



VARIOUS HERBS HAVING ANTIFUNGAL ACTIVITY AGAINST SKIN FUNGAL INFECTION: A REVIEW

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ABSTRACT

A fungus is what causes a fungal infection, also known as mycosis, which is a skin condition. Fungal skin infection that is mainly caused by yeast and dermatophytes. Yeast infection includes (*C. albicans*, *C. glabrata*, *C. tropicalis*, *C. krusei*, *C. guilliermondii*, *C. parapsilosis*) and dermatophytes include Athlete's foot (tinea pedis), Scalp ringworm (tinea capitis), Nail fungus (tinea unguium), Body ringworm (tinea corporis), Jock Itch (tinea cruris). The above-mentioned microorganisms are the most common that cause fungal skin infection. Various herbs that are having activity against this fungus, are being discussed in this article.

Keywords: Fungal Infection, Antifungal Activity, Yeast and Dermatophytes

Introduction:

Everywhere there are fungi. They are present in soil, plants, and even on your skin. Unless they multiply more quickly than usual or penetrate your skin through a cut or lesion, these minute organisms on your skin usually don't create any problems. Given that fungi like warm, moist conditions, sweaty or damp regions with little airflow are frequently where fungus skin infections can occur. The feet, groin, and folds of skin are a few examples. These infections frequently manifest as an itchy, scaly rash or

skin discolouration. Some types of fungal skin diseases are highly prevalent. The infection, while occasionally bothersome and painful, is usually not dangerous. Direct touch is frequently the method of transmission for fungal skin diseases. This may involve interacting with person or animal [1-9].

Types of Fungal skin Infection: [11-21] (Table 1).

Various Herbs used for Fungal skin infection [22-75] (Table 2).

Table 1: Types of Fungal skin Infection

Infection	Other Name	Causative agent	Symptoms
Body Ringworm	Tinea corporis	Microsporum, Trichophyton, Epidermophyton	Ring-shaped rashes on body and limbs, itch
Athlete's foot	Tinea pedis	Trichophyton rubrum	Feet especially between the toes, red scaly skin
Jock itch	Tinea cruris	Dermatophyte group of fungi	Occurs in the groin and thigh area, most common in men, red rash with itchiness
Scalp Ringworm	Tinea capitis	Microsporum and Trichophyton	Affects the scalp and hair shafts, common in children, bald patches are common along with redness, tenderness and pain may occur
Nail fungus	Tinea unguium	Trichophyton rubrum	Thickened. Discoloured. Brittle nails.
<i>Candida</i>	<i>Moniliasis</i>	<i>Yeast</i>	<i>Itching, redness</i>

Table 2: Various Herbs used for Fungal skin infection

Scientific Name	Common name	Family	Active against
<i>Cassia tora</i>	Sarudadigdiga	Caesalpiniaceae	<i>Tinea corporis, C.albicans</i>
<i>Azadirachta indica</i>	Mahanim	Meliaceae	<i>Tinea corporis, C.albicans, dermatophytes</i>
<i>Curcuma longa</i>	Haladhi	Zingiberaceae	<i>Tinea corporis, C. albicans, C. dubliniensis, C. glabrata, C. krusei</i>
<i>Aloe barbadensis</i>	Aloe vera	Asphodelaceae	<i>Tinea Corporis, C.albicans</i>
<i>Peganum harmala</i>	Espan	Nitrariaceae	<i>C.albicans, T.rubrum</i>
<i>Ananas comosus</i>	Ananas	Bromeliaceae	<i>C.albicans</i>
<i>Ferula assafoetida</i>	Anghuzeh		<i>C.albicans</i>
<i>Nectaroscordum Tripedale</i>	Anashq	Amaryllidaceae	<i>C.albicans, dermatophytes</i>
<i>Allium cepa</i>	Pyaz	Amaryllidaceae	
<i>Lawsonia inermis</i>	Henna	Iridaceae	<i>C.albicans, Tinea corporis</i>
<i>Crocus sativum</i>	Kesar	Iridaceae	<i>Tinea corporis, C.albicans</i>
<i>Allium sativum</i>	Garlic	Liliaceae	<i>C.albicans,</i>
<i>Juglans regia</i>	English walnut	Juglandaceae	<i>C.albicans,</i>
<i>Teucrium polium</i>	Felty germander	Lamiaceae	<i>C.albicans, T.rubrum</i>
<i>Zingiber officinale</i>	ginger	Zingiberaceae	<i>C.albicans</i>
<i>Eucalyptus spp</i>	-	Myrtaceae	<i>C.albicans</i>
<i>Artemisia absinthium</i>	wormwood	Asteraceae	<i>C.albicans</i>
<i>Cinnamomum Verum</i>	Dal chini	Lauraceae	<i>C.albicans</i>
<i>Dianthus caryophyllus</i>	Clove pink	Caryophyllaceae	<i>C.albicans</i>
<i>Thymus vulgaris</i>	Thyme	Lamiaceae	<i>C.albicans</i>
<i>Allium jesdianum</i>	-	Liliaceae	<i>C.albicans</i>
<i>Plumbago europaea</i>	leadwort	Plumbaginaceae	<i>C.albicans, dermatophytes</i>
<i>Origanum vulgare</i>	Oregano	Lamiaceae	<i>C.albicans</i>
<i>Adhatoda vesica</i>	Malabar nut	Acanthaceae	<i>Tinea corporis, ringworm</i>
<i>Allamanda cathartica</i>	Golden trumpet	Apocynaceae	<i>Tinea corporis, ringworm</i>
<i>Amaranthus spinosus</i>	Spiny amaranth	Amaranthaceae	<i>Tinea corporis, ringworm</i>
<i>Aquilaria agallocha</i>	Eagle wood	Thymelaeaceae	<i>Tinea corporis, ringworm</i>
<i>Argemone mexicana</i>	Mexican poppy	Papaveraceae	<i>Tinea corporis, ringworm</i>
<i>Artocarpus heterophyllus</i>	Jackfruit	Moraceae	<i>Tinea corporis, ringworm</i>
<i>Barringtonia acutangula</i>	Mango pine	Lecythidaceae	<i>Tinea corporis, ringworm</i>
<i>Calotropis gigantea</i>	Crown flower	Asclepiadaceae	<i>Tinea corporis, ringworm</i>
<i>Carica papaya</i>	Papaya	Caricaceae	<i>Tinea corporis, ringworm</i>
<i>Cassia alata</i>	Candle bush	Caesalpiniaceae	<i>Tinea corporis, ringworm</i>
<i>Cassia sophora</i>	kasaundi	Caesalpiniaceae	<i>Tinea corporis, ringworm</i>

<i>Centella asiatica</i>	Gotu kola	Apiaceae	<i>Tinea corporis</i> , ringworm
<i>Cinnamomum camphora</i>	Camphor	Lauraceae	<i>Tinea corporis</i> , ringworm
<i>Cinnamomum porrectum</i>	Gondhsoroi	Lauraceae	<i>Tinea corporis</i> , ringworm
<i>Clerodendrum infortunatum</i>	Vetetita	Verbenaceae	<i>Tinea corporis</i> , ringworm
<i>Commelina benghalensis</i>	Kanashimalu	Commelinaceae	<i>Tinea corporis</i> , ringworm
<i>Costus speciosus</i>	Devitokan	Zingiberaceae	<i>Tinea corporis</i> , ringworm
<i>Cynodon dactylon</i>	Dubariban	Poaceae	<i>Tinea corporis</i> , ringworm
<i>Eclipta alba</i>	Keharaj	Asteraceae	<i>Tinea corporis</i> , ringworm
<i>Elephantopus scaber</i>	Bon-lai	Asteraceae	<i>Tinea corporis</i> , ringworm
<i>Euphorbia thymifolia</i>	Gakhirati ban	Euphorbiaceae	<i>Tinea corporis</i> , ringworm
<i>Gloriosa superba</i>	Nangalbhanga	Liliaceae	<i>Tinea corporis</i> , ringworm
<i>Glycosmis pentaphylla</i>	Chouldhuwa	Chouldhuwa	<i>Tinea corporis</i> , ringworm
<i>Ichnocarpus frutescens</i>	Anantamul	Apocynaceae	<i>Tinea corporis</i> , ringworm
<i>Jatropha curcas</i>	Bhatora	Euphorbiaceae	<i>Tinea corporis</i> , ringworm
<i>Justicia gendarussa</i>	titabahak	Acanthaceae	<i>Tinea corporis</i> , ringworm
<i>Leucas lavandulaefolia</i>	Dron	Lamiaceae	<i>Tinea corporis</i> , ringworm
<i>Naravelia zeylanica</i>	dhanavalli	Ranunculaceae	<i>Tinea corporis</i> , ringworm
<i>Oscimum sanctum</i>	tulsi	Lamiaceae	dermatophytes
<i>Oscimum basilicum</i>	Sweet tulsi	Lamiaceae	<i>Tinea corporis</i> , ringworm
<i>Piper betle</i>	betel	Piperaceae	<i>Tinea corporis</i> , ringworm
<i>Piper nigrum</i>	Black pepper	Piperaceae	<i>Tinea corporis</i> , ringworm
<i>Pistia stratiotes</i>	Water cabbage	Araceae	<i>Tinea corporis</i> , ringworm
<i>Plumbago zeylanica</i>	Ceylon leadwort	Plumbaginaceae	<i>Tinea corporis</i> , ringworm
<i>Pongamia pinnata</i>	Indian Beech	Fabaceae	<i>Tinea corporis</i> , ringworm
<i>Punica granatum</i>	Pomegranate	Punicaceae	<i>Tinea corporis</i> , ringworm, C.albicans
<i>Semecarpus anacardium</i>	Ballataka	Anacardiaceae	<i>Tinea corporis</i> , ringworm
<i>Solanum indicum</i>	African egg plant	Solanaceae	<i>Tinea corporis</i> , ringworm
<i>Solanum melongena</i>	Brinjal	Solanaceae	<i>Tinea corporis</i> , ringworm
<i>Xanthium strumarium</i>	common cocklebur	Asteraceae	<i>Tinea corporis</i> , ringworm
<i>Xyris indica</i>	-	Xyridaceae	<i>Tinea corporis</i> , ringworm
<i>Melaleuca alternifolia</i>	Tea Tree		Ringworm
<i>A. burkei</i>	Black monkey thorn		Ringworm
<i>K. africana</i>	sausage tree		Ringworm
<i>B. Pilosa</i>	black-jack		Ringworm
<i>S. pseudocordifolia</i>	flannel weed		Ringworm
<i>H.hemerocallidea</i>	African Potato		Ringworm
<i>L. revoluta</i>	Indian squill		Ringworm
<i>Eugenia uniflora</i>	Pitanga	Myrtaceae	<i>C. albicans</i> , <i>C. dubliniensis</i> , <i>C. glabrata</i> , <i>C. krusei</i>
<i>Psidium guajav</i>	guava	Myrtaceae	<i>C. albicans</i> , <i>C. dubliniensis</i> , <i>C. glabrata</i> , <i>C. krusi</i>
<i>Piptadenia colubrina</i>	Angico	Mimosaceae	<i>C. albicans</i> , <i>C. dubliniensis</i> , <i>C. glabrata</i>
<i>Schinus terebinthifolius</i>	Brazilian Pepper	Anacardiaceae	<i>C. albicans</i> , <i>C. dubliniensis</i>
<i>Persea americana</i>	avocado	Lauraceae	<i>C. albicans</i> <i>C. dubliniensis</i> <i>C. glabrata</i> , <i>C. krusei</i>
<i>Parapiptadenia rigida</i>	angico	Fabaceae	<i>C. albicans</i>
<i>Ajania fruticulosa</i>	Shrubby Ajania	Asteraceae	<i>Candida albicans</i> , <i>C. glabrata</i>
<i>Alibertia macrophylla</i>	hard milkwood	Rubiaceae	<i>C. cladosporioides</i>
<i>Aniba panurensis</i>	-	Lauraceae	<i>C. albicans</i>
<i>Mimosa tenuiflora</i>	jurema	Fabaceae	<i>C. albicans</i> , <i>C. dubliniensis</i> , <i>C. glabrata</i> , <i>C. krusei</i>
<i>P. regnellii</i>	false shamrock	Piperaceae	<i>Trichophyton rubrum</i> , <i>Trichophyton mentagrophytes</i> , <i>Microsporum canis</i>

<i>Vernonanthura tweediana</i>	-	<i>Asteraceae</i>	<i>T. mentagrophyte</i>
<i>Datura metel</i>	Devil's trumpet	<i>Solanaceae</i>	<i>C. albicans, C. tropicalis</i>
<i>Lupinus albus</i>	White lupin	<i>Leguminosae</i>	<i>T. mentagrophytes</i>
<i>Capparis spinosa</i>	Caper bush	<i>Capparidaceae</i>	<i>T. mentagrophytes</i>
<i>Anagallis arvensis</i>	Shrubby pimpernel	<i>Primulaceae</i>	<i>T. mentagrophytes</i>
<i>Juglans regia</i>	English walnut	<i>Juglandaceae</i>	<i>T. mentagrophytes</i>
<i>Inula viscosa</i>	False yellowhead	<i>Compositae</i>	<i>T. violaceum, M. canis, and T. mentagrophytes</i>
<i>Phagnalon rupestre</i>	Rock Phagnalon	<i>Compositae</i>	Dermatophytes
<i>Ruscus aculeatus</i>	Butcher's brom	<i>Liliaceae</i>	<i>T. mentagrophytes</i>
<i>Ruta chalepensis</i>	Fringed rue	<i>Rutaceae</i>	<i>T. mentagrophytes</i>
<i>Salvia fruticosa</i>	Greek sage	<i>Labiatae</i>	<i>T. mentagrophytes</i>
<i>Artemisia judaica</i>	Judean wormwood	<i>Asteraceae</i>	<i>T. rubrum, T. mentagrophytes</i>
<i>Ballota Undulat</i>		<i>Lamiaceae</i>	<i>T. rubrum</i>
<i>Cleome amblyocarpa</i>	Spider flower	<i>Cleomaceae</i>	<i>T. rubrum</i>
<i>Aegle marmelos</i>	Bael	<i>Rutaceae</i>	dermatophytes
<i>Artemisia sieberi</i>	wormwood	<i>Asteraceae</i>	<i>T. rubrum, T. mentagrophytes</i>
<i>Cuminum cyminum</i>	Cumin		<i>T. rubrum</i>
<i>Foeniculum vulgare</i>	Fennel	<i>Apiaceae</i>	<i>T. rubrum, T. mentagrophytes</i>
<i>Heracleum persicum</i>	Persian hogweed	<i>Apiaceae</i>	<i>T. rubrum, T. mentagrophytes</i>
<i>Mentha spicata</i>	Spearmint	<i>Lamiaceae</i>	<i>T. rubrum</i>
<i>Nigella sativa</i>	Black cumin	<i>Ranunculaceae</i>	<i>T. mentagrophytes</i>
<i>Rosmarinus officinalis</i>	Rosemary	<i>Lamiaceae</i>	<i>T. mentagrophytes</i>
<i>Syzygium jambolanum</i>	Jamun bark	<i>Myrtaceae</i>	<i>C. albicans, C. glabrata, C. tropicalis, C. krusei, C. guilliermondii, C. parapsilosis</i>

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