

Timing of antibiotics important in reducing infections after C-section

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Giving antibiotics before cesarean section surgery rather than just after the newborn's umbilical cord is clamped cuts the infection rate at the surgical site in half, according to researchers at Washington University School of Medicine in St. Louis and Barnes-Jewish Hospital.

"We followed more than 8,000 women over an eight-year period, and our findings support giving antibiotics just before a [cesarean section](#) to prevent infections," says infectious disease specialist David K. Warren, MD. "Until recently, standard practice in the U.S. was to give antibiotics when the baby was delivered, after the [umbilical cord](#) was clamped."

The study is available online and appears in the August issue of *Obstetrics & Gynecology*.

The previous practice of waiting to give antibiotics until after the surgical delivery of the baby evolved out of concern that these drugs might hide signs of blood infection in the newborn. But other recent studies have shown that giving antibiotics in the hour before surgery both reduced the risk of infection in the mother and had no effect on the health of the infant.

"It was always a theoretical concern that giving antibiotics might somehow mask sepsis in the neonate," says Warren, associate professor of medicine. "But there have been several recent studies showing that this was not an issue."

In this study, the researchers tracked C-section deliveries and associated surgical site infections at Barnes-Jewish Hospital between January 2003-December 2010. Based on reduced infection rates following other types of surgeries, the hospital changed its policy to administering antibiotics before C-section surgery in January 2004. The American College of Obstetricians and Gynecologists recommended the same change in practice in 2011.

In 2003, the year before the policy changed, the infection rate oscillated around nine or 10 infections per 100 cesarean deliveries. A downward trend in the infection rate began after the policy switch and by 2010, the rate was about two infections per 100 cesarean sections. On average, the researchers calculated about five fewer infections per 100 surgeries due to changing the timing of the [antibiotics](#). Over the entire eight-year period, the researchers observed 303 infections following 8,668 cesarean deliveries.

The investigators also pointed out that infection rates were cut almost in half after the policy change despite the fact that there were significant increases in the number of patients who were overweight or obese over the course of the study. Having a higher body mass index is associated with increased risk of [infection](#) following surgery.

More information: Kittur ND, McMullen KM, Russo AJ, Ruhl L, Kay HH, Warren DK. Long-term effect of infection prevention practices and case mix on cesarean surgical site infections. *Obstetrics & Gynecology*. August 2012.

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