

National Clinical Management Protocol based on Ayurveda and Yoga for Management of Covid-19



**Ministry of AYUSH
GOVERNMENT OF INDIA
October 6, 2020**

BACKGROUND

- Global Pandemic of Covid-19 created immense challenges to health systems
- Ministry of AYUSH has taken multiple actions
 - to promote awareness in the country about the disease
 - possible methods to keep oneself healthy
 - to mitigate the possible disaster due to outbreak of pandemic
 - to support AYUSH stakeholders.
 - To enable for conducting scientific studies on the possible role AYUSH interventions

BACKGROUND

- Ayurveda and Yoga play a pivotal role to augment preventive measures provided in the guidelines
- Ministry of AYUSH has brought out Ayurveda and Yoga protocol for management of covid-19 considering:
 - i. Knowledge from Ayurveda literature and clinical experience
 - ii. Empirical evidences and Biological plausibility
 - iii. Emerging trends of ongoing clinical studies
- Protocol developed by expert committee from AllIA, Delhi, IPGT&RA, Jamnagar and NIA, Jaipur, CCRAS, CCRYN and other national research organizations

Recommendations of National Task Force on Covid 19

- 29th meeting of National Task Force and Joint Monitoring Group on Covid 19 held on September 1, 2020 recommended the following:
 - Yoga interventions as a supportive modality of care for Covid 19 patients including the post- illness phase
 - Establishment of separate National Task Force for recommending a comprehensive National Clinical Management protocol based on Ayurveda system of medicine
- Accordingly, Chairman, Interdisciplinary Committee for inclusion of Ayurveda and Yoga in the management of mild COVID-19 and the empowered committee of the Interdisciplinary AYUSH Research and Development Taskforce on COVID-19 approved the protocol

SALIENT FEATURES

- **General and Physical measures**

- Follow physical distancing, respiratory and hand hygiene, wear mask
- Gargle with warm water added with a pinch of turmeric and salt. Water boiled with Triphala (dried fruits of *Emblica officinalis*, *Terminalia chebula*, *Terminalia bellerica*) or Yashtimadhu (*Glycyrrhiza glabra*) also can be used for gargling.
- Nasal instillation/application of medicated oil (Anu taila or Shadbindu Taila) or plain oil (Sesame or Coconut) or nasal application of cow's ghee (Goghrita) once or twice in a day, especially before going out and after coming back to home.
- Steam inhalation with Ajwain (*Trachyspermum ammi*) or Pudina (*Mentha spicata*) or Eucalyptus oil once a day
- Adequate sleep of 6 to 8 hrs.
- Moderate physical exercises
- Follow Yoga Protocol for Primary Prevention of COVID-19 and Protocol for Post COVID-19 care (including care for COVID-19 patients)

SALIENT FEATURES

- **Dietary measures**
 - Use warm water or boiled with herbs like ginger (*Zingiber officinale*) or coriander (*Coriandrum sativum*) or basil (*Ocimum sanctum / Ocimum basilicum*), or cumin (*Cuminum cyminum*) seeds etc., for drinking purpose.
 - Fresh, warm, balanced diet
 - Drink Golden Milk (Half tea spoon Haldi (*Curcuma longa*) powder in 150 ml hot milk) once at night. Avoid in case of indigestion.
 - Drink *Ayush Kadha* or *Kwath* (hot infusion or decoction) once a day.

SALIENT FEATURES

Specific measures/ Symptom Management

Clinical severity	Medicines*	Doses & Timing
Prophylactic care (high risk population, primary contacts)	<i>Ashwagandha</i> (Aqueous extract of <i>Withania somnifera</i> IP) or its powder	500 mg extract or 1-3 g powder twice daily with warm water for 15 days or one month or as directed by Ayurveda physician
	<i>Guduchi Ghana vati</i> [Samshamani vati or Giloy Ghana vati having Aqueous extract of <i>Tinospora cordifolia</i> IP] or the powder of <i>Tinospora cordifolia</i>	500 mg extract or 1-3 g powder twice daily with warm water for 15 days or one month or as directed by Ayurveda physician
	<i>Chyawanaprash</i>	10 g with warm water / milk once a day

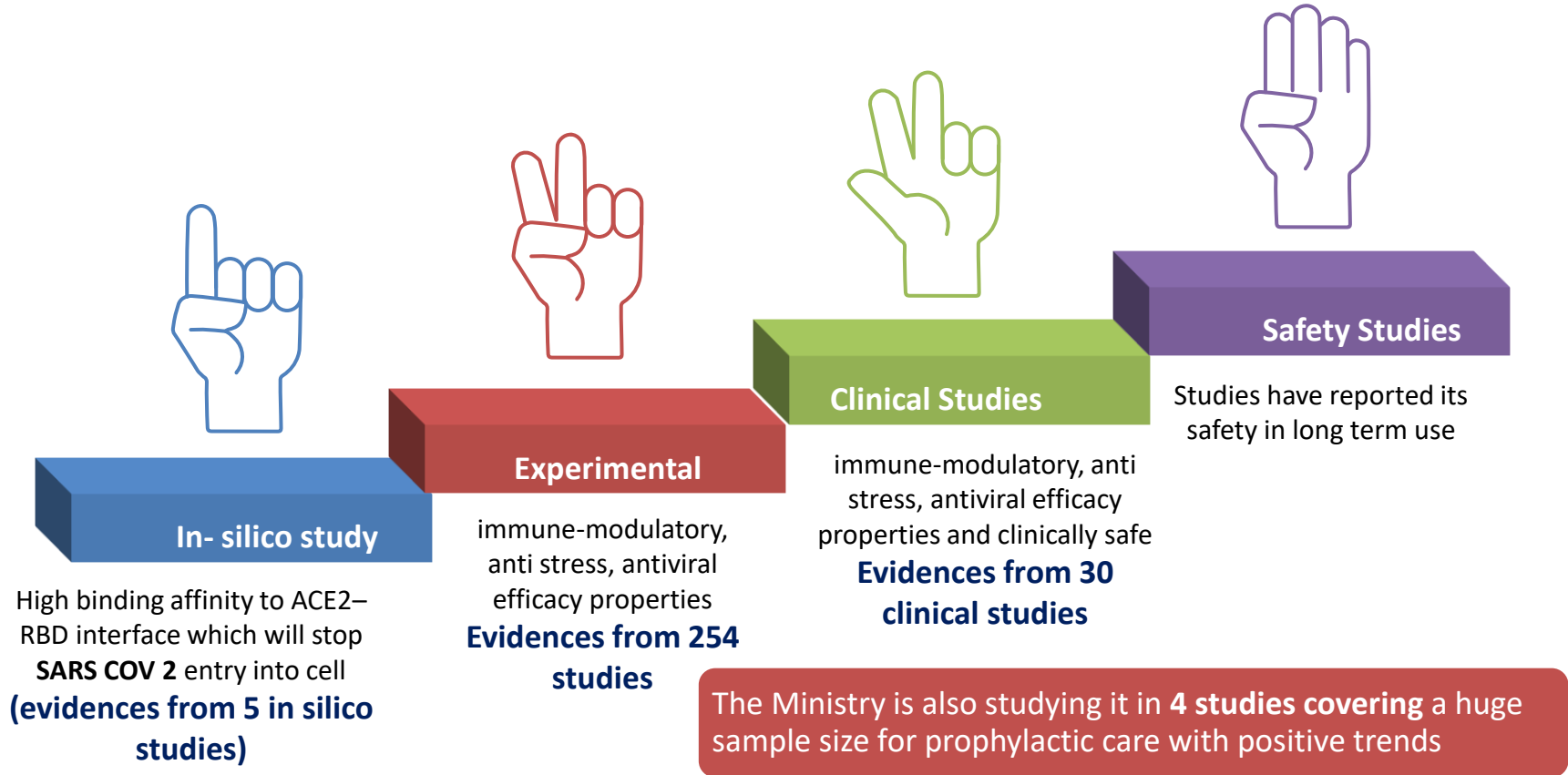
SALIENT FEATURES

Clinical severity	Clinical Presentation	Medicines*	Doses & Timing
Asymptomatic – COVID-19 Positive	For prevention of disease progression to symptomatic and severe form and to improve recovery rate	Guduchi Ghana vati [Samshamani vati having Aqueous extract of Tinospora cordifolia IP] or the powder of Tinospora cordifolia	500 mg extract or 1-3 g powder twice daily with warm water for 15 days or one month or as directed by Ayurveda physician
		Guduchi + Pippali (Aqueous extracts Tinospora cordifolia IP and Piper longum IP) or AYUSH 64	500 mg twice daily with warm water for 15 days or as directed by Ayurveda physician

SALIENT FEATURES

Clinical severity	Clinical Presentation	Clinical Parameters	Medicines*	Doses & Timing
Mild COVID-19 Positive**	Symptomatic management Fever, Headache, Tiredness Dry Cough, Sore throat Nasal congestion	Without evidence of breathlessness or hypoxia (normal situation)	Guduchi + Pippali (Aqueous extracts <i>Tinospora cordifolia</i> IP and <i>Piper longum</i> IP)	375 mg twice daily with warm water for 15 days or as directed by Ayurveda physician
			AYUSH 64	500 mg twice daily with warm water for 15 days or as directed by Ayurveda physician

Ashwagandha (*Withania somnifera*)



Guduchi (*Tinospora cordifolia*)

In- silico study
high binding efficacy against
SARS-CoV-2 targets involved in
attachment and replication of the
virus, as compared to Favipiravir,
Lopinavir/Ritonavir
**(evidences from 5 in-silico
studies)**

01

Experimental studies
Immuno modulator, Anti inflammatory, Antiviral,
antipyretic, antimalarial and significant increase in
the IFN- γ , IL-2, IL-4, and IL-1 levels **(evidences
from 232 experimental studies)**

02

Clinical Studies
Immuno modulator, Anti
inflammatory, Antiviral,
antipyretic, antimalarial and
clinically safe
**Evidences from 38
clinical studies**

03

Safety Studies
The herb has been
reported to be safe even
in high doses for long
term

04

Ministry has also undertaken
about **7 studies on Guduchi as
Prophylactic care on about 1.33
Lakh population** with very
positive trends in preventing
COVID 19 and in management of
asymptomatic COVID 19 without
any side effect

Pippali (Piper longum)

In Silico Studies

high binding affinity to ACE2 protein and main protease (MPro)
(evidences from 2 in silico studies)

01

Safety Studies

does not show any mortality or morbidity when 3 to 5g/kg is administered to animals during pharmacological study

03

Experimental studies

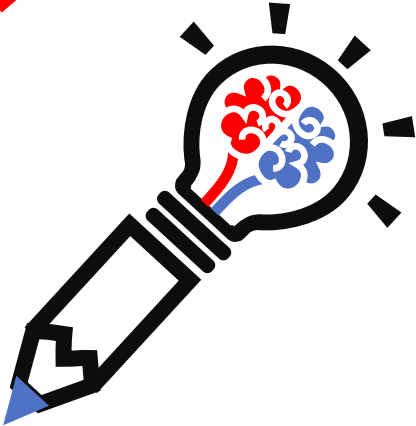
inhibition of TNF- α induced ICAM-1 and VCAM-1 expression also inhibit the TNF- α induced expression of cell adhesion molecules by inhibiting nuclear factor- κ B (NF- κ B) activation in endothelial cells, Anti inflammatory, immuno-modulator, anti viral **(evidences from 705 experimental studies)**

02

Clinical Studies

Anti inflammatory, immuno modulator and clinically safe **(evidences from 534 clinical studies)**

04



The Ministry is also studying the combination in about 200 participants through 2 studies, in moderate COVID 19 with very positive trends

AYUSH 64

The Ministry is also studying it through **6 clinical studies across India** which are very positive trends



In silico study

in-silico study on AYUSH 64 which shows that about **35 of its phyto-constituents** have high binding affinity in COVID 19 virus



Experimental

antipyretic, antimalarial & Hepatoprotective, immune modulatory properties (**evidences from 25 experimental studies**)



Clinical Studies

anti-malarial property, anti-pyretic, anti-viral, found effective in Influenza Like Illness (**evidences from 8 clinical studies**)



Safety Studies

AYUSH 64 was found to be safe and non-toxic in a dose of 500 mg/kg of body weight for 12 weeks in experimental studies Clinical studies on safety and efficacy has also shown the drug to be safe without in ADR/SAE reported and on LFT, KFT like parameters besides clinical efficacies

Management of mild Covid 19 Cases

Clinical severity	Symptom	Formulation*	Dose*
Mild COVID-19	Fever with Body ache, Headache	Nagaradi Kashaya	20 ml twice a day or as directed by Ayurveda physician
	Cough	Sitopaladi Churna with Honey	2 g thrice daily with Honey or as directed by Ayurveda physician
	Sore throat, Loss of taste	Vyoshadi vati	Chew 1-2 pills as required or as directed by Ayurveda physician
	Fatigue	<i>Chyawanprasha</i>	10 g with warm water / milk once a day
	Hypoxia	Vasavaleha	10 g with warm water or as directed by Ayurveda physician
	Diarrhoea	Kutaja Ghana Vati	500 mg - 1 g thrice daily or as directed by Ayurveda physician
	Breathlessness	Kanakasava	10 ml with equal amount of water twice a day or as directed by Ayurveda physician

References

1. Guidelines for Ayurveda practitioners for COVID-19; available at <https://www.ayush.gov.in/docs/ayurved-guidlines.pdf>
 2. Guidelines on Clinical Management of COVID-19; Government of India, Ministry of Health & Family Welfare; available at <https://www.mohfw.gov.in/pdf/GuidelinesonClinicalManagementofCOVID1912020.pdf>
 3. Advisory from Ministry of AYUSH for meeting the challenge arising out of spread of corona virus (COVID-19) in India; available at <https://www.ayush.gov.in/docs/125.pdf>
 4. Ayurveda's immunity boosting measures for self-care during COVID-19 crisis; available at <https://www.ayush.gov.in/docs/123.pdf>
 5. Post COVID management protocol of Ministry of Health & Family Welfare; available at <https://www.mohfw.gov.in/pdf/PostCOVID13092020.pdf>
- Revised SOP on preventive measures to be followed while conducting examinations to contain spread of COVID-19; available at <https://www.mohfw.gov.in/pdf/RevisedSOPonpreventivemeasurestobefollowedwhileconductingexaminationstocontainspreadofCOVID19.pdf>

Yoga Protocol for Primary prevention of Covid 19

- To improve respiratory and cardiac efficiency
- To reduce stress and anxiety
- To enhance immunity
- To improve pulmonary function and lung capacity
- To reduce stress and anxiety
- To improve Muco-ciliary clearance

This is a general advisory. Attending physicians need to use their discretion to select the drugs based upon the stage of the disease, symptom complex and availability of the medicines. The recommended formulations in this attempt are in addition to standard approaches of care and prevention as well as other Ayurvedic approaches recommended for prevention earlier. Moderate to Severe COVID-19 individuals may have informed choice of treatment options.



सत्यमेव जयते
Ministry of AYUSH

THANK YOU