

A Review on Medicinal Plants
Used in Respiratory Disorders in
Eastern India

Submitted by-

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Introduction:

The recent and most welcome principle in natural products research that leads to bioprospection, and drug development is mainly based on botanical knowledge, skills, practices and beliefs on folk medicinal plants. Reports from World Health Organization (WHO 2023) reckoned about 88 percent of the world's population exclusively depend on traditional medicines based on local phytoresources for their daily healthcare needs. This dependence is due to beliefs in own culture, reliability of effective curing properties of medicinal herbs and difficulties in availing modern medical facilities mainly due to pitiable economic status. Now-a-days, about 25% of the total plant drugs used in therapeutics comes from plant sources (Ayyanar & Ignacimuthu 2011). The Respiratory system is a network of organs and tissues that make respiration possible by making the body observe oxygen from the air so that organs can functions. The respiratory organs system includes airways ,the lungs and blood vessels. The system can be divided into the upper and lower respiratory tracts. Respiratory infections are most common of all human infections which may cause death specially in passasions of sevier diseases of chronic problems .The most common problems and systems are Cough, Nausea, Shortness of breath ,Chest pain, allergies .The WHO estimates that nonchronicle diseases represent 63% of all global death of which 3.9 million are due to chronic respiratory diseases and chronic obstructive pulmonary diseases that is why WHO is promoting herbal medicine of pharmacological research for Seeking remedies of different respiratory disorders from ancient time .Plants had been a rich source of effective and safe medicine. In the world 64% of the population realised from medicinal plants to treat health problems.

The present study is aimed to review and document the medicinal plants used to treat different respiratory disorders in India.



Objectives :

- ❖ To understand the uses of different medicinal plants of eastern India employed in curing respiratory disorders.
- ❖ To make a comprehensive and up-to-date review of published literature on medicinal plants of eastern India used in respiratory problems.



Results:

SL. No	NAME OF PLANTS	FAMILY	LOCAL / TRIBAL NAME	HABIT (PARTS USED)	MODE OF ADMINISTRATI ON AND USES IN CURING RESPIRATORY PROBLEMS	REFERENCE NUMBER
1.	<i>Spondiaspinnata</i> (L. f.) Kurz	Betulaceae	Simrayo	Whole plant	Cough	YasodhaSubba, SamikHazra, Chowdhury HabiburRahaman , 2023
2.	<i>Nasturtium officinale</i> W.T. Aiton	Betulaceae	Simrayo	Whole plant	Cough	
3.	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Combretaceae	Barra	Fruit and bark	Cough, cold and bronchitis	
4.	<i>Ocimumtenuiflorum</i> L.	Fabaceae	Tulsi	Leaf	Cough and throat pain	
5.	<i>Perillafrutescens</i> (L.) Britton	Fabaceae	Silam	Seed	Cough and cold	
6.	<i>Fragarianubicola</i> (Lindl. ex Hook.f.) Lacaita	Rosaceae	Bhuiaiselu	Aerial part	Cough and cold	
7.	<i>Justicaadhatoda</i> L.	Acanthaceae	Basak	Leaf	Asthama	Abhishek Konar and AnusreeMondal , 2022
8.	<i>Centellaasiatica</i> (L.) Urb.	Apiaceae	Thankuni	Leaf	Cold & cough.	
9.	<i>Basella alba</i> L.	Basellaceae	Puinsak	Root and leaf	Tuberculosis	
10.	<i>Ocimumfenuiflorum</i> L.	Labiatae	Tulsi	Leaf	Cough and cold	
11.	<i>Acanthus ilicifolius</i> L.	Acanthaceae	Kantajhuri	Leaf and root	Cough	Arjun Patra , Amal Kumar Mondal and Debdulal Banerjee , 2017
12.	<i>Gendarussa vulgaris</i> Burm. f	Acanthaceae	Bisllakaroni	Leaf	Cough	
13.	<i>Ruelliatuberosa</i> L	Acanthaceae	Chotpot	Leaf and Root	Whooping cough	
14.	<i>Andrographispaniculata</i> (Burm.f.)Wall. Ex Nee	Acanthaceae	Kalmegh	Leaf	Cough	
15.	<i>Barleriaprionitis</i> L.	Acanthaceae	KantaJhinti	Leaf and Root	Cough	
16.	<i>Barleriacristata</i> L.	Acanthaceae	Swetjhinti	Leaf	Cough	

17.	<i>Leucascephalotes</i> (Roth.) Spreng.	Lamiaceae	Bara Halkasha	Whole plant	Cough and cold	ArijitSinhbabu, Arpita Banerjee 2013
18.	<i>Micheliachampaca</i> (L.) Baill.ex Pierre	Magnoliacea e	Swarnach ampa	Stem	Cough	
19.	<i>Crinum amoenum</i> Ker Gawl.exRoxb.	Amaryllidace ae	Mosaisab rum	Whole plant	Asthma	Ajita Sarkar and A.P. Das
20.	<i>Phlogacanthusthyrs</i> <i>iformis</i> (Roxb.exHardw.) Mabb.	Acanthaceae	Chinching rikhala	Leaf	Whooping cough	
21.	<i>Justicaadhatoda</i> Linn.	Acanthaceae	Chinchiri	Leaf	Bronchitis	
22.	<i>Pupalialappacea</i> (L.)Juss.	Amaranthac eae	Samultha	Whole plant	Common cold and cough	
23.	<i>Cassia tora</i> (L.)Roxb.	Fabaceae	Shinchum	Root	Influenza	
24.	<i>Leucaszeylanica</i> Var.	Lamiaceae	Khansisa	Leaf	Sore throat	
25.	<i>Solanum torvum</i> Sw.	Solanaceae	Khunthai raja	Root	Pneumonia	
26.	<i>Ocimumgratissimu</i> <i>m</i>	Lamiaceae	--	--	Cough	
27.	<i>Tectonagrandis</i>	Verbenaceae	--	--	Bronchitis	
28.	<i>Vernoniacinerea</i>	Asteraceae	--	--	Bronchitis	
29.	<i>Ecliptaprostrata</i>	Asteraceae	--	--	Asthma	
30.	<i>Coleus amboiunicus</i>	Lamiaceae	--	--	Asthma bronchitisL	

Odisha

1.	<i>Emblicaofficinaltis</i> Gaertn.	Euphorbiace ae	Amla	Fruit	Cold and cough	GyanaranjanSahoo ,Afaq Majid Wani , BineetaSatpathy, Sandeep Rout . 2020
2.	<i>Gymnemasylvestre</i> (Retz.) R.Br. exsm.	Asclepiadacc ac	Gurmar	Leaf	Asthma	
3.	<i>Peeper longum</i> L.	Piperaceae	Long pepper	Fruit and root	Bronchitis and cold	
4.	<i>Santalum album</i> L.	Santalinacea e	Sandalwo od	Heart wood,oil	Cold	
5.	<i>Asparagus</i> <i>racemosus</i> Willd.	Liliaceae	Satawar	Tuber, root	Cough	
6.	<i>Ocimum sanctum</i> <i>tenuiflorum</i> L.	Lamiaceae	Tulsi	Leaf and seed	Cough, cold, bronchitis	
7.	<i>Terminaliabelerica</i> (Gaertn.) Roxb.	Combretacea e	Bibhitaki	Seed, bark	Cough	
8.	<i>Euphorbia hirta</i>	Euphorbiace ae	--	--	Cold fever	
9.	<i>Solanum</i> <i>virginianum</i>	Solanaceae	--	--	Cough	

10.	<i>Sesbania grandiflora</i>	Fabaceae	--	--	Asthma	
11.	<i>Argemone maxicana</i>	Papaveraceae	--	--	Cold	
12.	<i>Phyllanthus fraermus</i>	Phyllanthaceae	--	--	Cold	
13.	<i>Tephrosia villosa</i>	Combretaceae	--	--	Cold fever	
14.	<i>Terminalia chebula</i>	Combretaceae	--	--	Cough	
15.	<i>Plumbago indica</i>	Plumbaginaceae	--	--	Cough	

Bihar

1.	<i>Ocimum sanctum tenuiflorum</i> L.	Lamiaceae	Tulsi	Leaf, root	Bronchitis, bronchial asthma	Rahul Nayan , Ashok Kumar Thakur , Rina Kumari , 2022
2.	<i>Calotropis gigantea</i> (L.) W.T. Aiton	Apocynaceae	Aak	Whole plant	Asthma, cold, cough	
3.	<i>Mentha piperita</i> L.	Lamiaceae	Peppermint	Leaf	Cold, nausea	
4.	<i>Trigonella foenum-graecum</i> L.	Fabaceae	Methi	Seed, leaf	Bronchitis, sore throat	
5.	<i>Curcuma longa</i> L.	Zingiberaceae	Termeric	Rhizome	Cough	
6.	<i>Daucus carota</i>	Apiaceae	--	--	Asthma	
7.	<i>Leucas cephalotus</i>	Lamiaceae	--	--	Cough	
8.	<i>Elcipta alba</i>	Asteraceae	--	--	Cough	
9.	<i>Calendula officinalis</i>	Asteraceae	--	--	Cough	
10.	<i>Allium sativum</i>	Alliaceae	--	--	Cough, bronchitis, asthma	
11.	<i>Bacopa monnieri</i>	Scrophulariaceae	--	--	Clearing voice	
12.	<i>Croton tiglium</i>	Euphorbiaceae	--	--	Cold , Cough and asthma	

Chhattisgarh

1.	<i>Andrographis paniculata</i> Burm.f.) Wall. Ex Nees	Acanthaceae	Kalmegh, Bhui neem	Leaf	Asthma, bronchitis	Sanyogita Shahi, Shirish Kumar Singh , 2022
2.	<i>Bacopa monnieri</i>	Scrophulariaceae	Brahmisa k	Tuber	Asthma	
3.	<i>Cinnamomum bejolghota</i>	Lauraceae	Tejpatha	Bark, fruit, root	Cough and cold	

4.	<i>Helianthus annuus</i>	Asteraceae	Surajmukhi	Latex	Cough and cold	
5.	<i>Terminalia bellirica</i>	Combretaceae	Baheda	Bark	Cough and cold	
6.	<i>Argemonemexicana</i>	Papaveraceae	Pilikateri	Fruit	Cough and cold	
7.	<i>Tamarindusindica L.</i>	Fabaceae	--	--	Cough and cold	
8.	<i>Acalyphaindica L.</i>	Euphorbiaceae	--	--	Cold cough Asthma and pneumonia	
9.	<i>Pongamiapinnata</i>	Fabaceae	--	--	Cold and cough	
10.	<i>Leucasaspera (Willd) Linn.</i>	Lamiaceae	--	--	Cold and cough	
11.	<i>Salvia hispanica L.</i>	Lamiaceae	--	--	Asthma	
12.	<i>Verbena cinerea</i>	Asteraceae	--	--	Asthma cold	

Jharkhand

1.	<i>Ocimumsanclum</i>	Lamiaceae	Tulsi	Leaf, seed	Cough , cold , bronchitis	Iqbal Ansari , S.N. Sharma , M. Sundararajan , R. Kumar and B. K. Pandey , 2016
2.	<i>Emblicaofficinalis</i>	Euphorbiaceae	Amla	Fruit	Cough , cold	
3.	<i>PlumbagoIndica</i>	PlumbagoIndica	RaktaChitrak	Root	Cough	
4.	<i>CinnamomumZeylanicum</i>	Lauraceae	Dalchini	Bark	Bronchitis , asthma	
5.	<i>Mucunamonosperma</i>	Fabaceae	Kariyasa	Stem,leaf	Asthma	
6.	<i>Argemonemexicana</i>	Papaveraceae	Mexicanpoppy	Whole plant	Asthma	
7.	<i>Acalyphaindica Linn</i>	Euphorbiaceae	Khokali	Whole plant , roots , leaf	Asthma	
8.	<i>Bombaxmalabaricum DC.B.thorelii</i>	Bombacaceae	--	--	Cough	
9.	<i>Lepidumsativum L.</i>	Brassicaceae	--	--	Asthma bronchitis and cough	
10.	<i>Mesuaferrea Linn.</i>	Calophyllaceae	--	--	Cough cold asthma	
11.	<i>Terminalia arjuna</i>	Combretaceae	--	--	Asthma	
12.	<i>Terminalia bellirica</i>	Combretaceae	--	--	Cough	
13.	<i>Operculinaturpethum</i>	Convolvulaceae	--	--	Bronchitis	
15.	<i>Saussurealappa</i>	Asteraceae	--	--	Cough asthma	



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Lacuna and scopes

1 No modern scientific approach of documentation was made till date except a few quantitative ethnobotanical studies from West Bengal, Odissa and Bihar } The identity of species must be verified before further scientific studies in the line of pharmacology and phytochemistry Mostly monoherbal preparations have been documented and polyherbal formulations are neglected and or not well documented in the studies so far made from the eastern India .



Conclusion

A total of 83 plants used to cure 9 different types of respiratory problems in eastern India. Taxa under family Acanthaceae is cited mostly for curing such diseases which shows further scopes for research with the reported plants under his family. Highest number of species documented from West Bengal which indicates the West Bengal is most prone to respiratory problems among the other states of eastern India whereas and Bihar and Chattisgarh states are less prone to such diseases. This review finally meet the gap of earlier studies and it will help to create database on medicinal plants to cure respiratory disorders.



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