# About Australian Tea Tree Oil

Americans have started discovering Australian tea tree oil only recently. However, it is already featured in many everyday products like soaps, deodorants, shampoos, ointments, cosmetics, and herbal remedies.

Australian tea tree oil is four to five times stronger than the usual household disinfectants. It is considered **the most powerful natural antiseptic known to Man**. But it is 100% natural, biodegradable and environment-friendly.

## Where does the tea tree oil come from?

It is a volatile essential oil obtained by steam distillation of freshly harvested foliage of the Australian Tea Tree. It takes about one ton of branches and leaves to make 6–10 kg of the essential oil.

There are over three hundred varieties of the Melaleuca tree but only one, the Australian Melaleuca Alternifolia, has been found to have both antiseptic and fungicidal properties. This bushy tree with needle-like leaves, related to Eucalyptus and Myrtle, grows to about 20 feet and is native to the low-lying wetlands of Northern New South Wales in Australia.

## The discovery of Australian tea tree

Since the beginning of time, Australian Aborigines have used the tea tree for its healing properties. They treated cuts, burns, and skin infections by crushing the leaves and spreading the pulp over the affected area. They bathed in the healing waters of “magical healing lagoons,” where tea trees dropped their leaves and created a naturally antiseptic bath.

In the 1770s, the British explorer Captain Cook observed the Aborigines brewing leaves of the tree to make a tea used to cure various ailments. He then brewed a strong tea for his sailors to prevent scurvy. He coined the name “tea tree” and took the medicinal plants back to England for study.

Scientists ignored the tea tree until 1920s, when Australian physicians began to use the oil to sterilize wounds after surgery. They found it to be much stronger than phenol (carbolic acid), the most widely used antiseptic at that time. And average Australians began to use the oil as a common household remedy for skin conditions and fungal infections. Then, the British Medical Journal reported that tea tree oil was "a powerful disinfectant – non-poisonous and non-irritant.”

During World War II, this “cure-all” became standard issue in the first-aid kits given to Australian soldiers and sailors for treatment of tropical infections, wounds, and everything else from head lice to trench foot. In 1955, the United States Dispensatory stated that tea tree oil was actively germicidal "with an antiseptic action 11 to 13 times that of carbolic acid." But the US “Big Pharma” had little interest in promoting a natural medication that is non-expensive and non-patentable.

## The comeback of the tea tree oil

After the discovery of penicillin and other antibiotics in the late 1940s, tea tree oil fell out of favor as an antibiotic.

But in the 1980s, it was found that some forms of staphylococcal bacteria (the "hospital killer bug"), became resistant to methicillin and vancomycin antibiotics (Methicillin-resistant Staphylococcus aureus or M.R.S.A.,"). After antibiotics failed, Australian tea tree oil was re-discovered as effective even against antibiotic-resistant bacteria.

The renewed interest in tea tree oil as an alternative to antibiotics led to more extensive laboratory research. It has shown that Australian tea tree oil possesses a broad range of **antiseptic, antiviral, and fungicidal** properties.

## The unique powers of Australian tea tree oil

There are other essential oils that also kill bacteria but Australian tea tree oil is unique – it also kills fungi, including molds and mildew. It has a broad-spectrum antibacterial, antiviral, and antifungal activity. It **kills all three categories of infectious organisms**:

- Bacteria (antiseptic/bactericide)
- Viruses (viricide)
- Fungi, molds & mildew (fungicide)

Tea tree oil should be a part of any first aid kit. It can help with most minor conditions. Its anti-inflammatory and anesthetic properties reduce swelling and soothe pain, while its antibacterial action prevents infections and reduces scarring. Use it topically for all skin ailments, cuts, burns, acne, cold sores, boils, warts, ringworm, skin rashes, herpes, corns, lice, insect bites, and fungal infections. As an organic solvent, it dissolves pus (lumps of white blood cells), allowing the blood stream to clean it away, and helps to heal infected wounds, boils, sores, and pimples.

Australian tea tree oil is considered the strongest natural antiseptic - **4 to 5 stronger than usual household disinfectants**. It kills gram negative and gram positive bacteria, even stubborn germs like Staphylococcus aureus, Pseudomonas aeruginosa and Escherischia coli. Unlike some synthetic antiseptics, it works without damaging healthy cells.

The list of its therapeutic properties is long: anti-infectious, antibiotic, antiseptic, antiviral, bactericidal, balsamic, expectorant, fungicide, immune-stimulant, insecticide, and stimulant.

Its antifungal properties make it effective against a variety of fungal infections of the scalp, skin, and toenails. Its antiviral activity makes it a suitable treatment against the herpes group of viruses like cold sores, shingles, and warts.

The tea tree oil reportedly also **boosts the body's immune system**, which helps the body fight off bacteria, viruses, and fungi. It is very useful for people who repeatedly succumb to infections and is one of the most important oils for helping people who are HIV positive.

## The natural indoor air quality solution

Australian tea tree oil is volatile and its **vapors kill germs and molds in the indoor air**. It is used as a **disinfectant to purify indoor air** in homes, offices, cruise ships, and hotels. When used in a hospital room, it does not interfere with other treatment for the patient.

The oil has been successfully used for the "sick building syndrome." When placed inside the air-conditioning system, it protects office workers against the risks of legionella, immunological diseases, fatigue, headaches, colds, watery eyes, chronic coughs, and runny noses, resulting from breathing contaminated air. Similarly, it protects passengers on ships or airliners against sudden epidemics. During the flue season, it can be used to prevent the spread of germs in homes and offices.

In addition, the tea tree oil is a **natural deodorizer**. Its vapors do not mask but break down and eliminate musty or organic malodors.

There is a very long history of its therapeutic use in aromatherapy. Tea tree oil is inhaled using diffusers or vaporizers to clear up sinuses or bronchial congestion, and to help with colds and influenza, asthma, coughs, whooping cough, and viral infections.

The tea tree oil is penetrating – the oil and its vapors **penetrate into porous materials**, where they provide a lasting protection. The oil penetrates through the skin and even through fingernails. The vapors saturate the air, spread by diffusion and chase biological pathogens into low-ventilated corners and even into sheetrock, ceilings, upholstery, and carpeting.

## The "Tea Tree Oil Air Cleaner"

A couple of jars will solve the common problem of a musty or moldy basement. Placing a large jar in the suction duct of an air-conditioning system will prevent the spread of molds through the house.

## How do you get rid of mold and mildew?

There are many liquid household cleaners that also kill molds and mildew, but the results are only temporary. The mold and mildew soon re-appear. And in the case of chlorine bleach, there are serious health and odor issues.

Tea tree oil helps eliminate molds not only in the indoor air we breathe, but also on surfaces and inside porous materials or furnishings. Since it penetrates into porous surfaces to kill the roots of molds, it provides a lasting protection. If there is already a visible growth of molds, use tea tree oil for the Mold and Mildew.

## Australian tea tree oil composition

Australian tea tree oil is a complex of over 50 naturally occurring compounds, which all work together to produce its healing abilities. The main chemical components are Terpinen-4-ol, Cymene, Pinene, Terpinene, and Cineole.

Terpinen-4-ol is present at the highest levels (minimum 30%) and is responsible for most of the antimicrobial activity. High-quality tea tree oil should have a minimum Terpinen-4-ol content of 35–40% and a maximum cineole content of 5%.

## Regulations and the mandatory disclaimer

After years of testing to ensure that it is safe and effective, Australian tea tree oil has been approved by European government authorities and included in the European Pharmacopoeia. Its medicinal and therapeutic properties are no longer questioned.

But the self-financed approval process with the US FDA requires hundreds of millions of dollars. There is **no chance that an American pharmaceutical company will finance the research and approval of a natural, inexpensive, and non-patentable medication for the benefit of the population at large**.

## Tea tree applications

Australian Tea Tree oil 100% natural and environmentally sound. It is produced from a naturally regenerating source – tea trees. It has been widely used as a natural antiseptic for over 70 years in Australia and is currently in use worldwide.

Research shows that tea tree oil does not cause toxicity due to dermal adsorption and that solutions with less than 10% by weight pose little risk of skin irritation. You can test yourself for sensitivity by dabbing a drop on the inside of your forearm and waiting for several days. As with other commonly used essential oils, 100% tea tree oil may be toxic when administered orally and hence the ingestion of pure tea tree oil is not recommended. Keep away from children and animals.

Household cleaners that use tea tree oil are a much safer and healthier alternative to chlorine bleach or cleaners that contain possible cancer-causing chemicals, such as formaldehyde. Uusing tea tree oil **avoids the odors and health hazards of chlorine bleach**.

# Indoor Air Quality and Moisture in Homes

## The indoor air pollution in homes

Studies show that the Indoor Air Quality (IAQ) in the average home can be **up to 100 times more polluted than outdoor air**. Modern, almost airtight buildings with low fresh air exchange do not provide sufficient ventilation to remove indoor air contaminants. Boosting ventilation would improve the indoor air quality but would be very costly due to the energy losses in heated or air-conditioned air.

Americans spend on average 93 percent of their time indoors, which makes indoor air quality critical to their health. Indoor air pollution is even more critical in their homes, where they spend most of their time - on average 70 percent (more for children).

The Environmental Protection Agency warns that **indoor air pollution is one of the five most urgent environmental risks** to public health.

One of the major problems are biological contaminants like molds, mildew, and dust mites, which prosper in the warm and humid indoor air.

## Biological pollutants need moisture

The most common indoor biological contaminants are molds, mildew, bacteria, viruses, house dust mites, animal dander or saliva, and pollen. These particles are too small to be visible or to settle by gravity, and travel perpetually suspended in air.

The essential pre-condition for biological growth is moisture. Suitable conditions can be found in bathrooms, damp or leaking basements, humidifiers, air conditioners, carpets and upholstered furniture.

Reducing moisture lowers the biological contaminants in indoor air - **the ideal relative humidity is 30 to 50 percent**.

"Dust mites, molds, animal dander, and other biologicals are found in some degree in every home and workplace. **High relative humidity is the primary factor encouraging biological agents to grow and be released into the air**." *(US EPA)*

## *The health effects of biological contaminants*

Indoor biological pollutants are a major contributing factor to asthma and allergies, which have become a growing public health problem, particularly among children.

EPA warns: "Biological agents are known to cause three types of human diseases:

1. Infections, where pathogens invade human tissues;
2. Hypersensitivity diseases, where specific activation of the immune system causes disease; and
3. Toxicoses, where biologically produced chemical toxins cause direct toxic effects".

Many health effects are associated with biological contaminants:

- Some molds and mildews can release disease-causing toxins. These toxins can damage a variety of organs and tissues in the body, including the liver, central nervous system, digestive tract, and immune system.
- Symptoms of exposure to biological contaminants include sneezing, watery eyes, coughing, shortness of breath, dizziness, lethargy, fever, and digestive problems. Children, elderly people, and people with breathing problems, allergies, and lung diseases are particularly susceptible to disease-causing biological agents in the indoor air.

*(Environmental Health Center of The National Safety Council)*

## *Dust mites*

Dust mites have been identified as **the single most powerful trigger for asthma attacks**. Mites thrive on dead human skin cells in bedding, carpeting and upholstery. These microscopic animals multiply by the thousands in warm and humid conditions, when humidity exceeds 45 percent and temperature is above 65° F.

Dust mites leave behind droppings and disintegrating body parts that we inhale. Each dust mite produces about 20 pellets which are invisible to the human eye (10 to 24 microns in size). It is the protein in the fecal products and disintegrating body parts of dust mites that is one of the most powerful biological allergens. Over 10 percent of people are allergic to dust mite extracts.

Mites have eight tiny legs with sticky pads, which enable them to burrow deep into carpet fibers, mattresses or furniture and easily resist the pull of even the most powerful vacuum cleaners. The average bed can easily have over 10,000 dust mites living in it. One-tenth of the weight of an old pillow can be sometimes attributed to dust mites and their droppings! Because of dust mites, **the average mattress will double its weight in 10 years**!

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# How to reduce biological contaminants in your home

Reduce the humidity in your home and minimize the biological pollutants in the indoor air.

The liquid cleaners on the market today may offer a temporary fix but most of the time the mold and mildew reappears. There is a natural substance that can be used to kill mold and mildew. Most people are not aware of an alternative mold killer called tea tree oil which has natural properties that kill mold and mildew instantly and prevent them to reoccurring. You can get tea tree oil from health food stores and other places that sell natural products. In order to get the best results, you need to make sure you get a concentrated form and a high strength of the tea tree oil. Using the natural alternative has many benefits it not only works well and kills the germs it is safer to use and it will not harm you or your family.

Mold and mildew can cause real problems in your home if it gets out of control. They can cause odor and can be detrimental to your health. If you follow the suggestions above and try some of the products mentioned you will be well on your way to mold and mildew prevention. And the best part of all your family and your home will be healthier in the process.