

The patient was a 55-year-old man who developed severe lower back pain radiating to his left leg after bending to lift a medium-sized flower pot. The pain was so intense that he found it difficult to walk without support. He was initially treated with pain-relieving medicines, but an MRI scan showed a slipped disc, and surgery was recommended. However, the patient wanted to avoid surgery and therefore, he chose to take Ayurvedic treatment.

According to the report, at the time of starting Ayurveda treatment, the patient had severe pain and restricted movement of his left leg. He was unable to raise the affected leg properly because of pain, although his muscle strength, sensation, and reflexes were normal. The study reports that the patient had no other systemic illness. Clinical assessments showed that the condition had caused considerable disability and had a major impact on

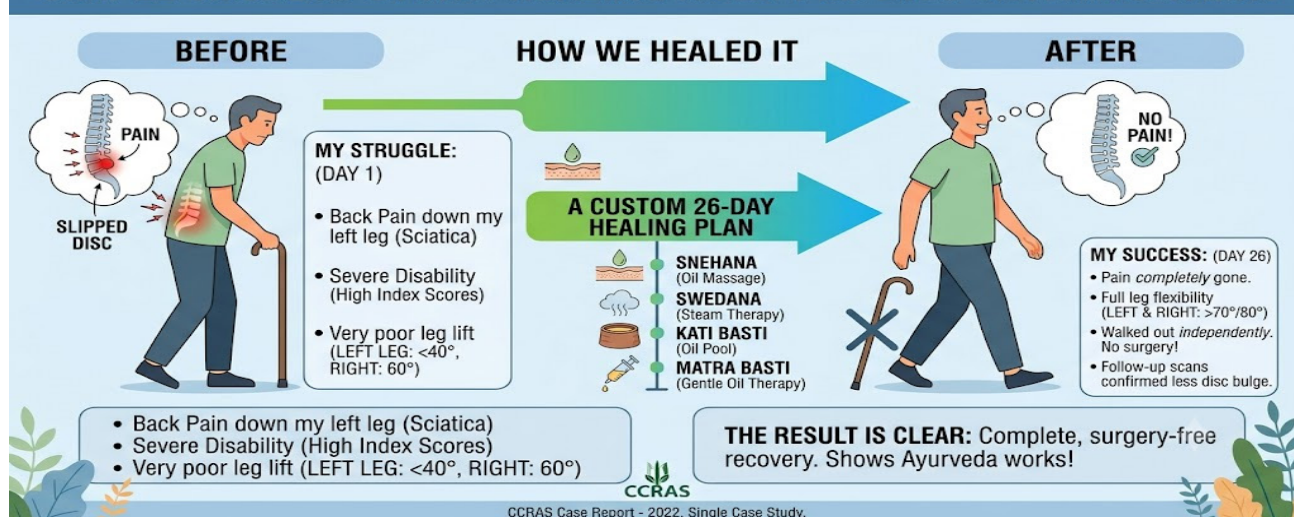
daily activities.

An MRI scan confirmed bulging and wear and tear of the spinal discs at several levels of the lower back, along with a mild curvature of the spine. Routine blood tests and liver and kidney function tests of the studied patient were normal, with no signs of inflammation or rheumatoid arthritis. Based on the patient's symptoms, examination, and Ayurveda perspectives, the researcher diagnosed the condition as *Vata-Kaphaja Gridhrasi*, a condition characterised by low back pain that radiates to the leg, along with heaviness, limping, and difficulty in walking.

The patient received a 26-day course of Ayurvedic treatment, including medicines and therapeutic procedures selected according to his condition. By the end of treatment, he experienced remarkable improvement. His back and leg pain had almost completely resolved, he was able to walk normally without support or limping, and the movement of both legs had improved significantly. His disability scores also showed marked recovery, indicating that he was able to return to his normal daily activities.

A follow-up MRI scan showed a reduction in the bulging of the spinal discs and less pressure on the spinal nerves. A slight improvement in the curvature of the spine was also observed. This case suggests that Ayurvedic treatment may help relieve pain, improve mobility, and enhance quality of life in selected patients with a slipped disc. However, as this is a single case report, larger clinical studies are needed to confirm these findings and better understand the role of Ayurveda in managing this condition.

SIMPLE SUCCESS STORY: HEALING A SLIPPED DISC WITH AYURVEDA



[AI generated image]

The authors of the case report stated that the findings suggest Ayurvedic treatment may help reduce pain, improve mobility, and enhance quality of life in selected patients with slipped disc. However, they also emphasized that the observations are based on a single case report and that larger clinical studies are required to confirm these results and establish the role of Ayurveda in the management of intervertebral disc prolapse.

Reference source: Balakrishnan P, Surendran ES, Raj LS. Ayurveda management of an acute intervertebral disc prolapse: A case report. *Journal of Ayurveda and Integrative Medicine*. 2025 May 1;16(3):101113.

Reference Link: <https://www.sciencedirect.com/science/article/pii/S0975947624002286?via%3Dihub>

Ayurvedic Formulations, *Jatiphaladya Churna* and *Chitrakadi Gutika* Show Promise in Improving Symptoms and Quality of Life in Irritable Bowel Syndrome

A clinical study conducted by researchers from the Central Ayurveda Research Institute (CARI), Bhubaneswar, and the Central Ayurveda Research Institute (CARI), Guwahati, has reported encouraging results for the Ayurvedic management of Irritable Bowel Syndrome (IBS), a common digestive disorder that affects millions of people worldwide.

IBS is a chronic gastrointestinal condition characterized by abdominal pain, bloating, diarrhoea, constipation, or alternating bowel habits. Although the condition is not life-threatening, it often has a significant impact on daily activities and quality of life. In Ayurveda, IBS is considered comparable to *Grahani*, a disorder associated with impaired digestive fire (Agni), resulting in disturbed digestion and bowel function.

To assess the effectiveness of traditional Ayurvedic medicines, the researchers enrolled 100 patients diagnosed with *Grahani* (IBS). The participants received *Jatiphaladya Churna* and *Chitrakadi Gutika* for 84 days. Treatment outcomes were evaluated using clinical symptom assessment and the Irritable Bowel Syndrome Quality of Life (IBS-QOL) questionnaire.

According to the study, the majority of patients experienced significant improvement in their digestive symptoms following treatment. Abdominal pain and bloating resolved completely in patients who presented with these complaints. Marked improvement was also observed in loose stools, pain during bowel movements, abdominal discomfort, urgency to pass stools after meals,

and the sensation of incomplete bowel evacuation. Other symptoms, including mucus in stools, undigested food particles, foul-smelling stools, and alternating episodes of constipation and diarrhoea, were also substantially reduced.



[AI generated image]

The study further reported notable improvements in patients' quality of life. Participants experienced better emotional well-being, greater comfort in carrying out daily activities, and increased confidence in social interactions after completing the treatment. The Ayurvedic formulations were also found to have a favourable safety profile. Routine liver and kidney function tests remained within normal limits throughout the study, and no serious adverse drug reactions were reported.

Based on these findings, the researchers concluded that *Jatiphaladya Churna* and *Chitrakadi Gutika* may offer a safe and effective Ayurvedic approach for managing *Grahani* (IBS). They noted that the results support the potential role of these classical formulations in improving digestive health and enhancing the quality of life of patients with IBS.

Reference source: Panda P, Das B, Rao MM, Elavana R, Das JR, Suryawanshi M, Bharati P, Singh R, Sharma BS, Khanduri S, Rana RK. Clinical evaluation of *Jatiphaladya Churna* and *Chitrakadi Gutika* in the management of *Grahani* (Irritable Bowel Syndrome): A prospective, multicentric, open-label study. *Journal of Research in Ayurvedic Sciences*. 2026 May 1;10(3):134-41.

Reference Link: https://www.ovid.com/jnls/jras/fulltext/10.4103/jras.jras_292_23~clinical-evaluation-of-jatiphaladya-churna-and-chitrakadi

Pilot Trial Suggests Daily Sesame Oil Nasal Drops May Support Respiratory Health

A pilot randomized controlled trial has reported that daily intranasal sesame oil instillation, a traditional Ayurvedic self-care practice, may help strengthen nasal barrier function and support respiratory health. The study provides encouraging preliminary

evidence for the safety, feasibility, and potential benefits of this simple intervention, particularly in the context of increasing exposure to air pollution.

The trial enrolled 102 healthy adults aged 18–35 years, who were randomly assigned to receive either sesame oil, medicated sesame oil (Anu Taila), or no nasal intervention for 12 weeks. Participants in the intervention groups self-administered two drops of oil into each nostril every morning, using formulations prepared according to the Ayurvedic Pharmacopoeia of India. The oils were manufactured in a single batch by the Central Council for Research in Ayurvedic Sciences (CCRAS).

Researchers evaluated changes in nasal barrier function, mucosal immunity, inflammatory markers, nasal mucus pH, sleep quality, perceived stress, and the occurrence of respiratory infections. They also standardized a non-invasive method for collecting nasal mucus samples, providing a valuable protocol for future respiratory research.

The study reported that 99 participants completed the trial, with no serious adverse events, demonstrating that daily intranasal oil instillation was both safe and well accepted. Preliminary findings showed a reduction in the expression of MUC5B and MUC5AC, genes associated with mucus production, without a corresponding increase in inflammatory cytokines, suggesting a potentially beneficial effect on nasal health while maintaining safety.

Participants receiving sesame oil also experienced significant improvements in sleep quality and nasal mucus pH, both of which are considered important indicators of overall respiratory well-being. Trends toward enhanced mucosal immunity were also observed, although larger studies are required to confirm these findings.

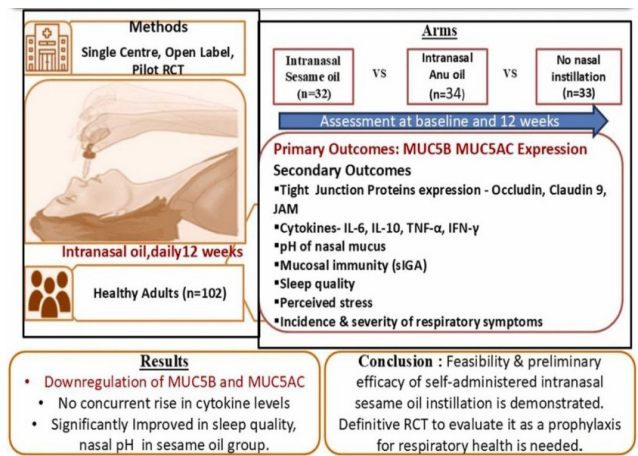


Image source: https://ars.els-cdn.com/content/image/1-s2.0-S0965229925000858-ga1_lrg.jpg

According to the researchers, the trial establishes the feasibility of conducting larger clinical studies and provides early scientific evidence supporting the traditional Ayurvedic practice of nasal oil instillation (Nasya) as a preventive self-care measure. They emphasized that a larger, multi-centre randomized controlled trial is needed to determine whether this intervention can help protect against the adverse respiratory effects of air pollution and reduce the risk of respiratory infections. The findings contribute to the growing scientific evaluation of traditional Ayurvedic practices and highlight the potential of simple, evidence-based self-care interventions for promoting respiratory health.

Reference source: Chaturvedi S, Karandikar M, Mundada P, Tripathy S, Kolhe R, Yadav B, Rana R, Gautam PC, Satoor S, Phalke T, Suryawanshi P. Daily intranasal sesame oil instillation to improve nasal barrier function and mucosal immunity for respiratory health: A pilot randomized trial in healthy adults. *Complementary Therapies in Medicine*. 2025 Jul 26:103210.

Reference link: <https://www.sciencedirect.com/science/article/pii/S0965229925000858>

Pharmacological Research

Ayurvedic Formulation Ayush SL Found Safe in Acute and Repeated Dose Toxicity Studies

A recent scientific study has provided encouraging evidence on the safety of Ayush SL, an Ayurvedic herbal formulation developed by the Central Council for Research in Ayurvedic Sciences (CCRAS) for the management of lymphatic filariasis, a disease known as *Shlipada* in Ayurveda. Lymphatic filariasis is a mosquito-borne disease that can cause long-term swelling of the limbs. Although Ayush SL has shown promising results in improving this condition, the present study was carried out to evaluate its safety before wider clinical use.

The study was conducted by scientists at the

National Ayurveda Research Institute for Panchakarma (NARIP), Cheruthuruthy, Kerala, under CCRAS. Researchers assessed the safety of Ayush SL through laboratory studies in animals. They examined the effects of both a single high dose and repeated daily doses given over 28 and 90 days.

In the first part of the study, laboratory mice received a single oral dose of Ayush SL at levels much higher than the recommended therapeutic dose. The animals were closely observed for any signs of illness, unusual behaviour, or other harmful effects. No such effects were seen, suggesting that the formulation was well tolerated even at high doses.

KEY OUTCOMES



Study Design



Acute Oral Toxicity
(Up to 3250 mg/kg in mice)



28-Day Repeated Dose Toxicity
(225, 1125, 2250 mg/kg in rats)



90-Day Repeated Dose Toxicity
(225, 1125, 2250 mg/kg in rats)

Conducted as per OECD Guidelines

1. No Mortality or Toxic Signs



No mortality or abnormal behaviour observed in mice (up to 3250 mg/kg) and rats during the entire study period.

2. Normal Body Weight and Feed Intake



Body weight gain and feed consumption remained normal in all treated groups during 28-day and 90-day studies.

3. No Adverse Changes in Hematological and Biochemical Parameters



All hematological and biochemical values remained within normal physiological limits with no treatment-related changes.

4. No Treatment-related Effects on Organ Weights



Absolute and relative organ weights showed no significant changes in any dose group.

5. No Histopathological Abnormalities



Histopathological examination of major organs revealed no pathological changes or treatment-related toxicity.

6. High Margin of Safety



Ayush SL was well tolerated at all tested doses in acute and repeated dose toxicity studies.

Ayush SL is safe up to:



3250 mg/kg in acute oral toxicity study (mice)



2250 mg/kg/day in 28-day and 90-day repeated dose studies (rats)

NOAEL

2250 mg/kg/day
(In Rats)

[AI generated image]

In the longer-term studies, laboratory rats were given Ayush SL daily at the recommended dose, as well as at five and ten times that dose, for 28 and 90 consecutive days. Throughout the study, researchers monitored the animals' body weight, food and water intake, behaviour, blood and urine test results, and the health of major organs such as the liver, kidneys, heart, lungs, stomach, intestines, spleen, and reproductive organs.

The findings showed that Ayush SL did not cause any harmful effects. The animals remained healthy, with normal growth, normal eating and drinking habits, and no significant changes in blood tests, urine tests, or the structure of major organs. Based on these findings, the researchers concluded that Ayush SL has a favourable safety profile and was well tolerated even when administered at doses much higher than the recommended therapeutic level in these animal studies.

These findings provide important scientific evidence supporting the safety of Ayush SL and strengthen its potential use as an Ayurvedic formulation for the management of lymphatic filariasis. The study also adds to the growing body of evidence supporting the safety of Ayurvedic medicines through systematic scientific evaluation.

Reference source: Rajanna SKY, Natarajan TS, Gaidhani SN, Lamba D, Singh A, Padhi MM, Lavekar GS, Narayanam S. Acute and repeated dose oral toxicity study of Ayurvedic coded formulation Ayush SL. Indian Journal of Traditional Knowledge. 2026;25(3):213-221.

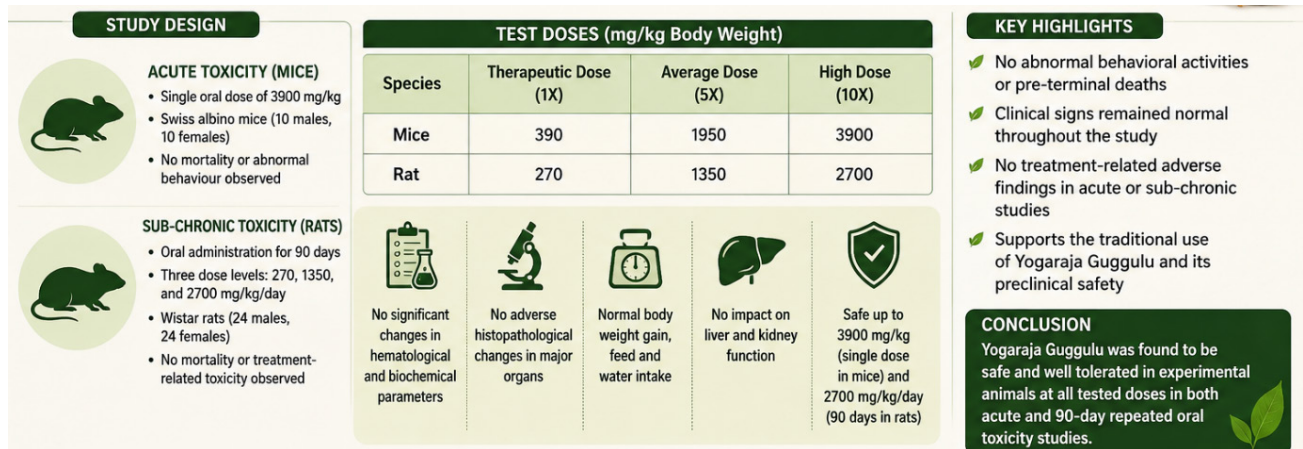
Reference Link: <https://or.niscpr.res.in/index.php/IJTK/article/view/24531>

Preclinical Study Confirms Safety Profile of Classical Ayurvedic Formulation *Yogaraja Guggulu*

A preclinical safety study has reported that *Yogaraja Guggulu*, a classical Ayurvedic formulation widely prescribed for neurological, musculoskeletal, and joint disorders, demonstrated a favourable safety profile in both acute and 90-day repeated oral toxicity studies conducted in experimental animals.

The study evaluated the safety of the polyherbal formulation using internationally accepted toxicological protocols. In the acute toxicity assessment, Swiss albino mice received a single oral dose of 3,900 mg/kg, while the sub-chronic study involved Wistar rats that were administered three dose levels—270 mg/kg, 1,350 mg/kg, and 2,700 mg/kg—daily for 90 consecutive days.

According to the researchers, no treatment-related deaths, abnormal behavioural changes, or signs of toxicity were observed in either study. Throughout the 90-day evaluation, animals maintained normal body weight, feed intake, and neurological behaviour, indicating that repeated administration of the formulation did not adversely affect general health.



(AI Generated Image)

Detailed laboratory investigations further supported the safety findings. Hematological and biochemical parameters, including liver and kidney function markers, remained within normal ranges, while microscopic examination of major organs revealed no treatment-related abnormalities or tissue damage.

Based on the findings, the researchers concluded that *Yogaraja Guggulu* was safe at the highest dose tested in both experimental models. The formulation showed no evidence of acute toxicity at 3,900 mg/kg in mice and no adverse effects following repeated oral administration of up to 2,700 mg/kg/day for 90 days in rats.

Yogaraja Guggulu is one of the widely used classical Ayurvedic formulations for the management of *Vatavyadhi* (neurological and musculoskeletal disorders) and *Sandhigata Vata* (osteoarthritis). The researchers noted that the study provides important scientific evidence supporting its preclinical safety and contributes to the growing body of evidence required for the quality assurance and safe use of Ayurvedic medicines.

Reference source: Sanjaya Kumar YR, Thamizh Selvam N, Gaidhani SN, Deepak Lamba, Sharma BS, Vikrant Singh Chauhan, Srikanth N. Acute and sub-chronic oral toxicity study of classical ayurvedic formulation Yogaraja Guggulu. Research Journal of Pharmacy and Technology. 2025;18(5):2175-2180

Reference link: <https://www.rjptonline.org/HTMLPaper.aspx?Journal=Research%20Journal%20of%20Pharmacy%20and%20Technology;PID=2025-18-5-35>

Health System Research

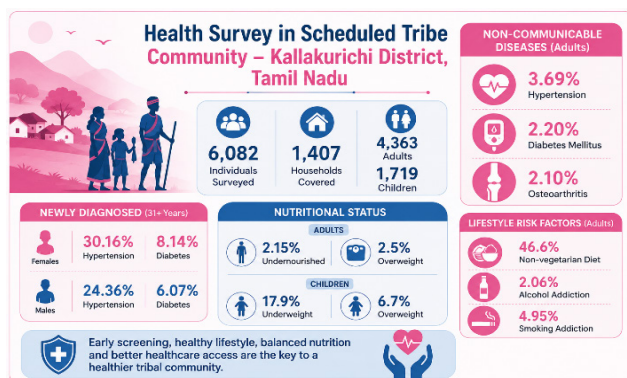
Health Survey Highlights Burden of Non-Communicable Diseases Among Scheduled Tribes in Tamil Nadu

A large community-based health survey conducted by the Dr. Achanta Lakshmiopathi Regional Ayurveda Research Institute (ALRARI), Chennai, under the Central Council for Research in Ayurvedic Sciences (CCRAS), has highlighted the growing burden of non-communicable diseases (NCDs) among the Scheduled Tribe (ST) population living in the Kalrayan Hills of Tamil Nadu. The cross-sectional study, carried out between June 2021 and March 2022, surveyed 6,082 individuals from 1,407 households across four ST-dominated panchayats—Vanjikuzhi, Serapattu, Kilakadu, and Innadu—in Kallakurichi district. The survey included 4,363 adults and 1,719 children, all belonging to the Malayali Scheduled Tribe, and collected detailed information on demographic characteristics, nutritional status, lifestyle, and health conditions.

The findings revealed that 3.69% of adults were living with hypertension, 2.20% had diabetes mellitus, and 2.10% had osteoarthritis. Screening also identified previously undiagnosed cases, with hypertension and diabetes being more common among adults aged 31 years and above, particularly women. Osteoarthritis was also found to be more prevalent among female participants. The survey highlighted several nutritional and lifestyle concerns. While most adults had a normal body mass index, 2.15% were undernourished and 2.5% were overweight. Among children, 17.9% were underweight, indicating persistent nutritional challenges. Limited consumption of fruits and green leafy vegetables, along with tobacco and alcohol use among a section of the adult population, were identified as additional health risk factors.

Researchers also observed a substantial proportion of adults with elevated blood pressure, suggesting that many individuals may be at risk of developing hypertension if preventive measures

are not implemented. Anaemia among women was another significant concern, underscoring the need for improved nutritional interventions. According to the research team, the findings point to an urgent need for early screening, health education, nutritional support, and strengthened primary healthcare services in tribal communities. The study also emphasizes the importance of improving sanitation, promoting healthy lifestyles, and expanding access to quality healthcare in remote tribal regions.



The survey study can be a valuable baseline data for planning targeted public health interventions and developing evidence-based strategies to reduce the burden of non-communicable diseases and improve the overall health of Scheduled Tribe populations in Tamil Nadu.

Reference source: Srinivas P, Prameela Devi K, Maheswar T, Murali Krishna C, Kachera K, Deepa Makhija AA, Asif M, Manathottathil A, Narayanam S. Cross-sectional study of demographic and health status of the scheduled tribe population in selected panchayat areas of Kallakurichi district, Tamil Nadu. *International Journal of Community Medicine and Public Health*. 2025;12(4):1718.

Reference link: <https://www.ijcmph.com/index.php/ijcmph/article/view/13585/8283>

Strengthening Ayurveda Drug Safety Monitoring: Researchers Develop and Validate Pharmacovigilance Assessment Tool

As Ayurveda continues to gain global recognition, ensuring the safety of its medicines has become an increasingly important priority. In a significant step toward strengthening pharmacovigilance in Ayurveda, researchers from the Central Council for Research in Ayurvedic Sciences (CCRAS) and the Regional Ayurveda Research Institute (RARI), Gangtok, have developed and scientifically validated a structured questionnaire to assess the knowledge, attitude, and practices of registered Ayurvedic practitioners regarding drug safety monitoring.

The study was carried out between July and Sep-

tember 2024 across 10 Indian states, involving 89 registered Ayurvedic practitioners. The objective was to create a dependable tool to measure awareness, attitude, and practical engagement in adverse drug reaction reporting, which is essential for strengthening the Pharmacovigilance Programme for ASU&H Drugs of Ministry of Ayush. According to the researchers, the growing use of classical Ayurvedic medicines-including herbal, mineral, and herbo-mineral formulations, has increased the need for robust pharmacovigilance systems. However, reporting of adverse drug reactions remains limited, highlighting the importance of improving awareness and reporting practices among healthcare professionals.



Image Source: <https://suraksha.ayush.gov.in/>

To develop the tool, the research team initially prepared a questionnaire consisting of 59 questions covering three major areas – knowledge, attitude, and practice related to pharmacovigilance. The draft questionnaire was then reviewed by a panel of experts from pharmacology and Ayurveda disciplines to assess its clarity, relevance, and overall suitability. Based on expert feedback, pilot testing, and validation procedures, the questionnaire was refined and finalized into a shorter, more focused version containing 35 questions. The validation process confirmed that the questionnaire was scientifically sound, reliable, and suitable for assessing the awareness and practices of Ayurvedic practitioners regarding drug safety monitoring, making it a useful tool for future training programs, research studies, and policy evaluation.

The findings of survey suggest that although most participants were aware of pharmacovigilance concepts, important knowledge gaps remain in regulatory procedures and ADR reporting pathways. Encouragingly, many practitioners expressed strong support for integrating pharmacovigilance training into Ayurveda education and advocated for ADR monitoring

centers in hospitals. Researchers believe that the newly validated questionnaire will serve as a valuable resource for training programmes, nationwide surveys, research initiatives, and policy evaluation, ultimately contributing to stronger pharmacovigilance systems within Ayurveda. With the global expansion of Ayurveda, the development of this validated assessment tool represents an important milestone in promoting the safe, evidence-informed use of Ayurvedic medicines

and reinforcing public confidence in traditional healthcare systems.

Reference Source: Mitra A, Sharma BS, Chincholikar MB, Khanduri S, Maheswar T, Sen A, Tripathi A, Acharya R. Development and validation of the questionnaire to assess the knowledge, attitude, and practice of pharmacovigilance among registered Ayurvedic practitioners in India. *Journal of Research in Ayurvedic Sciences*. 2026 May 1;10(3):116-24.

Reference Link: https://www.ovid.com/jnls/jras/fulltext/10.4103/jras.jras_51_26~development-and-validation-of-the-questionnaire-to-assess

Drug Research and Medicinal Plant Survey

Regional variation influences the medicinal quality of *Pippali* (*Piper longum* Linn.)

Pippali (*Piper longum* Linn.), commonly known as Long Pepper, is an important medicinal plant widely used in Ayurveda for promoting digestion, respiratory health, immunity, and overall well-being. Although the plant is the same species, its medicinal quality can vary depending on where it is grown. Factors such as climate, altitude, rainfall, and soil conditions influence the production of natural bioactive compounds that confer therapeutic properties.

To understand this variation, researchers compared *Pippali* fruits collected from three different regions of India—Kerala (Malabar region), Bangalore (Deccan region), and Ranikhet (Himalayan region). The study observed slight differences in the appearance of the fruits, including their size and colour. More importantly, significant differences were found in the levels of health-promoting compounds present in the samples.



Image Shows representative *Piper longum* fruits collected from the (A) Malabar (Kerala), (B) Deccan (Bangalore), and (C) Himalayan (Ranikhet) regions, highlighting regional differences in their physical appearance.

Image Source: <https://pubmed.ncbi.nlm.nih.gov/41563950/>

The study revealed that *Pippali* collected from the Himalayan region (Ranikhet) contained higher levels of beneficial plant compounds and showed stronger antioxidant potential than samples collected from Kerala and Bangalore. An

important bioactive compound, piperlongumine, was detected only in the Ranikhet sample, while it was not detected in the samples from the other two regions. These findings indicate that the geographical location where *Pippali* is grown can greatly influence its medicinal quality and therapeutic value.

The findings highlight the importance of selecting high-quality raw materials for preparing Ayurvedic medicines. Understanding regional differences in medicinal plants helps ensure better quality, consistency, and effectiveness of herbal formulations. Scientific studies like this also support the standardization of medicinal plants and encourage evidence-based use of traditional medicines.

Reference source: Misro L, Jeevan AS, Maurya R, Radhakrishnan T, Boini T, Rajeeesh VR, Rohit KS, Kumar V, Meena AK, Srikanth N, Acharya R. Impact of Regional Variation on the Bioactive Composition and Antioxidant Potential of *Piper longum* Linn. *Chemistry & Biodiversity*. 2026 Jan;23(1):e02460.

Reference Link: <https://onlinelibrary.wiley.com/doi/10.1002/cbdv.202502460>

Study Scientifically Validates the Medicinal Potential of Ayurvedic Herb *Kanchanar* (*Bauhinia variegata* L.)

Kanchanar (*Bauhinia variegata* L.) is a well-known medicinal tree used in Ayurveda for centuries in the management of ulcers, skin disorders, bleeding conditions, digestive problems, inflammation, and glandular swellings. Although widely used in traditional medicine, scientific evidence is essential to confirm its identity, quality, and therapeutic potential. In a recent study, researchers carried out a comprehensive evaluation of *Kanchanar* stem bark by combining pharmacognostic examination, phytochemical analysis, isolation of a key bioactive compound, and computer-based molecular docking studies. The objective was to establish scientific standards for the identification, quality assessment, and therapeutic potential of this important medicinal plant.



Image Habit (a) and inflorescence (b) photograph of *Bauhinia variegata* L.

Image source: <https://link.springer.com/article/10.1007/s44371-026-00779-2>

The investigation identified distinctive microscopic features of the stem bark, including lignified fibres, medullary rays, calcium oxalate crystals, and mucilage cells. These characteristics serve as reliable diagnostic markers for authenticating *Kanchanar* and distinguishing it from adulterants, thereby supporting the quality control of Ayurvedic raw materials. Further phytochemical investigations confirmed the presence of major bioactive constituents, including phenolic compounds, flavonoids, tannins, and alkaloids. Kaempferol, a bioactive flavonoid with well-documented antioxidant and anti-inflammatory potential, was successfully isolated and characterized using advanced spectroscopic techniques.

Computer-based molecular docking studies further demonstrated that kaempferol interacts favourably with several disease-related protein targets. The strongest interaction was observed with Nrf2, a key regulator of the body's antioxidant defence system. The compound also showed promising binding with proteins associated with inflammatory disorders, gastrointestinal diseases, helminthic infections, bleeding disorders, and skin conditions, providing scientific support for several traditional therapeutic applications of *Kanchanar*.

The researchers concluded that the findings strengthen the scientific basis for the Ayurvedic use of *Kanchanar* and highlight its potential as a valuable source of bioactive compounds for future phytopharmaceutical research. The study also contributes to the standardization and quality assurance of Ayurvedic medicinal plants, supporting the development of safe and evidence-based herbal medicines.

Reference source: Ghosh K, Gopal K, Narayanan L, Pandey A, Monika N, Krishna KV, Durga KS, Soumya MC, Suseem SR, Thallada V, Sharma P. Integrated pharmacognostic, phytochemical, and in silico investigation of kaempferol isolated from the stem bark of *Bauhinia variegata* L. Discover Chemistry. 2026 Dec;3(1):327.

Reference link: <https://link.springer.com/article/10.1007/s44371-026-00779-2>

Study Finds Miyawaki Forest Technique Boosts Growth and Early Flowering of Medicinal Plants

A three-year study conducted by researchers at the Regional Ayurveda Research Institute (RARI), Pune, under the Central Council for Research in Ayurvedic Sciences (CCRAS), has found that the Miyawaki plantation technique can significantly enhance the growth, flowering, and productivity of several important medicinal plants used in Ayurveda. The study compared the performance of 25 medicinal plant species grown under the Miyawaki method, a dense, multi-layered plantation of native species—with those cultivated using conventional plantation techniques. The findings revealed that the Miyawaki approach promoted earlier flowering and fruiting in a majority of the species, offering a promising strategy for the conservation and sustainable cultivation of medicinal plants.

According to the researchers, 13 of the 25 species flowered earlier and maintained longer flowering periods under Miyawaki conditions. Several important medicinal plants, including *Agastya* (*Sesbania grandiflora*), *Nirgundi* (*Vitex negundo*), *Vasa* (*Justicia adhatoda*), *Agnimantha* (*Premna serratifolia*), and *Japa* (*Hibiscus rosa-sinensis*), reached the flowering stage much sooner than those grown under conventional methods. Notably, *Agastya* and *Nirgundi* flowered within six months, compared with nearly three years under conventional plantation.

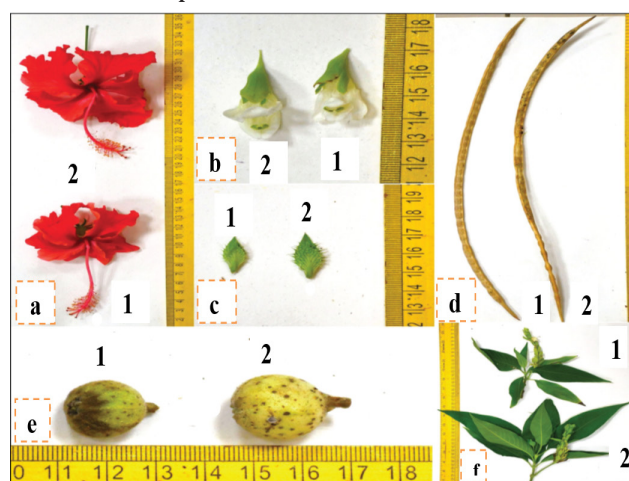


Image: Comparative morphology of flowers, fruits, and leaves in the control and Miyawaki experimental plots. (1) Control plot; (2) Miyawaki experimental plot. (a) *Hibiscus rosa-sinensis* L.; (b, c, f) *Justicia adhatoda* L.; (d) *Sesbania grandiflora* (L.) Pers.; (e) *Ficus hispida* L.f.

Image source: https://www.ovid.com/jnls/jdra/fulltext/10.4103/jdras.jdras_198_24~effect-of-miyawaki-and-conventional-method-of-plantation-on

The study also observed that plants grown in Miyawaki forests produced larger leaves, flowers, and fruits, indicating greater plant vigour and reproductive performance. Early flowering and fruiting are particularly valuable for Ayurvedic medicine production, as many formulations rely on plant parts harvested at specific stages of development. While a few sun-loving species, such as *Gambhari* (*Gmelina arborea*) and *Karanja* (*Pongamia pinnata*), performed better under conventional plantation, the overall results suggest that the Miyawaki technique can substantially accelerate the growth cycle and improve the productivity of many medicinal plants.

The researchers believe that establishing “*Aushadha Aranyam*” (medicinal Miyawaki forests) in urban

and degraded landscapes could play a vital role in conserving medicinal plant diversity, ensuring a sustainable supply of quality raw materials for Ayush systems, and supporting ecological restoration. The findings offer a promising nature-based approach for strengthening the future of medicinal plant conservation and Ayurvedic healthcare.

Reference Source: Gurav A, Bondade P, Nirawane R, Prasad G, Kolhe R, Prasad S, Shiddamallaya N, Srikanth N. Effect of Miyawaki and conventional method of plantation on flowering and fruiting of selected medicinal plants. *Journal of Drug Research in Ayurvedic Sciences*. 2025 Sep 1;10(5):391-400.

Reference Link: https://www.ovid.com/jnls/jdra/fulltext/10.4103/jdras.jdras_198_24~effect-of-miyawaki-and-conventional-method-of-plantation-on