What is Ringworm?

Ringworm is a contagious fungus infection that can affect the scalp, the body (particularly the groin), the feet, and the nails. Despite its name, it has nothing to do with worms. The name comes from the characteristic red ring that can appear on an infected person's skin. Ringworm is also called Tinea.

What is the infectious agent that causes Ringworm?

Several different fungus organisms cause ringworm that all belong to a group called "Dermatophytes." Different Dermatophytes affect different parts of the body and cause the various types of Ringworm:

Ringworm of the scalp

Ringworm of the body

Ringworm of the foot (athlete's foot)

Ringworm of the nails
Where is Ringworm found?

Ringworm is widespread around the world and in the United States. The fungus that causes scalp Ringworm lives in humans and animals. The fungus that causes Ringworm of the body lives in humans, animals, and soil. The fungi that cause Ringworm of the foot and Ringworm of the nails live only in humans.

How do people get Ringworm?

Ringworm is spread by either direct or indirect contact. People can get Ringworm by direct skin-to-skin contact with an infected person or pet. People can also get Ringworm indirectly by contact with objects or surfaces that an infected person or pet has touched, such as hats, combs, brushes, bed linens, stuffed animals, telephones, gym mats, and shower stalls. In rare cases Ringworm can be spread by contact with soil.

What are the signs and symptoms of Ringworm?

Ringworm of the scalp usually begins as a small pimple that becomes larger, leaving scaly patches of temporary baldness. Infected hairs become brittle and break off easily. Yellowish crusty areas sometimes develop. Ringworm of the body shows up as a flat, round patch anywhere on the skin except for the scalp and feet. The groin is a common area of infection (groin Ringworm). As the rash gradually expands, its center clears to produce a ring. More than one patch might appear, and the patches can overlap. The area is sometimes itchy. Ringworm of the foot is also called athlete's foot. It appears as a scaling or cracking of the skin, especially between the toes. Ringworm of the nails causes the affected nails to become thicker, discolored, and brittle, or to become chalky and disintegrate.

How soon after exposure do symptoms appear?

Scalp Ringworm usually appears 10 to 14 days after contact, and Ringworm of the skin 4 to 10 days after contact. The time between exposure and symptoms is not known for the other types of Ringworm.

How is Ringworm diagnosed?

A health-care provider can diagnose Ringworm by examining the site of infection with special tests.

Who is at risk for Ringworm?

Anyone can get Ringworm. Scalp Ringworm often strikes young children; outbreaks have been recognized in schools, day-care centers, and infant
nurseries. School athletes are at risk for scalp Ringworm, Ringworm of the body, and foot Ringworm; there have been outbreaks among high school wrestling teams. Children with young pets are at increased risk for Ringworm of the body.

**What is the treatment for Ringworm?**

Ringworm can be treated with fungus-killing medicine. The medicine can be in taken in tablet or liquid form by mouth or as a cream or as an essential oil applied directly to the affected area.

**What complications can result from Ringworm?**

Lack of or inadequate treatment can result in an infection that will not clear up.

**Is Ringworm an emerging infection?**

Although health authorities do not track Ringworm, infections appear to be increasing steadily, especially among pre-school and school-age children. Early recognition and treatment are needed to slow the spread of infection and to prevent re-infection.

**How can Ringworm be prevented?**

Ringworm is difficult to prevent. The fungus is very common, and it is contagious even before symptoms appear.

Steps to prevent infection include the following:

- Educate the public, especially parents, about the risk of Ringworm from infected persons and pets.
- Keep common-use areas clean, especially in schools, day-care centers, gyms, and locker rooms. Disinfect sleeping mats and gym mats after each use.
- Do not share clothing, towels, hairbrushes, or other personal items.

Infected persons should follow these steps to keep the infection from spreading:

- Complete treatment as instructed, even after symptoms disappear.
- Do not share towels, hats, clothing, or other personal items with others.
- Minimize close contact with others until treated.
- Make sure the person or animal that was the source of infection gets treated.

**If I am exposed to Ringworm does that mean I will get it?**

Not necessarily. Ringworm is a living fungus and needs to be healthy and have the proper environment to live. A weakened spore that is in a hostile environment has less of a chance of survival.
If I use an antibacterial soap after practice won’t that protect me from Ringworm?

No. Ringworm is a fungus not a bacterium. Antibacterial soaps will help protect you from Impetigo and MRSA not Ringworm.

How about dandruff shampoo, will that protect me from Ringworm?

Dandruff shampoo has been known to be effective against Ringworm because there are chemicals in the shampoo that weaken the Ringworm spores. Dandruff is caused by Dermatophytes, which is the same family as Ringworm. Using a dandruff shampoo will help in your battle with Ringworm but offers no protection from bacterial infections such as Impetigo and MRSA.

Why are there so many different over the counter anti-fungal medicines and why do they end in “ole”?

These are called the “oles” and each of the “oles” has been developed to cure one of the four strands of Ringworm.

How will I know which strand of Ringworm I have and which “ole” to buy?

Unless you are a Microbiologist with a very strong and expensive microscope you will not be able to tell which strand of Ringworm you have. Buying the most effective over the counter medicine for your Ringworm is a one in four chance. This is why sometimes a product seems to work real well one time but the next time it seems to take weeks to heal.

Once I don’t see my Ringworm anymore is it gone?

No. An infected area needs to be treated for three weeks after the Ringworm has cleared up from the surface of the skin. The fungus is still alive below the top layer of skin.

How can Defense Soap products help protect me from Ringworm?

Defense Soap products contain a blended formula of 100% pure essential oils, which have been clinically proven to be affective against fungi, bacteria, and viruses by weakening them and creating an environment too hostile to live in.

The studies below demonstrates how well our active ingredients work against the Ringworm.

Treatment of interdigital tinea pedis with 25% and 50% tea tree oil solution: a randomized, placebo-controlled, blinded study.
Tea tree oil has been shown to have activity against dermatophytes in vitro. We have conducted a randomized, controlled, double-blinded study to determine the efficacy and safety of 25% and 50% tea tree oil in the treatment of interdigital tinea pedis. One hundred and fifty-eight patients with tinea pedis clinically and microscopy suggestive of a dermatophyte infection were randomized to receive either placebo, 25% or 50% tea tree oil solution. Patients applied the solution twice daily to affected areas for 4 weeks and were reviewed after 2 and 4 weeks of treatment. There was a marked clinical response seen in 68% of the 50% tea tree oil group and 72% of the 25% tea tree oil group, compared to 39% in the placebo group. Mycological cure was assessed by culture of skin scrapings taken at baseline and after 4 weeks of treatment. The mycological cure rate was 64% in the 50% tea tree oil group, compared to 31% in the placebo group. Four (3.8%) patients applying tea tree oil developed moderate to severe dermatitis that improved quickly on stopping the study medication.

PMID: 12121393 [PubMed - indexed for MEDLINE]

Tea tree oil in the treatment of tinea pedis.

Tong MM, Altman PM, Barnetson RS.

Dermatology Department, Royal Prince Alfred Hospital, Camperdown, NSW.

Tea tree oil (an essential oil derived primarily from the Australian native Melaleuca alternifolia) has been used as a topical antiseptic agent since the early part of this century for a wide variety of skin infections; however, to date, the evidence for its efficacy in fungal infections is still largely anecdotal. One hundred and four patients completed a randomized, double blind trial to evaluate the efficacy of 10% w/w tea tree oil cream compared with 1% tolnaftate and placebo creams in the treatment of tinea pedis. Significantly more tolnaftate-treated patients (85%) than tea tree oil (30%) and placebo-treated patients (21%) showed conversion to negative culture at the end of therapy (p < 0.001); there was no statistically significant difference between tea tree oil and placebo groups. All three groups demonstrated improvement in clinical condition based on the four clinical parameters of scaling, inflammation, itching and burning. The tea tree oil group (24/37) and the tolnaftate group (19/33) showed significant improvement in clinical condition when compared to the placebo group (14/34; p = 0.022 and p = 0.018 respectively). Tea tree oil cream (10% w/w) appears to reduce the symptomatology of tinea pedis as effectively as tolnaftate 1% but is no more effective than placebo in achieving a mycological cure. This may be the basis for the popular use of tea tree oil in the treatment of tinea pedis.
Comparison of two topical preparations for the treatment of onychomycosis: Melaleuca alternifolia (tea tree) oil and clotrimazole.

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Department of Family Medicine, University of Rochester School of Medicine and Dentistry, Highland Hospital, New York.

BACKGROUND. The prevalence of onychomycosis, the most frequent cause of nail disease, ranges from 2% to 13%. Standard treatments include debridement, topical medications, and systemic therapies. This study assesses the efficacy and tolerability of topical application of 1% clotrimazole solution compared with that of 100% Melaleuca alternifolia (tea tree) oil for the treatment of toenail onychomycosis. METHODS. A double blind, multicenter, randomized controlled trial was performed at two primary care health and residency training centers and one private podiatrist’s office. The participants included 117 patients with distal subungual onychomycosis proven by culture. Patients received twice-daily application of either 1% clotrimazole (CL) solution or 100% tea tree (TT) oil for 6 months. Debridement and clinical assessment were performed at 0, 1, 3, and 6 months. Cultures were obtained at 0 and 6 months. Each patient’s subjective assessment was also obtained 3 months after the conclusion of therapy. RESULTS. The baseline characteristics of the treatment groups did not differ significantly. After 6 months of therapy, the two treatment groups were comparable based on culture cure (CL = 11%, TT = 18%) and clinical assessment documenting partial or full resolution (CL = 61%, TT = 60%). Three months later, about one half of each group reported continued improvement or resolution (CL = 55%; TT = 56%). CONCLUSIONS. All current therapies have high recurrence rates. Oral therapy has the added disadvantages of high cost and potentially serious adverse effects. Topical therapy, including the two preparations presented in this paper, provides improvement in nail appearance and symptomatology. The use of a topical preparation in conjunction with debridement is an appropriate initial treatment strategy.

PMID: 8195735 [PubMed - indexed for MEDLINE]

What is impetigo?

Impetigo is an infection of the skin caused primarily by the bacterium Streptococcus pyogenes, also known as Group A beta-hemolytic streptococci (GABS). Sometimes another bacterium, Staphylococcus aureus, can also be isolated from impetigo lesions.
What are the symptoms of impetigo?

Impetigo begins as a cluster of small blisters that expand and rupture within the first 24 hours. The thin yellow fluid that drains from the ruptured blisters quickly dries forming a honey-colored crust. Impetigo develops most frequently on the legs, but may also be found on the arms, face and trunk. There is usually no fever.

How does a person get impetigo?

Impetigo may develop after the skin is infected with GABS. The bacterium is usually acquired from skin-to-skin contact with another person with impetigo. Less commonly, impetigo may develop when open skin lesions (such as insect bites or burns) are infected following exposure to a person with streptococcal pharyngitis ("strep throat").

Who gets impetigo?

The infection is most common in settings where there is crowding or activities leading to close person-to-person contact such as in schools and military installations. Impetigo occurs more commonly during the summer and early fall.

How long does it take to develop impetigo following exposure?

Impetigo may develop up to 10 days after the skin becomes infected with GABS.

How is impetigo treated?

Impetigo may be treated with an antibiotic taken by mouth or by application of an antibiotic ointment to the affected areas.

How long is a person considered infectious?

A person with impetigo is probably no longer infectious after 24 hours of adequate antibiotic treatment. Without treatment, a person may be infectious for several weeks.
What are the complications of impetigo?

Rarely, GABS may invade beyond the skin of a person with impetigo and cause more serious illnesses. Persons with impetigo may also develop post-streptococcal glomerulonephritis or scarlet fever. Post-streptococcal glomerulonephritis follows roughly 10 days after the onset of streptococcal infection and results in temporary kidney failure. However, the long-term prognosis is excellent. Scarlet fever is caused by a toxin produced by certain strains of GABS and is characterized by high fever, chills, sore throat, headache, vomiting and a fine red rash.

What can be done to prevent impetigo?

Simple cleanliness and prompt attention to minor wounds will do much to prevent impetigo. Persons with impetigo or symptoms of GABS infections should seek medical care and if necessary begin antibiotic treatment as soon as possible to prevent spread to others. Individuals with impetigo should be excluded from school, day care, or other situations where close person-to-person contact is likely to occur until at least 24 hours after beginning appropriate antibiotic therapy. Sharing of towels, clothing, and other personal articles should be discouraged.

Will using an antibacterial soap protect me from Impetigo?

Yes, antibacterial soaps are designed to protect against Impetigo, however using just an antibacterial soap will not protect you from fungus, which can lead to Ringworm.

Can’t I use the same dandruff shampoo I use to protect myself from Ringworm to protect myself from Impetigo?

No. The dandruff shampoo has anti-fungal properties not antibacterial.

How can Defense Soap products help protect me from Impetigo?

As mentioned earlier, Defense Soap products contain a blended formula of 100% pure essential oils, which have been clinically proven to be effective against fungi, bacteria, and viruses by weakening them and creating an environment too hostile to live in. Another property of our formula is that it is a proven antiseptic, which means Defense Soap, cleans mat burns, scratches and cuts where Impetigo can form.

The study below demonstrates how well our active ingredients work against the Impetigo.

**Herbal medicines for treatment of bacterial infections: a review of controlled clinical trials.**
OBJECTIVES: Many hundreds of plant extracts have been tested for in vitro antibacterial activity. This review is a critical evaluation of controlled clinical trials of herbal medicines with antibacterial activity. METHODS: Four electronic databases were searched for controlled clinical trials of antibacterial herbal medicines. Data were extracted and validated in a standardized fashion, according to predefined criteria, by two independent reviewers. RESULTS: Seven clinical trials met our inclusion criteria. Four of these studies were randomized. Three trials of garlic and cinnamon treatments for Helicobacter pylori infections reported no significant effect. Bacterial infections of skin were treated in four trials. Positive results were reported for an ointment containing tealeaf extract in impetigo contagiosa infections. Two trials of tea tree oil preparations used for acne and methicillin-resistant Staphylococcus aureus, and one trial of Ocimum gratissimum oil for acne, reported results equivalent to conventional treatments. CONCLUSIONS: Few controlled clinical trials have been published and most are methodologically weak. The clinical efficacy of none of the herbal medicines has so far been demonstrated beyond doubt. This area seems to merit further study through rigorous clinical trials.

PMID: 12562687 [PubMed - indexed for MEDLINE]

What is Herpes?

The herpes simplex virus (HSV) (also known as Cold Sore, Night Fever, or Fever Blister) is a virus that manifests itself in two common viral infections, each marked by painful, watery blisters in the skin or mucous membranes (such as the mouth or lips) or on the genitals. The disease is contagious, particularly during an outbreak, and is incurable with present-day technology. An infection on the lips is commonly known as a "cold sore" or "fever blister," though this should not be confused with a canker sore, which appears inside the mouth and is not caused by the herpes simplex virus.

Herpes is contracted through direct skin contact with an infected person. The virus travels through tiny breaks in the skin or through moist areas, but symptoms may not appear for up to a month or more after infection. Transmission was thought to be most common during an active outbreak - however, in the early
1980s, it was found that the virus can be shed from the skin in the absence of symptoms. It is estimated that between 50% and 80% of new HSV-2 cases are from asymptomatic viral shedding.

**Is there a cure for Herpes?**

Unfortunately once you are infected with the Herpes Virus you have it for life. The virus lays dormant in your system until it is triggered. Once triggered it will appear on the skin. Herpes outbreaks are triggered by many things. Most common are stress and weakness of the bodies immune system. Treating the Herpes outbreaks is all that we can do. Most treatments are topical in nature.

**How can Defense Soap products help protect me from the Herpes Virus?**

The properties of Defense Soap products make a great topical treatment for the Herpes outbreaks. The active ingredients in Defense Soap have also been proven to be antiviral.

The study below demonstrates how well our active ingredients work against the Herpes Virus.

**Antiviral activity of Australian tea tree oil and eucalyptus oil against herpes simplex virus in cell culture.**

Schnitzler P, Schon K, Reichling J.

Department of Virology, Hygiene Institute, University of Heidelberg, Germany.

The antiviral effect of Australian tea tree oil (TTO) and eucalyptus oil (EUO) against herpes simplex virus was examined. Cytotoxicity of TTO and EUO was evaluated in a standard neutral red dye uptake assay. Toxicity of TTO and EUO was moderate for RC-37 cells and approached 50% (TC50) at concentrations of 0.006% and 0.03%, respectively. Antiviral activity of TTO and EUO against herpes simplex virus type 1 (HSV-1) and herpes simplex virus type 2 (HSV-2) was tested in vitro on RC-37 cells using a plaque reduction assay. The 50% inhibitory concentration (IC50) of TTO for herpes simplex virus plaque formation was 0.0009% and 0.0008% and the IC50 of EUO was determined at 0.009% and 0.008% for HSV-1 and HSV-2, respectively. Australian tea tree oil exhibited high levels of virucidal activity against HSV-1 and HSV-2 in viral suspension tests. At noncytotoxic concentrations of TTO plaque formation was reduced by 98.2% and 93.0% for HSV-1 and HSV-2, respectively. Noncytotoxic concentrations of EUO reduced virus titers by 57.9% for HSV-1 and 75.4% for HSV-2. Virus titers were reduced significantly with TTO, whereas EUO exhibited distinct but less antiviral
activity. In order to determine the mode of antiviral action of both essential oils, either cell were pretreated before viral infection or viruses were incubated with TTO or EUO before infection, during adsorption or after penetration into the host cells. Plaque formation was clearly reduced, when herpes simplex virus was pretreated with the essential oils prior to adsorption. These results indicate that TTO and EUO affect the virus before or during adsorption, but not after penetration into the host cell. Thus TTO and EUO are capable to exert a direct antiviral effect on HSV. Although the active antiherpes components of Australian tea tree and eucalyptus oil are not yet known, their possible application as antiviral agents in recurrent herpes infection is promising.

PMID: 11338678 [PubMed - indexed for MEDLINE]

What is MRSA?

Methicillin-resistant Staphylococcus aureus (MRSA) is a specific strain of the Staphylococcus aureus bacterium that has developed antibiotic resistance to all penicillins, including methicillin and other narrow-spectrum β-lactamase-resistant penicillin antibiotics. It was first discovered in the UK in 1961 and is now widespread, particularly in the hospital setting where it is commonly termed a superbug.

MRSA may also be known as oxacillin-resistant Staphylococcus aureus (ORSA) and multiple-resistant Staphylococcus aureus.

In the US there are increasing reports of outbreaks of MRSA colonisation and infection through skin contact in locker rooms and gymnasiums, even among healthy populations. MRSA causes as many as 20% of Staphylococcus aureus infections in populations that use intravenous drugs. These out-of-hospital strains of MRSA, now designated as community-acquired, methicillin-resistant staph. aureus, or CAMRSA, are not only difficult to treat but are especially virulent. CAMRSA apparently did not evolve de novo in the community, but represents a hybrid between MRSA which escaped from the hospital environment and the once easily treatable community organisms. Most of the hybrid strains also acquired a virulence factor which makes their infections invade more aggressively, resulting in deep tissue infections following minor scrapes and cuts, and many cases of fatal pneumonia as well.
Is MRSA something new?

MRSA in not necessarily new, however it appears to be knew due to the fact it resists most of our common medicines. You may have heard before that we use so many antibiotics that one day we will run across an infection that is immune to what we commonly use. Well, MRSA is that infection. MRSA is giving the medical field fits trying to come up with a cure. Fortunately, MRSA is still a bacteria that is devasted by our active ingredeints.

The studies below demonstrate how well our active ingredients work against MRSA.

**Percutaneous treatment of chronic MRSA osteomyelitis with a novel plant-derived antiseptic.**

Sherry E, Boeck H, Warnke PH.

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BACKGROUND: Antibiotic-resistant bacteria such as methicillin-resistant Staphylococcus aureus (MRSA) and vancomycin-resistant enterococcus (VRE, are an increasing problem world-wide, causing intractable wound infections. Complex phytochemical extracts such as tea tree oil and eucalypt-derived formulations have been shown to have strong bactericidal activity against MRSA in vitro. Polytoxinol (PT) antimicrobial, is the trade name of a range of antimicrobial preparations in solution, ointment and cream form. METHODS: We report the first use of this drug, administered percutaneously, via calcium sulphate pellets (OsteosetTM), into bone, to treat an intractable MRSA infection of the lower tibia in an adult male. RESULTS AND DISCUSSION: Over a three-month period his symptoms resolved with a healing response on x-ray and with a reduced CRP.

PMID: 11368798 [PubMed - indexed for MEDLINE]

**Comparison of the effects in vitro of tea tree oil and plaunotol on methicillin-susceptible and methicillin-resistant strains of Staphylococcus aureus.**


Department of Microbiology, Showa Pharmaceutical University, Machida, Tokyo, Japan.

The effects in vitro of tea tree oil (TTO) and plaunotol were examined by monitoring the growth of a standard strain of Staphylococcus aureus FDA 209P
and of fourteen methicillin-susceptible strains of S. aureus (MSSA), together with twenty methicillin-resistant strains (MRSA). The minimum inhibitory concentrations (MIC) and the doses for 50% inhibition of growth (ID50) were determined by the micro-broth dilution (MD) method, and the broth dilution with shaking (BDS) method, respectively. The MIC of plaunotol for 50 and 90% of the MSSA and MRSA were assessed by the MD method, as 16 microg/ml and > or = 1,024 microg/ml, respectively. No antibacterial effects of TTO on MSSA and MRSA were detected by the MD method. The growth-inhibitory effects of TTO on S. aureus by the BDS method were examined, and it appeared that TTO was effective over a lower range of concentrations than previously reported. It seems that TTO is very effective in vitro against MSSA and MRSA at high concentrations but less effective below 40 microg/ml of TTO.

PMID: 11548201 [PubMed - indexed for MEDLINE]

What are Essential Oils?

Volatile oils that occur in plants and in general give to the plants their characteristic odors, flavors, or other such properties.

What is Tea Tree Oil?

Tea tree oil is a yellow- or green-tinged essential oil with a fresh camphoraceous odour. It is extracted from the leaves of the tree Melaleuca alternifolia which is native to the northeast coast of New South Wales, Australia. The oil is claimed to have beneficial cosmetic and medical properties (including antiseptic and antifungal action).

Note that the term "tea tree oil" is somewhat of a misnomer, since Melaleuca alternifolia is a paperbark rather than a tea tree (genus Leptospermum). Tea tree oil should also not be confused with tea oil, the sweetish seasoning and cooking oil from pressed seeds of the tea plant Camellia sinensis or the tea oil plant Camellia oleifera.

What is Eucalyptus Oil?

Eucalyptus Oil is an organic essential oil extract derived from leaves of the Eucalyptus tree native to Australia (Eucalyptus globulus). Eucalyptus Oil is a traditional Aboriginal remedy used primarily as an antiseptic to relieve coughs, colds, sore throats and other upper respiratory symptoms. There are many uses for this essential aromatic oil some of which include: sores, cuts, scrapes, minor burns, and sunburn.
Visit us at DefenseSoap.com to view our entire product line.

Defense Soap LLC, offers its products as Natural Remedies. The FDA prohibits Defense Soap from making any anti-fungal claims therefore we have provided you with the above research to make your own decision. If you are not convinced with the effectiveness of our natural ingredients then return the unused portion for a complete refund.

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Reichling, Sherry E, Boeck H, Warnke PH, Hada T, Furuse S, Matsumoto Y,
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United States National Library of Medicine

This fact sheet is for information only and is not meant to be used for self-diagnosis or as a substitute for consultation with a health-care provider. If you have any questions about the disease described above or think that you might have a fungus infection, consult a health-care provider.