

Families of kids with staph infections have high rate of drug-resistant germ

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Family members of children with a staph infection often harbor a drug-resistant form of the germ, although they don't show symptoms, a team of researchers from Washington University School of Medicine in St. Louis has found.

The results are published in the June issue of *Archives of Pediatrics & Adolescent Medicine*.

The investigators focused on [family members](#) of nearly 200 children who had Staphylococcus aureus infections in the skin and soft tissue, in areas such as the nose, armpits and/or groin. They found that of the more than 600 household members who lived with the children, more than half were colonized with S aureus. An additional 21 percent harbored MRSA, a difficult-to-treat form of staph that is resistant to common antibiotics such as penicillin and amoxicillin.

Outbreaks of S aureus can occur in households from close contact with another person who is infected or from sharing common household items, such as a bath towel or razor, even if the infected family member doesn't show symptoms.

While up to 30 percent of people nationwide carry the S aureus [germ](#) in their nose without symptoms, less than 2 percent are colonized with MRSA, according to the Centers for Disease Control and Prevention.

"The rate of MRSA we found in household members of these patients is

higher than rates of the colonization in the community," says Stephanie A. Fritz, MD, assistant professor of pediatrics who treats children with infectious diseases at St. Louis Children's Hospital.

Previously published national rates show 0.8 percent-1.5 percent for MRSA colonization in the community.

The study included 183 patients, ages 6 months to 20 years, with community-onset *S aureus* skin and soft tissue infections and their parents, siblings and other household contacts who spent more than half of their time each week in the primary home of the patient. The patients were evaluated at St. Louis Children's Hospital Emergency Department and ambulatory wound center, as well as from nine community pediatric practices affiliated with the Washington University Pediatric and Adolescent Ambulatory Research Consortium.

Of the patients, 61 percent were colonized with MRSA; 30 percent were colonized with methicillin-sensitive *S aureus* (MSSA), which responds to antibiotics; and 9 percent were colonized with both MRSA and MSSA. The most common site of colonization was the groin region.

Of 609 household contacts, 53 percent were colonized with *S aureus*; 19 percent with MRSA; 32 percent with MSSA; and 2 percent with both MRSA and MSSA, the researchers found.

Parents were more likely than siblings other household contacts to be colonized with MRSA, Fritz says.

"Household contacts of patients with *S aureus* infections are not routinely sampled for *S aureus* colonization, and failure to identify all colonized [household members](#) may result in persistent colonization or recurrent infections," Fritz says. "In addition, household surfaces and shared objects, such as toys, razors or bath towels, represent potential

reservoirs for S aureus transmission."

In addition to not sharing objects, Fritz recommends that families practice good hand hygiene, keep wounds covered, wash hands after contact with another person's wound and clean frequently touched surfaces.

The research team is now going into homes of families with S aureus infections to test surfaces and objects to determine if transmission of the infections can be prevented.

More information: Fritz SA, Hogan PG, Hayek G, Eisenstein K, Rodriguez M, Krauss M, Garbutt J, Fraser VJ. Staphylococcus aureus colonization in children with community-associated Staphylococcus aureus skin infections and their household contacts. *Archives of Pediatric and Adolescent Medicine*, June 2012;166[6]:551-557.

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