

CHYAWANPRASH AND ITS ROLE IN THE TREATMENT OF TUBERCULOSIS

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Tuberculosis (TB) is responsible for a large portion of morbidity and mortality worldwide. According to WHO report, tuberculosis is responsible for at least 2 million deaths per year, so 90% of these occurring in developing countries. Recently, it has been shown that multidrug-resistance (MDR) and extensively drug resistant tuberculosis (XDR-TB) are the most important factors cause death in patients with tuberculosis. Drug resistance of *M tuberculosis* has been implicated in many aetiologies such as inadequate and incomplete treatment, host genetic factors and, HIV infection. The long duration of treatment, large amount of anti-TB drugs and their gastrointestinal side effects, are the most important causes of noncompliance in patients with TB. MDR-TB (when resistance to isoniazid and rifampicin appears in combination), increases the numbers of individuals who need treatment with second-line drugs worldwide. After development of MDR-TB, the development of resistance to second line drugs was another problem. XDR-TB is a form of TB caused by bacteria that are resistant to the most effective anti-TB drugs. XDR explained by resistance to both rifampicin and isoniazid, as well as to fluoroquinolones plus an injectable agent and Pre-XDR TB isolates are multidrug resistant bacilli which are resistant to either a fluoroquinolone or an injectable agent, but not both. Some believe that XDR-TB strains have emerged from the mismanagement of multidrug-resistant TB and once created, can spread from one person to another. ⁽⁶⁾

So, looking into the above facts, it indeed seems to be a big challenge to treat/eradicate tuberculosis. Every adversity brings big opportunities as well. We the proponents of Ayurveda, must make full use of this opportunity to establish our role, responsibility, acceptability and credibility in the health delivery system of mankind globally.

Several published papers were evaluated to find out the role of Chyawanprash and some other Ayurvedic drugs as adjuvant to standard anti-tubercular treatment.

One of the research papers states that the following benefits of Chyawanprash in the management of tuberculosis and also shares other benefits as well.

Immune booster and stamina

Chyawanprash is a powerful immune bolster and aids the body in the production of hemoglobin and white blood cells. Amla, the vital component in Chyawanprash, detoxifies the body and cleanses the blood, liver, spleen and the lungs. It enhances youthfulness and promotes healthy muscle mass and tones the body. ⁽¹⁾

Respiratory Health

Chyawanprash can do wonderful job in promoting lung power. It nourishes the mucous membrane and helps in maintaining the respiratory passage clean and clear. It is often used as a tonic in winter months as it supports natural resistance, lends strength, energy and combat infections by boosting overall health and wellbeing. ⁽¹⁾

Tuberculosis

Evidence reveals that Chyawanprash mitigated symptoms associated with tuberculosis such as coughing, poor appetite, lethargy and weight loss. In fact, it also helped patients suffering from TB to recover fast. ⁽¹⁾

Promotes Digestion

Chyawanprash strongly supports the digestion process in a systemic level. In Ayurveda, digestion starts with experiencing tastes and Chyawanprash has 5 out of 6 tastes, except salt. An effective carminative, Chyawanprash promotes healthy movement of gases and regular elimination of waste. Furthermore, it regulates blood sugar, and cholesterol levels in normal range. A great jam in maintaining and stimulating proper metabolism. ⁽¹⁾

Reproductive Health

Chyawanprash was originally formulated to strengthen and revitalize reproductive organs. It plays a vital role in triggering the reproductive system and promotes vitality and sexual health. Chyawanprash promotes fertility, healthy libido, sexual stamina in both men and women. ⁽¹⁾

In another published article, "Adjunct therapy of Ayurvedic medicine with anti-tubercular drugs on the therapeutic management of pulmonary tuberculosis"

The present study based on adjunct therapy of Ayurvedic medicine with anti-tubercular drugs on the therapeutic management of pulmonary tuberculosis has opened up new dimensions. Considering the re-emergence of TB, WHO looked to intricate traditional medicine in this context e.g., Ayurveda. In National Health Policy 1981 amended from time to time brought to light the role of ISM and H drugs specially Ayurveda in primary, secondary and tertiary healthcare. In the domain of primary healthcare, preventive aspects of common diseases were enlisted. Ayurvedic treatment may be considered as adjunct to standard treatment guidelines. Among them, cancer, diabetes and pulmonary tuberculosis may be amenable to Ayurveda. In the domain of primary healthcare, initiatives have been taken on preventive care by the Government of India through AYUSH in National Rural Health Mission (NRHM). India has got its rich heritage of primary healthcare delivery system and advantage of those provisions may be explored with scientific evidences which will best suit for Indian population (Health policy, ISM, 2002). In the present millennium *Rajyakshma* nomenclature as PTB appears as great threat in healthcare delivery especially at the primary care level. In the present scenario, Ayurveda must not remain silent to rationalize the therapeutic approach. At this juncture, incorporation of Ayurvedic regimen in the treatment may be a hope-finding solution (WHO 2000) and requires appreciation with scientific reasoning. *Rasayana Chikitsa* of Ayurveda is in existence since Vedic period in different forms. Single drug *Aswagandha* and ancient formulation *Chyawanprash* were included for they were in use through the ages and were well known to Indian community and is widely available. The specific actions of those drugs in the *poshaka* rasa level (nutrient supplement) *agni* level (metabolic appreciation) and *srotas* level (tissue nourishment) are well accepted. Good number of *rasayana* drugs had shown immunomodulatory activity to boost up or restore functional immunity in response to defence mechanism. The *rasayana* drugs also show tissue and disease specific immunomodulatory activity. The *rasayana* drugs not only play a role in immunity but also due to its anti-stress, inotropic and antioxidant activity help in the quality-of-life improvement, observed in patients as improvement of symptoms. ⁽²⁾

In this project *rasayana* drugs as adjunct to ATD regimen is reported after 28 days of treatment. Further, ATD was continued for 8 more months according to WHO norms. On initial exploratory observational study, out of 3 groups comprising 39 patients AFB was positive in 6 patients after 28 days that too on ATD group only. Usually, sputum smear test is not done frequently. In WHO clinical manual monitoring of PTB with sputum positive clearly

mentioned that sputum examination at diagnosis and to monitor it at the completion of initial phase i.e after 8 weeks of ATD treatment. Our observation was that out of 17 PTB patients under ATD treatment, 6 (35.2%) patients were AFB positive after twenty days of treatment with HRZE (isoniazid, rifampicin, pyrazinamide, and ethambutol (HRZE). In other groups that were on adjunct therapy, all the 23 patients were found to be AFB negative. In our study design we did lay emphasis on these aspects. Our objective focus was on the bioavailability study of ATD along with ESR estimations and other hematological and biochemical parameters. Looking toward the prognostic value of ESR, it was considered as an important marker. On ATD 18.67% ESR reduced while on *Aswagandha* 64.55% and with *Chaywanprash* added group 66.46%. On biochemical investigation no appreciable change was noticed. In two patients in add on therapy group, blood sugar which was higher than normal came down to normal level. Serum isoniazid estimation 2h after 1st dose and on 29th day after 2h blood samples was studied. The results were inconclusive. ⁽²⁾

Later on, with gained experience and on evaluation of the results we had changed our study protocol to get comprehensive information. Sequential bacterial load studies were incorporated. To assess the bacterial load, consecutive 3 days samples were collected for 24 h. In total 60 patients' results are projected as 'protocol complete', out of which 50% showed AFB positive and total bacterial load was thinner in ATD group. This information directed to comprehend that add-on therapy of Ayurvedic *rasayana* adjunct to ATD could reduce the bacterial load early. This information is of immense importance on public health issues. Dhanukar *et al.* (1988) in experimental model had clearly shown that *Tinospora cardifolia* (*Guduchi*) could protect *E. coli* infection and acts as an immunomodulator. Thattee and Dhanukar (1998) had indicated that Ayurvedic *rasayana* are immune stimulants in nature. *Jivanti* (*Desmotricum fimbriatum* Bl) an orchid plant had shown anti stress, antioxidant, and immune stimulant activity with quick shift of bacterial load in PTB patients. The water extracts of those drugs are used in *Chyawanprash* preparation. ⁽²⁾

Bioavailability of isoniazid and pyrazinamide showed 7-10% increased value after 28-days treatment. The present study indicates increased drug absorption status but not absolute bioavailability. In true sense estimation of bioavailability is done on the administration of drugs in two routes. In experimental situation, Ayurvedic plant product of *Piper nigrum* (Piperine) increases bioavailability of rifampicin. Recently, Indian Institute of Integrative Medicine (IIIM, Jammu) had transferred its technology to pharmaceutical industry for further evaluation in this regard. In a major breakthrough, the pharmaceutical industry has since marketed pipererine with a reduced dosage of rifampicin viz. 10 + 200 mg in capsule form. Immunoglobulin IgA and IgM estimations are other prognostic markers to determine the activity of Rasayana drugs. ⁽²⁾

The practice of Ayurveda has survived through the centuries and is a living tradition in India even today. The rich heritage of Ayurveda should be rationalized and revamped for the use of the suffering millions the world over. The present finding points toward appreciable increase in body weight and IgM and decreased ESR and IgA. Decreased TBW (TB without HIV) in PTB requires replenishment of *Rasa dhatu*. The toxic components are protected along with increased availability of ATD in blood. ⁽²⁾

In yet another review article," **Ayurvedic management of pulmonary tuberculosis: A systematic review.**" It was concluded that TB has been a major public health crisis for the

developing world including India. Due to increase in MDR and XDR strains of *M. TB*, there is an urgent need to find newer solutions to combat this problem. Distressingly research on the role of Ayurveda in the management of TB is very scanty and mostly limited to adjunct or supportive therapy. However, the adjunct role of Ayurveda drugs cannot be simply neglected for not qualifying as agents to combat the *M. TB* rather their role as agents of increasing bioavailability of ATDs and counteracting the adverse drug interactions should be properly utilized. Being a global public health crisis and having the state of current drug resistance, it is highly recommended to carry out clinical trials on TB patients using Ayurvedic drugs and therapeutic regimens. The drugs those proved potent in combating the adverse drug reactions of both the first line and second line anti-TB drugs could be successfully added to the drug regimens of TB for better curability and to reduce drug resistance. Similarly, the drugs which showed potential anti-TB properties *in vitro* could also be useful in today's world of drug resistance. ⁽³⁾

In an article, contributed by Dr. Pratik Bhoite, Ayurveda expert at allAyurveda.com. Dr Pratik has concluded the following. ⁽⁴⁾

Tuberculosis in Ayurveda

Vedic medicine refers to an ancient disease, called Yakshma, which was then redefined as Rajayakshma. This is essentially tuberculosis, which is caused by Dhatukshaya or emaciation and tissue loss. Ancient texts also mention Dhatwagninasana (metabolic problems), wherein there is a loss of rasa or fluid, rakta or blood, and meda or adipose tissue. They also describe wasting of muscles or mamsa, which leads to ojakshaya or weakening of immune function. ⁽⁴⁾ Ayurvedic experts also attempted to treat the condition, making several recommendations. Many of these therapies have been verified through modern studies, but we still have a long way to go. Until we have more data, based on what we already know, we can say that certain Ayurvedic formulations could help fight the TB pandemic, as they are effective as an add-on to conventional treatment. And yes, there's proof for those claims. ⁽⁴⁾

Modern Recommendations from Ancient Ayurveda

With the arrival of modern anti-TB drugs in 1947, the use of Ayurveda for TB was abandoned. But, here's what studies at the time found early TB drugs showed a cure rate of just 11.42% and a mortality rate of 40.9%. However, patients who received Ayurvedic medications in addition to conventional drugs showed a cure rate of 41.3% and the mortality rate dropped to just 3.8%! Today, there is growing interest among the global health community in traditional systems like Ayurveda for solution to the TB pandemic. The main Ayurvedic formulations used to treat and manage TB include Ashwagandha, Chyawanprash, and Bhringarajasava. ⁽⁴⁾

Ashwagandha & Chyawanprash

Ashwagandha (*Withania somnifera*) is regarded as a rejuvenator or rasayan of the body and is also known to increase balya or strength. This makes it particularly useful in the treatment of TB. It helps eliminate ama or toxins from the body and relieves kshayapaha or conditions of malnutrition and emaciation. ⁽⁴⁾

Chyawanprash, which contains a blend of herbs like ashwagandha, amla, pippali, and gokshura, among others, is regarded as the most important of all rejuvenators. According to the Charaka Samhita the herbal formulation is particularly effective at relieving respiratory distress and replenishes rasa and energy levels. ⁽⁴⁾

The Evidence: A review of various studies that appeared in the Journal of Intercultural Ethnopharmacology found that Ashwagandha can protect against side effects of TB drugs, also increasing their efficacy. One of the studies reviewed also proves that Ashwagandha can provide relief from symptoms like weight loss. Researchers investigating the effects of a combined treatment with Ashwagandha and Chyawanprash also observed improvements in

body weight, reduction in severity of symptoms, improvement in liver health, and better recovery. ⁽⁴⁾

How to Use Ashwagandha & Chyawanprash

Ashwagandha 500 mg - 2 capsules twice a day (entire duration of treatment) we have more data, based on what we already know, we can say that certain Ayurvedic formulations could help fight the TB pandemic, as they are effective as an add-on to conventional treatment. And yes, there's proof for those claims. ⁽⁴⁾

Bhringarajasava for Tuberculosis

In Ayurveda, we regard Bhringarajasava as a rasayana or rejuvenant as well as a kasahara, which means that it is also effective for respiratory infections. Because of its properties as vishaghna, it also helps to lower ama or toxin levels. It also improves energy levels, blood and fluid production, while protecting against liver damage. ⁽⁴⁾

The Evidence: A clinical study that evaluated the efficacy of Bhringarajasava found that the Ayurvedic formula provided relief from pain, fever, appetite loss, weight loss, breathing difficulty, and coughing.

How to Use Bhringarajasava: Bhringarajasava 30 ml mixed 30 ml of water thrice a day (entire duration of treatment + additional 6 8 months) ⁽⁴⁾

The Final Word

While the main line of treatment remains allopathy, which is unavoidable, Ayurveda can help improve recovery and the effectiveness of standard drugs. Studies so far, clearly prove that Ayurvedic therapies can improve patient outcomes, increasing the effectiveness of modern anti-TB drugs, reducing side effects, and providing symptom relief. ⁽⁴⁾

In another review article, Ayurvedic management of Pulmonary Tuberculosis (PTB): it has been summarized as follows.

Tuberculosis (TB) is a global public health crisis. 25% of world's TB cases are found in India. Ayurveda, an ancient medical science may offer some solution to this problem. Hence, a systematic review was carried out to assess the role of Ayurveda for the management of TB.

Methodology: A systematic review was carried out using published literature. until April 2015. The key words used for literature search include "Ayurveda, role and TB." ⁽⁵⁾

Results and Discussion: It was observed that a couple of single and compound drugs have been used for the management of TB. However, none of the studies could reflect the true anti-TB activities of any drug, both single and compound. Two of the studies revealed *in vitro* anti-TB properties of some herbs which can potentially be brought into the realm of a clinical trial to test their efficacy in a human subject. Most of these Ayurvedic therapeutic preparations studied in different clinical settings primarily reflected their adjunct properties for the management of TB. These studies revealed that Ayurvedic therapeutics was able to reduce associated symptoms and the adverse drug effects of ATDs (anti-TB drugs). Furthermore, some of the preparations showed potential hepato-protective properties that can be simultaneously administered with ATDs. ⁽⁵⁾

Ayurvedic Management of TB (Adjunct and Supportive)

Four different studies conducted in different clinical settings in India evaluated the properties of some of the Ayurvedic therapeutics as adjunct to anti-TB treatment. Vyas *et al.* conducted a single blind controlled trial to evaluate the adjunct properties of *Rasayana* compound among 133 TB patients receiving "Cat-1" therapy under RNTCP (Revised National Tuberculosis Control Programme (RNTCP)). The *Rasayana* used in this study is composed of *Amalaki* (*Emblia officinalis* Gaertn.)- Pericarp, 1 part, *Guduchi* (*Tinospora cordifolia* willd.)-Stem, 1 part, *Ashwagandha* (*Withania somnifera* L.)-Root, 1 part, *Yashtimadhu* (*Glycyrrhiza glabra*

Linn.)-Root, 1 part, *Pippali* (*Piper longum* Linn.)-Fruit, ½ parts, *Sariva* (*Hemidesmus indicus* R.Br.)-Root, ½ Parts, *Kustha* (*Saussurea lappa* Falc.)-Root, ½ parts, *Haridra* (*Curcuma longa* Linn.)-Rhizome, ½ parts and *Kulinjan* (*Alpinia galangal* Linn.)-Rhizome, ¼ parts and administered in capsule form. They conducted the study at OPD level at three different hospitals; (1) Institute of Post Graduate Training and Research in Ayurveda (IPGT and RA), Hospital, Gujarat Ayurveda University, Jamnagar, (2) District TB Centre and Hospital, Jamnagar, and (3) Guru Govind Singh Hospital, P. N. Marg, Jamnagar. The study was carried out for 60 days, and the capsule was administered at a dose of 450 mg. Only sputum smear-positive patients from Category I of PTB or extra PTB and age group of >13 years were selected for the study, rest excluded from the study. The study found that the compound is helpful in alleviating the associated symptoms of PTB in the treatment group (TG) compared to the control group (CG). The results were statistically significant ($P < 0.001$).⁽⁵⁾

The Rasayana compound was found to decrease cough (83%), fever (93%), dyspnea (71.3%), hemoptysis (87%), and increase body weight (7.7%)⁽⁵⁾

Based on the above references, it can be summed up that although tuberculosis is mentioned as Rajyakshma in Ayurveda but there are not enough clinical data available to prove that tuberculosis can be cured only with ayurvedic drugs. Ayurveda can play a very important role in eradicating tuberculosis especially in cases of drug resistant tuberculosis (MDR and XDR) which are on the rise. Through various clinical trials, it has been found that various ayurvedic formulations viz Chyawanprash, Bhringarajasava, Ashwagandha can help in speedy and complete recovery; increasing bio-availability of ATDs and reduce adverse effects of ATDs when used as adjuvant.

- Administration of Chyawanprash along with standard modern ATT helps in (i) boosting immunity and stamina (ii) improves respiratory health (iii) promotes digestion (iv) improves reproductive health⁽¹⁾
- The present finding points toward appreciable increase in body weight and IgM and decreased ESR and IgA.⁽²⁾
- The Ayurvedic drugs those proved potent in combating the adverse drug reactions of both the first line and second line anti-TB drugs could be successfully added to the drug regimens of TB for better curability and to reduce drug resistance. Similarly, the drugs which showed potential anti-TB properties *in vitro* could also be useful in today's world of drug resistance.⁽³⁾
- Ayurveda can help improve recovery and the effectiveness of standard drugs. Studies so far, clearly prove that Ayurvedic therapies can improve patient outcomes, increasing the effectiveness of modern anti-TB drugs, reducing side effects, and providing symptom relief.⁽⁴⁾
- Help in decreasing the associated symptoms of Pulmonary tuberculosis like cough (83%), Dyspnoea (71.3%), hemoptysis (87%) and increase in body weight (7.7%) as compared to control.⁽⁵⁾

References

1. <https://in.search.yahoo.com/search?fr=mcafee&type=E211IN885G0&p=Amazing+Benefits+Of+Chyawanprash+For+Bolstering+Immunity+And+Vitality>
2. P. K. Debnath, Jaydeb Chattopadhyay, Achintya Mitra, Anjan Adhikari, Mirza Samsur Alam, S. K. Bandopadhyay, and Jayram Hazra; *J Ayurveda Integr Med.* 2012 Jul-Sep;

3(3): 141–149. doi: [10.4103/0975-9476.100180](https://doi.org/10.4103/0975-9476.100180); PMID: 23125511

3. Janmejaya Samal; Ayurvedic management of pulmonary tuberculosis: A systematic review; *J Intercult Ethnopharmacol.* 2016 Jan-Feb; 5(1): 86–91.
4. *This article is contributed by Dr. Pratik Bhoite, Ayurveda expert at allAyurveda.com*
Published : March 24, 2018 6:44 PM IST <https://www.thehealthsite.com/news/living-with-tuberculosis-why-ayurveda-could-play-an-increasingly-important-role-d0318-560482/>
5. Janmejaya Samal Ayurvedic management of Pulmonary Tuberculosis (PTB): A systematic review, *Journal of Intercultural Ethnopharmacology* · January 2016; DOI: 10.5455/jice.20151107020621
6. *Iran Red Crescent Med J* 2012; 14(1):53-55 ©Iranian Red Crescent Medical Journal

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