

India's 'yoga ministry' stirs doubts among scientists

Ancient remedies and practices see a boost in government support, but evidence of their effectiveness is scarce.

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19 November 2014



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Medicinal herbs on display during the World Ayurveda Congress and Arogya Expo in New Delhi in early November.

Indian Prime Minister Narendra Modi has thrown his weight behind the country's traditional systems of medicine earlier this month by creating the Ministry for Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH). Among its stated goals is to promote "educational standards, quality control and standardization of drugs".

Modi — who is said to [begin each day by practising yoga](#) — made a pitch for declaring an 'international yoga day' in [a speech at the United Nations](#) in September. The initiative was backed by 130 countries.

While homoeopathy originated in Europe, and unani is a version of ancient Greek medicine, India also has native medical traditions. These include siddha, which originated in southern India as early as 10,000 years ago, and ayurveda, which dates back to the sixth century bc or earlier. The Modi government contends that Indian systems of medicine were suppressed during colonial times and were marginalized after India gained independence at the hands of anglicized elites. Although many Indians still use such systems along with folk healing practices especially in rural areas, their integration into modern medicine faces high hurdles and stiff resistance.

Is the Indian government's interest in traditional systems new?

No. The health ministry set up a Department of Indian Systems of Medicine and Homeopathy in 1995, and later renamed it AYUSH. But its newly acquired rank of full-fledged ministry, with a cabinet minister-in-charge, is expected to bring it new impetus and substantial budgetary support. The ideology of Modi's Bharatiya Janata Party is also more inclined towards the traditional systems of medicine than the Congress Party-led government it replaced in May.

India is also setting up an All India Institute of Ayurveda along the lines of the six All India Institute of Medical Sciences (AIIMS), based in cities across the country. All (and four more currently being planned) will have AYUSH departments, with special focus on ayurvedic medicine.

Have there been sceptical voices against this — in India or elsewhere?

These developments have alarmed practitioners of modern, science-based medicine, as many remain sceptical about traditional medical practices. “I am totally against it,” says Anoop Misra, director of the Fortis C-DOC Centre of Excellence for Diabetes, Metabolic Diseases and Endocrinology in New Delhi. Misra says that there is paucity of hard evidence in favour of AYUSH practices. “We need large-scale, double-blind, randomized, multicentric clinical trials — with results published in peer-reviewed international journals of repute — validating the claims of ayurveda or such systems,” he says. Practitioners of ayurveda are not willing to follow the experimental methodology of modern science, he adds, and until they do, mixing the practice of ayurveda with modern medicine at institutions such as AIIMS would be a mistake.

Do traditional Indian medicines raise safety concerns?

Traces of toxic elements such as lead, mercury and arsenic have been found in some traditional medicines. But practitioners say that these elements are neutralized when they are processed into the '*bhasmas*' that make up the final product. “Many minerals and metals, including mercury, gold, iron, copper *et cetera*, are used in ayurveda after sophisticated processing for purification and preparation of *bhasmas*, which are safe and more effective than herbals,” contends Ram Harsh Singh, emeritus professor of ayurveda at Benaras Hindu University in Varanasi. Ayurvedic practitioner P. Ram Manohar, the director of the Arya Vaidya Pharmacy Research Foundation in Coimbatore, agrees that heavy-metal toxicity is a contentious issue and that toxicology studies are needed to assess whether it is possible to neutralize them as ayurveda practitioners claim. “This knowledge gap urgently needs to be addressed through detailed toxicological studies,” he adds. “If proven safe, it will be a big advance for science”.

How does India's support for traditional systems compare to China's push for traditional Chinese medicine?

India has only now begun giving significant impetus to traditional medicine, and is still far behind China, which started efforts to modernize traditional Chinese medicine and integrate it into its health-care system immediately after the Communist Revolution of 1949. Although Chinese herbal remedies have been studied in modern drug development (see '[How an 1,800-year-old herbal mix heals the gut](#)') the government's support for the traditional medicine has had its [its critics](#) — and a researcher recently [openly challenged practitioners](#) to demonstrate that its methods are sound, offering cash in return.

Is there evidence that India's traditional systems are effective?

Traditional systems have a sizeable following in India, and some may have merit. Studies have suggested that certain herbal medicines from the ayurveda tradition could be effective at treating various conditions¹, and that [yoga has health benefits](#). But the systems still have a long way to go to reach international acceptance as scientific disciplines with a proven and documented track record. “Good-quality, controlled clinical trials of ayurvedic medicines have been scarce, but badly needed,” Manohar says.

Nature | doi:10.1038/nature.2014.16362

References

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