

5 HERBS TO FIGHT FUNGI

Words by Caroline Robertson



Image: Karolina Grabowska

Moulds are amazingly resilient and persistent, thriving in dark, damp places and in people with microbiome imbalances or compromised immunity.

Our personal and planetary ecosystems depend on fungi to flourish. However, when the mould monster takes over, it can pose a serious health hazard.

Did you know that the Earth's largest organism is a fungus? Oregon's Malheur National Forest is home to a humongous honey mushroom, *Armillaria ostoyae*, which is heavier than 200 blue whales. Moulds are amazingly resilient and persistent, thriving in dark, damp places and in people with microbiome imbalances or compromised immunity. Though household cleaning bleach kills mould on hard surfaces such as tiles, Queensland Health clarifies, "Bleach may not be effective in killing mould on porous surfaces."

According to Nicole Bijlsma, renowned building biologist, "The best way to remove mould is a 'HEPA sandwich', which involves vacuuming the affected surface with a vacuum cleaner fitted with a HEPA filter, then wiping with a damp microfibre cloth and then vacuuming."

An overgrown fungal foe can be tricky to evict, but fortunately nature offers some powerful mould managers.

Consider checking your health and habitat if you experience any of the following symptoms:

- athlete's foot
- brain fog
- chest tightness
- coughing
- dry, scaly skin
- eye irritation
- fatigue
- flatulence
- food sensitivities
- headache
- itchy eyes
- irritable bowel syndrome
- lung irritation
- recurring infections
- runny nose
- shortness of breath
- skin rash
- sneezing
- sore throat
- thrush
- visible mould in your environment
- watery eyes
- wheezing

Preventing mould is easier than addressing it. Ensure areas stay dry, seal leaks, optimise drainage and promote ventilation.

Protection is pivotal when managing mould or using antifungals. When addressing mould avoid inhaling or touching it by wearing a P2 mask, eye protection and rubber gloves and discarding cleaning materials. Spot

test anti-mould mixes on skin prior to applying to surfaces to check for skin allergies.

Those who are allergic, anaphylactic, asthmatic, immune compromised, suffering lung disease, pregnant or breastfeeding are advised to avoid external and internal mould management without expert guidance.

Clove

This pungent dried flower bud is amongst nature's strongest antifungals and antiparasitics. Clove (*Syzygium aromaticum*) is named after the Latin term *clavus* meaning nail, reflecting the spice's shape. Clove contains a high quantity of eugenol, an allylbenzene chemical compound. This aromatic oil is capable of killing mould spores and addressing fungal conditions including *Candida albicans*. Clove also has antimicrobial, antifungal eugenyl acetate and anti-inflammatory analgesic caryophyllene.

In medieval times people used pomanders containing cloves to protect against infection and purify the air. Pomanders can be bags, vases or spherical amulets filled with spices and perfumes. My grandmother would hang pomanders of clove-spiked oranges in cupboards to prevent mould on clothes and shoes. A modern method is to infuse big sticks of blackboard chalk with clove oil and hang them in mould-prone areas, adding a few additional drops of clove essential oil when the scent disappears. A few drops of clove oil in an aromatherapy diffuser also helps to cleanse the air with a spicy fragrance.

Diluted clove essential oil is an effective option to eradicate surface mould spores. "Clove oil was found to be the most effective and broad spectrum antifungal agent against fungal species of environmental origin," as compared to vinegar, eucalyptus and lavender essential oils, according to a study published in the *International Journal of Occupational and Environmental Health*.

For fungal conditions, clove essential oil can't be taken internally but whole cloves may be added to dishes or tea. There are also various TGA-approved formulas containing clove extract. In a moderate quantity whole cloves can reduce fungal conditions such as *Candida albicans* without obliterating good gut microflora.

Wild oregano oil is so concentrated it takes around 450kg of the plant to produce 450g of oregano essential oil.

Clove is effective against candida and aspergillus fungi according to a 2009 study in the *Journal of Medical Microbiology*, "Clove oil and eugenol have considerable antifungal activity against clinically relevant fungi, including fluconazole-resistant strains."

Horopito

Relatively new to the antifungal family, horopito (*Pseudowintera colorata*) has proven an invaluable addition to my naturopathic apothecary. This peppery-tasting tree is aptly called peppertree. Its dull green leaves are covered in rusty patches as if indicating its chilli-like bite. Known as the "Māori painkiller", horopito is native to New Zealand's wet upland forests. It has been traditionally used for burns, colds, coughs, diarrhoea, joint pain, skin conditions and STIs. Lactating mothers are said to have crushed horopito leaves onto their nipples to wean their infants.

This ancient plant has the unique antifungal properties to survive damp, dark rainforests over millennia. Recent research has shown horopito's sesquiterpene dialdehyde or polygodial constituent is effective against candida and trichophyton fungi even in very dilute preparations. Hence horopito is a herbal hero for athlete's foot, ringworm, tinea and thrush. In addition, horopito has analgesic, antibacterial, anti-parasitic and insecticidal actions.

Scientists from the University of Canterbury found that horopito's polygodial was a more powerful and more rapid-acting antifungal than the pharmaceutical antifungal amphotericin B.

Horopito wash has been very successful in preventing and addressing recurrent vulvovaginal candidiasis (RVVC). Horopito cream improved genital candida by 88.5 per cent in a 1995 Forest Herbs Research clinical study conducted by New Zealand naturopaths. Anise seed is often added to internal horopito formulations to reduce the die-off symptoms of candida including flatulence.

Horopito is available in many forms. Externally it is available as a cream, lip ointment, nail paint and wash. Internally it comes in capsules, mouthwash, powder, tablets, tea and a fluid extract. Kolorex, a company specialising in horopito products, states on its website, "As a precaution Kolorex oral products are not recommended during pregnancy. Kolorex topical products are fine to use during pregnancy. Please note Kolorex Intimate Care Cream is intended for external use only."

Neem

Ayurveda is so keen on neem (*Azadirachta indica*) that it's nicknamed "the village pharmacy". This resilient perennial plant can grow up to 30 metres high and 20 metres wide and is rarely leafless, making it a great pest-free shady shelter. Sanskrit texts praise neem as "sarva roga nivarini" or "one that cures all ailments". Bitter neem is a powerful antifungal along with its other antimicrobial, anti-inflammatory, anti-diabetic, anti-malarial and anti-parasitic properties. Neem is used to reduce damp heat and as a bitter digestive, blood purifier, immune stimulant, liver tonic, gum purifier and skin herb.

Containing antifungal compounds nimbidol and edunin, neem had a toxic effect on 19 types of moulds including *Aspergillus flavus* and *Candida albicans* according to a 2011 study in the *Brazilian Journal of Microbiology*.

Neem's fungicidal and pesticidal action is applied to plants as well as to people. Spraying foliage with neem will protect it from pests while being safe for bees and earthworms. Thoroughly mix one litre of warm water with 10 drops of liquid soap and 5ml of neem oil. Spray on the soil and plant once weekly to keep bad bugs and fungus away.

Applying pure neem oil to fungal skin issues or fungal nails can be highly effective in my clinical experience. The garlicky odour of neem can be masked by adding a little lemon myrtle essential oil to the neem mix. Neem can also be taken internally as a tea or fluid extract to tackle candida as prescribed by a qualified health care provider.

Neem is considered safe externally; however, neem or neem oil used orally in large amounts or long term may be toxic to the kidneys and liver with high-dose or chronic use. Internal neem is best avoided by children and when pregnant or lactating.

Oregano

This Mediterranean favourite meaning "mountain joy" is a member of the mint family. Though savoured for centuries as a culinary star in Italian dishes, oregano (*Origanum vulgare*) has only recently been recognised as a fantastic antifungal.

This evergreen shrub with flowers ranging from white to pale purple has powerful anti-inflammatory, antioxidant and antimicrobial properties. Oregano has broad health benefits including clearing candida, soothing SIBO (small intestinal bacterial overgrowth), fighting infections, treating nail fungus and addressing

Image: Emily Wade



Health • Fungal Diseases

Clove Surface Spray

¼ tsp clove essential oil
1 litre water
Mix clove essential oil with water
Add to a trigger spray bottle and shake well.
Mist lightly over mouldy areas. Leave on for 24 hours.
Wipe off with a mix of equal parts water and white vinegar.

To clean soft surfaces such as leather or vinyl

½ cup olive oil
¼ cup of vinegar
¼ tsp clove essential oil
Combine all ingredients.
Polish fabric with a small quantity of mix on a soft microfibre cloth.

Clove Tea

3 cloves
1 cup boiled water

Place cloves in a tea diffuser. Add boiled water. Let sit until cool enough to sip. Drink up to 2 cups a day. Clove is considered safe to take in dishes or beverages in moderate amounts granting it a Generally Recognized As Safe (GRAS) status for use in foods in the US. Clove oil should not be taken internally unless prescribed by a health professional as it can damage the liver. Clove cigarettes can cause respiratory injury.



Images: Top left: Milada Vigerova, Top right: Pew Nguyen, Lower: Karolina Grabowska

Pau d'arco can be used as a wash for fungal skin conditions, a mouthwash or douche for thrush and internally for systemic fungal conditions such as candidiasis, aspergillosis and cryptococcosis.

athlete's foot. Oregano won the strongest antifungal prize in a competition against 10 other essential oils in a study carried out in Japan.

In ancient Greece and Rome oregano was used as an antiseptic for wounds, a balm for aching muscles and as a tummy tonic. Numerous studies support oregano's antifungal efficacy, including research published in *Molecular and Cellular Biochemistry*. Another study published in the *Journal of Cultural Heritage* concluded that oregano was the most effective essential oil in parchment tests for three fungal strains.

Wild oregano oil is so concentrated it takes around 450kg of the plant to produce 450g of oregano essential oil.

The key constituents in oregano are antibacterial carvacrol and antifungal thymol, along with abundant antioxidants such as rosmarinic acid.

Oregano can be taken as a decoction, tea, fluid extract or encapsulated oil. In my clinical experience, it's best taken after food to prevent the sensation of stomach heat. The diluted oil can be applied topically to fungal infections. Ideally combine around five drops of organic oregano oil with a teaspoon of carrier oil such as coconut or MCT oil.

Concentrations of oregano oil greater than 1 per cent may be irritating to mucous membranes. Pregnant and breastfeeding women should avoid taking oregano orally in medicinal quantities as it may have abortifacient and emmenagogue effects.

Pau d'arco

Emerging from the lush Amazonian rainforest, this evergreen tree with rosy blossoms is a medical marvel. Pau d'arco (*Tabebuia impetiginosa*) can grow up to 30 metres high and three metres in diameter. Fungus-fighting pau d'arco means "bow tree" in Portuguese, as the bendy wood was crafted into hunting bows. It is also referred to locally as lapacho or taheebo.

The heartwood and astringent inner bark contains healing naphthoquinones lapachol and beta-lapachone. Scientific studies have established the antibacterial, antifungal and anti-inflammatory power of these constituents.

Traditionally, pau d'arco was used for a wide variety of ailments in South and Central America including

fever, fungal infections, inflammation, malaria, dysentery and rheumatism. Research suggests pau d'arco may damage fungal cell membranes, thereby destroying conditions including 11 different candida species.

Modern herbalists may prescribe pau d'arco as capsules, tablets, tea, decoction or fluid extract. Alcohol-based preparations draw more of the active agents from the bark. In conjunction with dietary and lifestyle adjustments, pau d'arco can be used as a wash for fungal skin conditions, a mouthwash or douche for thrush and internally for systemic fungal conditions such as candidiasis, aspergillosis and cryptococcosis. Significant improvement may take a few weeks of intake. Try this tangy tea: Place three teaspoons of pau d'arco bark in three cups of boiling water and reduce to two cups. Turn off the heat and allow to infuse covered for 30 minutes. Strain and sip one cup twice a day.

Taking pau d'arco with other products that increase the risk of bleeding might cause additional blood thinning effects, hence it's best to stop pau d'arco two weeks prior to surgery. Pau d'arco is not to be taken by children, while pregnant or when breastfeeding. 🍵

References available on request.

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