

**Circumcision makes a baby boy 12 times more likely to get a MRSA infection.**

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**Staph becomes a problem when it is a source of infection. Methicillin-resistant *Staphylococcus aureus* (MRSA) infections are more difficult to treat than ordinary *Staph* infections because they are resistant to many types of antibiotics. Causes of MRSA include unnecessary antibiotic use, antibiotics in food (cattle, pigs, and chickens), and bacterial mutation. Risk factors include invasive procedures [circumcision] and young age - incomplete development of the immune system.**

*Journal of the American Medical Association, October 22, 2007.*

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# Answers to Your Questions about Circumcision and MRSA

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*Educating a New Generation For the Well-Being of All Children*

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## **What is Staphylococcus aureus?**

*Staphylococcus aureus*, first described in 1882 and commonly called “staph,” is an infectious disease-causing bacterium (germ).<sup>1</sup> Under the microscope, it has a golden color, from which it derives its name.<sup>1</sup>

## **What is methicillin-resistant Staphylococcus aureus (MRSA)?**

MRSA is a new form of staph that has mutated to develop resistance to most common antibiotics. Moreover, many strains now carry a toxin-producing gene that causes tissue *necrosis* (death) and *hemolysis* (destruction of red blood cells).<sup>2</sup> MRSA may be classified as a “flesh-eating bacteria” because of its destructive effect on human tissue.

## **Where is MRSA found?**

Once primarily a hospital-acquired infection (HA-MRSA), MRSA now has become community-acquired (CA-MRSA) because it is found everywhere.<sup>3</sup> Many healthy people are carriers of CA-MRSA, on their skin or in their nose.<sup>1,4,5</sup> The incidence of CA-MRSA is now reaching epidemic proportions in the United States and elsewhere.<sup>3,5,6</sup>

CA-MRSA is carried back into hospitals by the medical staff, public, and patients.<sup>5,6</sup> CA-MRSA is displacing ordinary staph, so more and more infections are caused by more virulent CA-MRSA.<sup>3,5,7</sup> Outbreaks of staph or the more dangerous MRSA periodically occur in newborn nurseries.<sup>5,7</sup>

## **What does this have to do with circumcision?**

A male infant who has been circumcised has an open wound on his penis, through which

staph may enter.<sup>7</sup> Staph frequently is spread in newborn nurseries by parents and caregivers who may be carriers of staph on their skin and in their nose.<sup>4,8</sup> A circumcised boy may be infected in hospital or after he comes home.<sup>4,5,7,9</sup> A circumcised boy is twelve times more likely to get a staph infection.<sup>9</sup>

## **What diseases does MRSA cause?**

MRSA produces as many as fifteen toxins.<sup>3</sup> Toxins produced by MRSA have long been known to cause staphylococcal scalded skin syndrome in newborn boys, in which the skin peels off.<sup>7</sup> Other MRSA-caused diseases are impetigo, empyema (pus in a body cavity, usually the chest), abscesses, osteomyelitis, furunculosis, septic shock, and necrotizing fasciitis.<sup>3,7,9</sup> If the infection gets into the blood and becomes systemic, any organ of the body can be involved, such as necrotizing pneumonia (a highly fatal disease).<sup>2,3,7,9</sup> Most importantly, MRSA sharply increases the risk of death.<sup>10</sup>

## **Is MRSA infection really a fatal disease?**

The first reported post-circumcision death from staph infection occurred in 1942.<sup>11</sup> The death rate from MRSA infection is sharply higher than the death rate from the non-resistant variety of staph.<sup>10</sup> MRSA kills 18,000 Americans every year.<sup>12</sup>

## **Does sterile operating technique guarantee safety?**

*No.* The infant boy may already be colonized with staph before or after the operation, and the staph may infect the open wound after the operation.<sup>5,7</sup>

## **What should I do if I suspect my child has staph or MRSA infection?**

Contact your doctor immediately. Staph or MRSA is a fulminating (fast-developing), life-threatening infection.<sup>3</sup> Your son may require hospitalization

## **How is MRSA treated?**

Abscesses should be drained.<sup>3</sup> A culture should be taken to see which infectious organism is involved and a sensitivity test run to see which antibiotics can be used to treat the infection.<sup>3</sup> Systemic MRSA frequently is treated in hospital with an intravenous antibiotic drip, using a powerful antibiotic.<sup>13</sup>

## **Is MRSA really an emerging threat to all infants – especially recently circumcised baby boys?**

*Yes.* Circumcision makes a baby boy 12 times more likely to get a MRSA infection.<sup>9</sup> MRSA is an emerging threat in the 21st century, just as HIV was in the 1980s, and the risk increases as MRSA becomes more common.<sup>1,3</sup> MRSA infection is spread in nurseries.<sup>4,6,7,9</sup> Boys are more susceptible to skin colonization and infection.<sup>7,9</sup> Infants have immature immune systems, so are less resistant to infection.<sup>13</sup> A localized infection can quickly become a life-threatening, invasive systemic infection.

## **How do I protect my son from MRSA infection?**

Hand washing is important in preventing staph infection,<sup>3,9,13</sup> as is avoidance of medically-unnecessary, non-therapeutic invasive surgery, such as infant circumcision.