

Study finds treatment-resistant ringworm prevalent among children in metro elementary schools

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Approximately 7 percent of elementary school children across the bi-state, Kansas City metropolitan area are infected with the fungus *Trichophyton tonsurans* (*T. tonsurans*), the leading cause of ringworm in the U.S., according to a new study published today in *Pediatrics*. This is the largest study to date aimed at defining infection prevalence of the scalp fungus in children living in a metropolitan area and has implications for children nationwide.

"The organism *T. tonsurans* has become the leading cause of scalp infection in the U.S., and we believe it is on the rise in inner city areas," said Susan Abdel-Rahman, Pharm.D., lead study author and professor of pediatrics and pharmacy at Children's Mercy Hospitals and Clinics.

"This study supports what I and many of my peers are seeing - children with scaly, itchy scalps and hair loss are prevalent in [metropolitan areas](#). If not treated, ringworm can lead to permanent [hair loss](#), which can damage a child's self image. There is also some evidence that it may worsen seemingly unrelated problems such as asthma and [allergic rhinitis](#)."

Although its name suggests otherwise, ringworm is caused by a fungus, not a worm. In the past, *Microsporum* species were the main cause of ringworm, often passed to humans from cats and dogs. However, in recent years, *T. tonsurans* emerged, which spreads directly between humans, and is more challenging to screen for and treat.

The study of 10,514 children in grades K through 5 across 44 schools found that 6.6 percent of the children evaluated were infected with *T. tonsurans*. Infection rates varied markedly based on age and race, with African American children at greatest risk. More than 18 percent of the youngest African American children evaluated (kindergarten and first grade) were infected, with that number dropping to 7 percent by the time they reached fifth grade. In contrast, infection rates in Hispanic (1.6 percent) and Caucasian children (1.1 percent) were significantly lower. The reason for the dramatically higher prevalence in African Americans is not clear.

Current treatment regimens for *T. tonsurans* require a course of oral antifungal medicine typically for six to eight weeks until the symptoms resolve. However, in many of these children the [fungus](#) will not be completely eliminated. Consequently, children can still spread the infection to their classmates after being treated. "*T. tonsurans* has learned how to stay on the host and avoid eradication. This can be very frustrating for children who keep getting re-infected and for their parents who are doing everything they can to prevent this," added Abdel-Rahman. "We have only recently started to appreciate just how many [children](#) carry this pathogen so we don't yet know the best way to tackle this problem. However, I do advise parents to limit the sharing of items that come into contact with the scalp such as hats, combs, brushes and pillows. Watch closely for signs of infection such as flaking that looks like dandruff, white patchy scaling, itching, hair thinning or loss, and small pus-filled bumps, especially when your child has come in contact with another infected child. Make an appointment to see your doctor if you suspect that your child is infected and make sure to take the prescribed medicine as directed along with the application of a medicated shampoo two to three times a week."

Provided by GolinHarris International

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