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Herbal medicine as antipyretic: A comprehensive review

Sharma J.P.*, Srivastava.A., Thakur S.P., Barpete P. K. and Singh S.
Vinayaka College of Pharmacy
Vill. Bahoguna P.O. Garsa Distt. Kullu (H.P.)-175141

Abstract

The role of traditional medicines in the solution of health problems is invaluable on a global level. As estimated by WHO, 80% population of underdeveloped countries rely on traditional system of medicine. A large number of ethnic plants such as chirchitta, bhringraj, bija sal, arjuna, neem, tulsi etc. are used traditionally to cure pyrexia in India and other parts of the world. Plant based drugs are used as therapeutic agents or their chief constituent separated by chemical processes which are employed as medicines. Traditional use of herbal medicine is very basic and integral part of various cultures and spread of modern science. The practice continues today because of biomedical benefits in many parts of the world and demand for herbal product rising world wide.

Keywords: Pyrexia, antipyretic, herbal drugs, fever

Introduction

India has centuries old and rich heritage of medicinal & aromatic plant due to diversity in environment for curing human illness. The most common illness is fever which is pharmacological known as pyrexia characterized by elevation of temperature above the normal range of 36.5 ^{0}C to 37.5 ^{0}C. Fever is associated with symptoms of sickness behavior which consist of lethargy, depression, anorexia, sleepiness, & inability to concentrate. This increase in set point triggers increased muscle tone & shivering.
However antipyretic medication can be effective at lowering the temperature which may include the affected persons comfort. Medicinal plants are the only easily accessible health care alternative for most of our population and traditional medicines remained a part of our integral health system.[1]

Herbal drugs as antipyretics

Herbal care or traditional system of medicine are used throughout the world and from century's herbs have been the original source for most of the drugs. Medicinal plants contain so many chemical compounds which are the major source of therapeutic agents to cure human disease. Recent discovery and advancement in medicinal and aromatic plants have lead to the enhancement of health care of mankind. Various medicinal plants like neem, arjuna, aswagandha, tulsi, etc. traditionally used for treating fever. The extract prepared from the heartwood of *Acacia catechu*, stem bark and leaves of *Bauhinia racemosus*, *Cleome viscosa* etc. reported to have antipyretic activity in rats.[1]

***Correspondence Author:** Vil. & P.O. Malan, Tehsil & Distt. Kangra(H.P.)-476047
Tel: +919805545736; Email: jyoti_nsce@rediffmail.com

Table no. 1 List of plants used as the Antipyretic[2-16]

Sr. No.	Common Name	Botanical Name	Habit	Habitat	Part Used	Family	Uses
1	Tulsi	*Ocimum sanctum*	Herb	All India	Leaves	Labiatae	Antipyretic; Antitussive
2	Neem	*Azadirachta indica*	Tree	North India	Leaves	Meliaceae	Antipyretic;
3	Brahmi	*Centella asiatica*	Herb	India	Whole Plant	Umbelliferae	Antipyretic; Blood purifier
4	Stavari	*Asparagus adscendens*	Shrub	India	Tuberous Roots	Liliaceae	Antipyretic; Demulscent; Nutritive Tonic
5	Bahera	*Terminalia belerica*	Tree	India	Fruit	Combretaceae	Antipyretic; Expectorant
6	Harar	*Terminalia chebula*	Tree	India	Fruit	Combretaceae	Antipyretic; Astringent; Purgative
7	Amla	*Emblica officinalis*	Tree	All India	Fruits	Euphorbiaceae	Antipyretic;
8	Cinchona	*Cinchona officinalis*	Tree	All India	Bark	Rubiaceae	Antipyretic;
9	Bish	*Aconitum ferox*	Herb	Nepal; India	Dried Roots	Ranunculaceae	Antipyretic; Diaphoretic;Diuretic
10	Jawasa	*Alhagi maurorum*	Shrub	South Indiia	Seed; Oil	Papilionaceae	Antipyretic; Laxative; Diuretic; Expectorant
11	Datyuni	*Alstonia scholaris*	Shrub	All India	Leaves; Bark; Milky Juice	Apocynaceae	Antipyretic; Stimulant; Carminative; Aphrodisiac
12	Kiryat	*Andrographis paniculata*	Herb	India; Bengal	Whole Herb	Acanthaceae	Antipyretic; Antihelmintic
13	Gulancha	*Cocculus cordifolia*	Shrub	Western India	Stem; Leaves; Roots	Menispermaceae	Antipyretic; Aphrodisiac
14	Dhaniya	*Coriandrum sativum*	Herb	All India	Leaves; Seeds	Umbelliferae	Antipyretic; Carminative
15	Jhar Haldi	*Coscinum fenestratum*	Herb	All India	Stem	Menispermaceae	Antipyretic; Stomachic
16	Nirbisi	*Cissampelos pareira*	Tree	South India	Roots; Bark	Menispermaceae	Antipyretic; Antilithic
17	Phala-Kantak	*Daemia extensa*	Herb	All India	Leaves; Roots	Ascepidaceae	Antipyretic; Expectorant; Antihelmintic
18	Sarivan	*Desmodium gangentium*	Herb	Indian Himalayas	Root; Bark	Leguminosae	Antipyretic; Bitter Tonic
19	Dharmana	*Grewia asiatica*	Shrub	All India	Bark; Leaves	Tiliaceae	Antipyretic; Demulscent
20	Suganhi	*Hemidesmus indicus*	Herb	India	Root, Juice	Ascepiadaceae	Antipyretic; Demulscent;

							Diuretic
21	Parijata	*Nyctanthes arbor-tristis*	Herb	Central India	Leaves	Oleaceae	Antipyretic; Antidot; Laxative
22	Katuka	*Picorrhhiza Kurroa*	Herb	North India	Dried Rhizome	Scrophulariaceae	Antipyretic; Laxative
23	Kali-Mirch	*Piper nigrum*	Shrub	Western India	Dried Fruits	Piperaceae	Antipyretic; Carminative; Antiperiodic
24	Chitravalli	*Rubia cordifolia*	Shrub	North India	Roots	Rubiaceae	Antipyretic; Astringent; Diuretic
25	Jwaran-Thakah	*Swertia chirata*	Herb	North India	Whole Herb	Gentianaceae	Antipyretic; Antidot
26	Jamana	*Prunus padus*	Tree	India; Bhutan	Seed; Oil	Rosaceae	Antipyretic; Diuretic
27	Gurach	*Tinospora cardifolia*	Shrub	Soouth India	Stem; Root	Menispermaceae	Antipyretic; Antidot
28	Banaphsa	*Viola odorata*	Herb	All India	Whole Herb	Violaceae	Antipyretic; Antitussive
29	Nirgandi	*Vitex negundo*	Shrub	South India; Burma	Roots; Flower; Fruits; Bark	Verbenaceae	Antipyretic; Astringent
30	Chhota Pilu	*Salvadora persica*	Tree	North India	Root-Bark	Salvadoraceae	Antipyretic; Purgative
31	Palwal	*Trichosanthes dioica*	Herb	North India	Fruits	Cucurbitaceae	Antipyretic; Laxative
32	Harivera	*Pavonia odorata*	Herb	Western India	Roots	Malvaceae	Antipyretic; Diuretic
33	Hurmal	*Peganum harmala Linn.*	Shrub	North India	Seeds	Rutaceae	Antipyretic; Stimulant
34	Swet Chandan	*Santalum album*	Tree	South India	Wood; Volatile oil	Santalaceae	Antipyretics; Sedative; Astringent
35	Rakta-chandna	*Pterocarpus santalinus*	Tree	South India	Wood	Papilionaceae	Antipyretic; Astringent
36	Imli	*Tamarindus indica*	Tree	South India	Fruits	Caesalpiniaceae	Antipyretic; Carminative
37	Daman-paper	*Oldenlandia herbacea*	Herb	All India	Whole Herb	Rubiaceae	Antipyretic
38	Bhindi	*Abelmoschus esculentus*	Herb	India	Seed	Malvaceae	Antipyretic; Emollient; Diuretic; Aphrodisiac
39	Hansraj	*Andiantum capillus-veneris*	Herb	South India	Whole Plant	Polypodiaceae	Antipyretic; Expectorant; Diuretic
40	Akola	*Alangium lamarckii*	Shrub	South India	Root; Seed; Leaves	Cornaceae	Antipyretic; Antidot
41	Jangali Lahusan	*Allium sativum*	Herb	All India	Bulb; oil	Liliaceae	Antipyretic; Antiseptic;Antihelmintic
42	Rasaut	*Berberis aristata*	Herb	Bhutan; India	Root Bark; Stem; Wood	Berberidaceae	Antipyretic; Astringent;

							Purgative
43	Kasondi	*Cassia occidentalis*	Tree	India; Burma	Leaves; Seeds; Root	Caesalpiniaceae	Antipyretic; Purgative
44	Bhringaraj	*Eclipta erecta*	Herb	Indian-Himalaya	Roots; Leaves	Compositae	Antipyretic; Emetic; Purgative
45	Akasbel	*Cuscuta reflexa*	Herb	India	Seeds; Stem; Fruits	Convolvulaceae	Antipyretic; Carminative
46	Aghata	*Achyranthes aspera*	Herb	All India	Leaves; Seeds; Root	Amarantaceae	Antipyretic; Astringent; Purgative
47	Duk	*Lactuca scariola*	Herb	Western India	Seeds; Milky juice	Compositae	Antipyretic; Diuretic; Expectorant
48	Korehi-Jhar	*Cyperus rotundus*	Herb	SouthIndia	Bulbous Roots	Cyperaceae	Antipyretic; Demulscent
49	Toona	*Cadreia toona*	Tree	All India	Bark; gum; flowers	Meliaceae	Antipyretic; Astringent
50	Katkaranj	*Caesalpinia bonduc*	Shrub	All India	Seed; Nuts; Bark; Leaves	Caesalpiniaceae	Antipyretic; Antispasmodic; Antihelmintic
51	Devil's Horse whip	*Achyranthes indica*	Herb	All India	Whole Herb	Amaranthaceae	Antipyretic; Diuretic; Astringent
52	Cashew	*Anacardium occidentale*	Tree	South India	Fruit; Seed; Bark; Oil	Anacardiaceae	Antipyretic;Irritant; Astringent
53	Sousop	*Annona muricata*	Tree	All India	Leaves; Bark; Root; Seed; Fruit	Annonaceae	Antipyretic; Astringent; Purgative.
54	Yellow Cedar	*Tecoma stans*	Shrub	Central India	Wood; Oil	Bognoniaceae	Antipyretic; Sedative
55	Sage	*Cordia globosa*	Shrub	All India	Hruit; Kernel; Bark	Boraginaceae	Astringent; Demulscent
56	Ganja	*Cannibis sativa*	Herb	Persia; CentralAsia;	Leaves; Dried Flourerscence	Cannabaceae	Antipyretic; Analgesic;Sedative
57	Iron weed	*Elephantopus molis*	Herb	All India	Roots; Leaves	Compositae	Antipyratic; Cardiac tonic
58	Bitter Bush	*Eupatorium villosum*	Shrub	Brazil; India	Whole Herb	Compositae	Antipyretic; Expectorant
59	Button weed	*Borreriaarticularis*	Herb	South India	Whole Herb	Rubiaceae	Antipyretic
60	Wild mint	*Lantana involucrate*	Shrub	All India	Whole Herb	Verbenaceae	Antipyretic
61	Biiter gourd	*Momordica charantia*	Herb	All India	Fruit; Leaves; Seeds	Cucurbitaceae	Antipyretic; Stimulant; Astringent
62	Bambo	*Bambusa vulgaris*	Shrub	Bengal; India	Shoot; Seeds; Roots; Leaves	Graminae	Antipytretic; Diuretic
63	Australian fever tree	*Eucalyptus globules*	Tree	Australia; India	Dried leaves; Gum; Oil	Myrtaceae	Antipyretic; Carminative; Anti-malarial

64	Nagphani	*Opuntia tuna*	Shrub	Central India	Fruit; Juice	Cactaceae	Antipyretic; Expectorant
65	Pan	*Piper betel*	Shrub	Central India	Leaves	Piperaceae	Antipyretic; Carminative.

Conclusion

The world is witnessing the resurgence of herbal system of medicine. Herbal medicines are of great importance to the health of individuals and communities, but their quality standard needs to be established. The wide range of chemical structures provided by natural sources is under investigation for their chemical as well as pharmacological screening. Evaluation of Indian traditional medicine is possible through the proper exploitation of wide biodiversity and great ancient treatise with light of modern tools & technique. The medicinal plants with folklore uses, having antipyretics or any other pharmacological activity should be subjected to clinical investigation. Proper regulatory mechanism is recommended to ensure safety & efficacy of herbal products.

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