



I'm not robot



Continue

Ringworm of the scalp is caused by

Cutaneous fungal infection of the scalp
Medical conditionTinea of the scalpTinea capitisSpecialtyInfectious disease
Tinea capitis (also known as "herpes tonsurans",[1] "ringworm of the hair",[1] "ringworm of the scalp",[1] "scalp ringworm",[2] and "tinea tonsurans"[1]) is a cutaneous fungal infection (dermatophytosis) of the scalp.[3] The disease is primarily caused by dermatophytes in the genera Trichophyton and Microsporum that invade the hair shaft. The clinical presentation is typically single or multiple patches of hair loss, sometimes with a 'black dot' pattern (often with broken-off hairs), that may be accompanied by inflammation, scaling, pustules, and itching. Uncommon in adults, tinea capitis is predominantly seen in pre-pubertal children, more often boys than girls. At least eight species of dermatophytes are associated with tinea capitis. Cases of Trichophyton infection predominate from Central America to the United States and in parts of Western Europe. Infections from Microsporum species are mainly in South America, Southern and Central Europe, Africa and the Middle East. The disease is infectious and can be transmitted by humans, animals, or objects that harbor the fungus. The fungus can also exist in a carrier state on the scalp, without clinical symptomatology. Treatment of tinea capitis requires an oral antifungal agent; griseofulvin is the most commonly used drug, but other newer antimycotic drugs, such as terbinafine, itraconazole, and fluconazole have started to gain acceptance. Symptoms It may appear as thickened, scaly, and sometimes boggy swellings, or as expanding raised red rings (ringworm). Common symptoms are severe itching of the scalp, dandruff, and bald patches where the fungus has rooted itself in the skin. It often presents identically to dandruff or seborrheic dermatitis. The highest incidence in the United States of America is in American boys of school age.[4] There are three type of tinea capitis, microsporiasis, trichophytosis, and favus; these are based on the causative microorganism, and the nature of the symptoms. In microsporiasis, the lesion is a small red papule around a hair shaft that later becomes scaly; eventually the hairs break off 1–3 mm above the scalp. This disease used to be caused primarily by Microsporum audouinii, but in Europe, M. canis is more frequently the causative fungus. The source of this fungus is typically sick cats and kittens; it may be spread through person to person contact, or by sharing contaminated brushes and combs. In the United States, Trichophytosis is usually caused by Trichophyton tonsurans, while T. violaceum is more common in Eastern Europe, Africa, and India. This fungus causes dry, non-inflammatory patches that tend to be angular in shape. When the hairs break off at the opening of the follicle, black dots remain. Favus is caused by T. schoenleinii, and is endemic in South Africa and the Middle East. It is characterized by a number of yellowish, circular, cup-shaped crusts (scutula) grouped in patches like a piece of honeycomb, each about the size of a split pea, with a hair projecting in the center. These increase in size and become crusted over, so that the characteristic lesion can only be seen around the edge of the scab.[5] Pathophysiology From the site of inoculation, the fungus grows down into the stratum corneum, where it invades keratin. Dermatophytes are unique in that they produce keratinase, which enables them to use keratin as a nutrient source.[6] Infected hairs become brittle, and after three weeks, the clinical presentation of broken hairs is evident.[4] There are three types of infection: Ectothrix: Characterized by the growth of fungal spores (arthroconidia) on the exterior of the hair shaft. Infected hairs usually fluoresce greenish-yellow under a Wood lamp (blacklight).

Associated with Microsporum canis, Microsporum gypseum, Trichophyton equinum, and Trichophyton verrucosum. Endothrix: Similar to ectothrix, but characterized by arthroconidia restricted to the hair shaft, and restricted to anthropophilic bacteria. The cuticle of the hair remains intact and clinically this type does not have fluorescence. Associated with Trichophyton tonsurans and Trichophyton violaceum, which are anthropophilic. Favus: Causes crusting on the surface of the skin, combined with hair loss. Associated with Trichophyton schoenleinii.[4] Diagnosis Tinea capitis may be difficult to distinguish from other skin diseases that cause scaling, such as psoriasis and seborrheic dermatitis; the basis for the diagnosis is positive microscopic examination and microbial culture of eplated hairs.[7] Wood's lamp examination will reveal bright green to yellow-green fluorescence of hairs infected by M. canis, M. audouinii, M. rivalieri, and M. ferrugineum and a dull green or blue-white color of hairs infected by T. schoenleinii.[8] Individuals with M. canis infection trichoscopy will show characteristic small comma hairs.[9] Histopathology of scalp biopsy shows fungi sparsely distributed in the stratum corneum and hyphae extending down the hair follicle, placed on the surface of the hair shaft. These findings are occasionally associated with inflammatory tissue reaction in the local tissue.[10] Treatment The treatment of choice by dermatologists is a safe and inexpensive oral medication, griseofulvin, a secondary metabolite of the fungus Penicillium griseofulvum. This compound is fungistatic (inhibiting the growth or reproduction of fungi) and works by affecting the microtubular system of fungi, interfering with the mitotic spindle and cytoplasmic microtubules. The recommended pediatric dosage is 10 mg/kg/day for 6–8 weeks, although this may be increased to 20 mg/kg/d for those infected by T. tonsurans, or those who fail to respond to the initial 6 weeks of treatment.[11] Unlike other fungal skin infections that may be treated with topical therapies like creams

applied directly to the afflicted area, griseofulvin must be taken orally to be effective; this allows the drug to penetrate the hair shaft where the fungus lives. The effective therapy rate of this treatment is generally high, in the range of 88–100%.[12] Other oral antifungal treatments for tinea capitis also frequently reported in the literature include terbinafine, itraconazole, and fluconazole; these drugs have the advantage of shorter treatment durations than griseofulvin.[13] A 2016 meta-analysis of randomized controlled trials found that terbinafine, itraconazole and fluconazole were at least equally effective as griseofulvin for children infected with Trichophyton, and terbinafine is more effective than griseofulvin for children with T. tonsurans infection.[14] However, concerns have been raised about the possibility of rare side effects like liver toxicity or interactions with other drugs; furthermore, the newer drug treatments tend to be more expensive than griseofulvin.[15] On September 28, 2007, the U.S. Food and Drug Administration stated that Lamisil (Terbinafine hydrochloride, by Novartis AG) is a new treatment approved for use by children aged 4 years and older. The antifungal granules can be sprinkled on a child's food to treat the infection.[16] Lamisil carries hepatotoxic risk, and can cause a metallic taste in the mouth. Epidemiology Tinea capitis caused by species of Microsporum and Trichophyton is a contagious disease that is endemic in many countries. Affecting primarily pre-pubertal children between 6 and 10 years, it is more common in males than females; rarely does the disease persist past age sixteen.[17] Because spread is thought to occur through direct contact with afflicted individuals, large outbreaks have been known to occur in schools and other places where children are in close quarters; however, indirect spread through contamination with infected objects (fomites) may also be a factor in the spread of infection. In the US, tinea capitis is thought to occur in 3–8% of the pediatric population; up to one-third of households with contact with an infected person may harbor the disease without showing any symptoms.[18] The fungal species responsible for causing tinea capitis vary according to the geographical region, and may also change over time. For example, Microsporum audouinii was the predominant etiological agent in North America and Europe until the 1950s, but now Trichophyton tonsurans is more common in the US, and becoming more common in Europe and the United Kingdom. This shift is thought to be due to the widespread use of griseofulvin, which is more effective against M. audouini than T. tonsurans; also, changes in immigration patterns and increases in international travel have likely spread T.

tonsurans to new areas.[19] Another fungal species that has increased in prevalence is Trichophyton violaceum, especially in urban populations of the United Kingdom and Europe.[19] See also List of cutaneous conditions Ringworm affair Footnote:
^ a b c d Rapini, Ronald P., Bologna, Jean L., Jorizzo, Joseph L. (2007). Dermatology: 2-Volume Set. St. Louis: Mosby, p. 1135. ISBN 978-1-4160-2999-1.
^ James WD, Berger TG, Odom RB (2006). Andrews' Diseases of the Skin: Clinical Dermatology. Saunders Elsevier. p. 645. ISBN 0-7216-2921-0.
^ Freedberg IM, Fitzpatrick TB (2003). Fitzpatrick's Dermatology in General Medicine. New York: McGraw-Hill, Medical Pub. Division, p. 645. ISBN 0-07-138076-0.
^ a b c Tinea Capitis at eMedicine
^ Degreef H. (2008). "Clinical forms of dermatophytosis (ringworm infection)". Mycopathologia. 166 (5–6): 257–65. doi:10.1007/s11046-008-9101-8. PMID 18478364.
^ full citation needed
^ Ali S, Graham TA, Forgie SE (2007). "The assessment and management of tinea capitis in children". Pediatric Emergency Care. 23 (9): 662–65. quiz 666–8. doi:10.1097/PEC.0b013e31814efe06. PMID 17876261.
^ Wigger-Alberti W, Elsner P (1997). "[Fluorescence with Wood's light. Current applications in dermatologic diagnosis, therapy follow-up and prevention]". Der Hautarzt; Zeitschrift für Dermatologie, Venerologie, und verwandte Gebiete (in German). 48 (8): 523–7. doi:10.1016/j.jaad.2008.07.009. PMID 19119131.
^ Xu X, Elder DA, Elemtsa R, Johnson BL, Murphy GE (2008). Lever's Histopathology of the Skin. Hagerstwon, MD: Lippincott Williams & Wilkins. ISBN 978-0-7817-7363-8.
^ Richardson, p. 88.
^ Gupta AK, Cooper EA (2008). "Update in antifungal therapy of dermatophytosis". Mycopathologia. 166 (5–6): 353–67. doi:10.1007/s11046-008-9101-8. PMID 18478357.
^ Gupta AK, Summerbell RC (2000). "Tinea capitis". Medical Mycology. 38 (4): 255–87. doi:10.1080/071403949. PMID 10975696.
^ Chen, Xiaomei; Jiang, Xia; Yang, Ming; González, Urba; Lin, Xiufang; Hua, Xia; Xue, Siliang; Zhang, Min; Bennett, Cathy (2016-05-12). "Systemic antifungal therapy for tinea capitis in children". Cochrane Database of Systematic Reviews (5): CD004685. doi:10.1002/14651858.CD004685.pub3. ISSN 1465-1858. PMID 27169520.
^ Blumer JL. (1999). "Pharmacologic basis for the treatment of tinea capitis". The Pediatric Infectious Disease Journal. 18 (2): 191–9. doi:10.1097/00006454-199902000-00027. PMID 10048701.
^ Baertlein, Lisa (2007-09-28). "US FDA approves oral granules for scalp ringworm | Deals | Regulatory News | Reuters". Retrieved 2009-04-19.
^ Richardson, p. 83.
^ Richardson, p. 84.
References Richardson M. (2003). Fungal Infection: Diagnosis and Management. Cambridge, MA: Blackwell Publishers. ISBN 1-4051-1578-5. External links ClassificationDlCD-10: B35.0 (ILDS B35.006)ICD-9-CM: 110.0MeSH: D0144006DiseasesDB: 13117External resourcesMedlinePlus: 000878eMedicine: derm/420 Retrieved from " Medical illustration of Microsporum canis, one of the types of fungi that causes ringworm Scalp Ringworm (Tinea Capitis) is most common in children between the ages of 3 and 7, and is less often found in adults. What Is Ringworm on the Scalp?Scalp ringworm (tinea capitis) is a very common scalp infection among children throughout the world. It is one of the most common skin problems seen in children. It is not caused by a worm, but by a fungus and is named for the ring-like or circular appearance of the infection on the skin.Where Do Ringworm Infections Appear?Fungal organisms known as dermatophytes superficially infect certain types of tissue found in hair, skin, and nails. The different types of fungal infections are named based on location and may differ in how they are treated. Certain dermatophytes forms the crusty, scaly patches commonly associated with scalp ringworm.Does Ringworm Spread to Others?Some people (mostly adults) can be carriers of the organism and spread it to others in the household without having symptoms.Who Gets Ringworm of the Scalp?Children 4-14 years of age are most likely to develop ringworm of the scalp, although it can occasionally appear in adults and may occur in younger children.Scalp ringworm occurs most frequently in urban areas among people with poor hygiene, those living in overcrowded quarters, or those living in warm, damp climates. This disease tends to be more severe in people with weakened immune systems, such as those with diabetes, AIDS, or cancer.Ringworm found on the body (tinea corporis) differs from scalp ringworm and is caused by a separate organism.How Can You Get Rid of Ringworm on the Scalp Fast?Home remedies sometimes can heal scalp ringworm without treatment; but consulting with a doctor is recommended.Can Your Hair Grow Back after Curing Ringworm?It make take weeks to months for the hair to grow back after ringworm is cured. The appearance of scalp ringworm can vary among affected individuals, but the most common signs are reddening, crusting, and scaling of the scalp. Intense itching usually occurs as well. Scalp ringworm can cause up to 50% of hair loss among children. Lymph nodes in the neck region may become enlarged with all types of scalp ringworm organisms, and some children may have high fevers. The specific pattern depends on the infecting organisms and how the immune system responds to the infection.Black dot ringworm: The organism Trichophyton (T. tonsurans), which has become the most common fungus (causing most tinea capitis in the United States), causes black dot ringworm. This organism causes infections within the hair shaft. The hair becomes extremely brittle and breaks off at the surface of the scalp. The remaining portion of the hair is left behind in the follicle, creating the "black dot" appearance. Patches of hair loss commonly result.Gray patch ringworm: The organism Microsporum, which was the most common fungus in the United States in the 1940s and 1950s but now is a rare cause of ringworm of the scalp, causes gray patch ringworm. Today, it is much less common in North and Central America but continues to be the dominant cause of scalp ringworm in Southern and Eastern Europe. In this pattern, the lesions start as small, red bumps around the hair shaft. The lesions then grow outward, forming red, scaly, and circular "rings" that are dry but not inflamed. All hairs in the infected area appear gray and dull, and they frequently break off. Numerous areas of hair loss result. Intense itching is common.Inflammatory ringworm: From animals or soil commonly cause this inflammatory form of ringworm, which can look like areas containing small pustules or abscesses or kerion formations. Kerions are elevated boggy masses oozing pus and studded with broken hairs. Fever, pain, itchiness, and tender,

enlarged lymph nodes are common. Inflammatory ringworm can result in permanent scarring and hair loss. Oral or topical steroids may sometimes be prescribed for treatment, depending upon the severity, although this has not been shown to reduce permanent hair loss.NOTE: Once effective antifungal therapy has started, the child may develop a widespread "id" reaction. This involves itchy, raised blister-like bumps that begin on the face and then spread to the trunk. The body's immune response causes this reaction to the dermatophyte and is probably not an allergic reaction to the medication. Usually, the medication treatment does not need to be changed or discontinued. However, a person who notices these changes should talk with the doctor to make sure cure of the reaction is not potentially dangerous. Ringworm of the scalp usually appears within seven to 14 days of contact with an infected object or person. Not all people exposed to ringworm by contact will develop ringworm themselves. Ringworm is caused by a fungus. See Answer Dermatophytes can be found in humans, other animals (most common household pets such as cats, dogs, and farm animals such as cattle), and soil.Fungal spores can be transmitted through contact with an infected person, fallen infected hairs, or contaminated objects. These may include objects such as combs and brushes, hats, movie theater seats, bedding, and clothing.Contact alone with one of these carriers may not be enough to cause an infection.However, coupled with minor trauma to the scalp, such as scratches or tight braiding, spores can enter the skin or hair shaft through the stratum corneum (a layer of the skin). Here, dermatophytes invade and digest the tissue's keratin (a type of protein) as the organisms grow. A doctor should examine any child with scalp itch, scaling, or areas of hair loss for evidence of scalp ringworm as many other skin conditions such as psoriasis and dandruff (seborrheic dermatitis) can look like scalp ringworm and are treated differently.Treatment occurs over a course of weeks to months, so generally, scalp ringworm infections are not emergencies, but should be examined by a doctor to start appropriate treatment. Yes, ringworm of the scalp is contagious. Fungal spores can be transmitted through contact with an infected person or animal, fallen infected hairs, or contaminated objects. Ringworm stays contagious until about 48 hours after appropriate treatment has started. Any primary care doctor (family physician, general internist, or pediatrician) will be able to diagnose and treat ringworm of the scalp.Rarely, a skin specialist (dermatologist) would need to be involved in the diagnosis or treatment. In many cases, the doctor can diagnose scalp ringworm by examining the patient and asking questions.When the scalp is examined with a Wood lamp that transmits ultraviolet light, the base of the hair shaft will light up a blue-green fluorescent band if Microsporum species is present. This is due to deposits of metabolic byproducts that this species leaves. Because this species is no longer common in the United States, this technique is less useful and not routinely performed.More commonly, the doctor can diagnose scalp ringworm with a visual inspection and by observing the symptoms present. However, scrapings examined in the laboratory are sometimes needed to confirm the diagnosis and may be helpful if repeated to make sure the ringworm is treated.The following are methods of collecting tissue samples for microscopy:Scraping the scalp with a surgical blade and removing the hair with a needle and forcepsRunning a toothbrush over the scalp about 10 times to collect the scales and hair (this is the best method)Cotton swabsMoistened gauzeOnce tissues have been collected, a 10%-15% solution of KOH (potassium hydroxide) is added and the slide is studied under a microscope to look for fungal spores. This method is fast, but it is effective in demonstrating fungal spores only 50% of the time.The best method of diagnosis is culture. The collected specimen is placed in a medium that provides fungal food to see if growth takes place. This method naturally takes more time, and an answer takes seven to 10 days. Sometimes, scalp ringworm can heal without treatment, but consulting a doctor is advised. To ensure timely management of the infection, it must be treated with a course of oral antifungal medications. Shaving the scalp is unnecessary.Shampoo with selenium sulfide (1%-2.5%), zinc pyrithione (1%-2%), or ketoconazole used two to three times weekly at home can help decrease shedding of spores, decrease spread of the infection to other people, and should be used together with the oral medications. Shampoos include Head & Shoulders Intensive Treatment, Selsun, Selsun Blue, Selsun Gold for Women, and Nizoral. Stronger medicated shampoos are sometimes prescribed by doctors, but in general, over-the-counter shampoos can be used.Because family members may be carriers, some doctors recommend that family members should also use the medicated shampoo to reduce the number of spores and prevent the infection from returning.Hairbrushes and combs should be replaced or cleansed with disinfectant such as bleach solution. Bleach solution can be made by combining one part bleach to one part water, then soak the hairbrushes or combs for one hour daily for the first three days after using the shampoo and oral medication.Home remedies such as vinegar (acetic acid) and tea tree oil have not been shown to improve scalp ringworm and may further irritate the skin and worsen the condition. They will also not prevent the spread of the disease. Readers Comments 2 Share Your Story Scalp ringworm must be treated with oral antifungal medications to penetrate the hair follicle and eliminate the scalp ringworm. Children may return to school once they have started oral therapy.Griseofulvin (Fulvicin, Grisactin) has been the drug of choice since 1958 because of its safety. This medication also comes in a liquid formula which makes it easier to administer to children. The usual dose involves taking the medicine every day with a fatty meal to enhance absorption for six to eight weeks. Therapy should continue until the ringworm is gone and you are told to stop by your physician. Occasionally a scalp culture may be performed to confirm that no fungi are present. Side effects caused by griseofulvin, such as headaches and GI disturbances, are rare. Routine liver and other blood test monitoring is not necessary for healthy children with scalp ringworm.The following are available to those who are allergic to or not responsive to griseofulvin:itraconazole (Sporanox)fluconazole (Diflucan)Terbinafine (Lamisil)For inflammatory scalp ringworm: Prednisone during the first 10-15 days of treatment can be added for symptom relief, but no data have shown an increase in cure rate.Many physicians recommend adding an antifungal shampoo during the early period of the treatment. For the infection to be completely cured, the hair needs to grow out. With average hair growth, this process could take weeks to months.Continuing to take all the medications prescribed for the entire course of treatment is important.The medicated shampoo can help but should not replace the oral medications.Routine follow-up with the doctor is advised to measure the effect of the treatment and to monitor the potential side effects. Daily oral griseofulvin in combination with medicated shampoo has been the most common treatment of scalp ringworm over the last several decades.Generally, this combination is successful, but new antifungal drugs are being studied due to increasing resistance to griseofulvin and the desire for faster treatment.If ringworm treatment is started early and if the medications are taken as prescribed, scalp ringworm can be successfully cured, and the hair in bald spots will likely grow back. Rosacea, Acne, Shingles, Covid-19 Rashes: Common Adult Skin Diseases See Slideshow A person can prevent scalp ringworm by keeping skin clean and dry, not sharing hats, combs, brushes, and avoiding contact with infected people or objects. Tinea capitis: black dot ringworm. Tinea capitis: gray patch ringworm Tinea capitis: kerion type, inflammatory tumor. Tinea capitis: ringworm with extensive hair loss with scarring and yellowish crusts on the scalp. Ringworm characteristic symptoms are a red, elevated, rapidly growing, round ring-like sore on the skin. The center of the ring may be clear. The sore itself may be scaly, crusty, or fluid-filled that may be accompanied by itching and pain. Each infected lesion is less than about 2 inches (5 cm) across and occurs alone or appears as a skin rash in groups of three or four. Ali, S., T. Graham, and S. Forgie. "The Assessment and Management of Tinea Capitis in Children." Pediatr Emerg Care 23.9 (2007): 662-665. Ameen, M. "Epidemiology of Superficial Fungal Infections." Clin Dermatol 28.2 (2010): 197-201. Higgins, E.M., L.C. Fuller, and C.H. Smith. "Guidelines for the Management of Tinea Capitis." Br J Dermatol 143.1 (2000): 53-58. Lacarrubba, F., A.E. Verzi, and G. Micali. "Newly described features resulting from high-magnification dermoscopy of tinea capitis." JAMA Dermatol 151.3 March 2015: 308-310. Noble, S.L., R.C. Forbes, and P.L. Stamm. "Diagnosis and Management of Common Tinea Infections." Am Fam Physician 58.1 (1998): 163-174. Patient Comments & Reviews Ringworm on Scalp - Treatment What treatment was effective for your scalp ringworm? Post View 2 Comments Ringworm on Scalp - Home Remedies Did any home remedies effectively treat your scalp ringworm? Post Ringworm on Scalp - Symptoms and Signs Please describe your scalp ringworm symptoms and signs. Post

solutions to engineering circuit analysis 8th edition
leonardo da vinci a life in drawing pdf
how do i get proof of renunciation of indian citizenship
how to program magnavox universal remote mc345
drivers dell vostro 1500 windows 10
20748791260.pdf
160b05ce148802--78087364600.pdf
52255095033.pdf
network study guide 2018
59180249135.pdf
160d227b9a31fa--57076806454.pdf
160745903e739--43850265667.pdf
160aaa7170fab6--11821112424.pdf