

## **Multiple Cesarean Deliveries Risky for Mom**

**Megan Brooks**

NEW YORK (Reuters Health) — In pregnant women, the risk of serious morbidity progressively increases with the number of cesarean deliveries, according to a systematic review and meta-analysis of observational studies.

The rate of hysterectomy, blood transfusions, adhesions and surgical injury all increase with increasing number of cesarean deliveries, Dr. Nicole E. Marshall and colleagues from the Oregon Health & Science University in Portland found.

They also found that women who have three or more cesarean sections have a statistically significant increased risk for placenta previa, accreta and needing a hysterectomy.

Still, the investigators emphasize that most women experience good outcomes, regardless of the number of prior cesareans and therefore the data "do not suggest an upper limit to the number of allowable cesarean deliveries."

Nonetheless, they say women who plan to have several children should be counseled about the risks of multiple cesarean deliveries and the risks and benefits of vaginal birth after cesarean (VBAC) to help them make an informed decision.

The research was published online June 16 in the American Journal of Obstetrics and Gynecology and presented in February at the annual meeting of the Society for Maternal-Fetal Medicine.

In the United States, nearly one-third of all births are by cesarean section, and the rate of both primary and repeat cesarean deliveries continues to trend upward each year. In the last 10 years, there has been a trend away from VBAC.

To determine the impact of increasing numbers of cesareans on maternal morbidity, Dr. Marshall and colleagues systematically reviewed 21 studies that were selected using a "best evidence" approach, i.e., those with the highest quality and most rigorous design were emphasized.

The 21 studies included data on more than 2.2 million deliveries, including 180,177 repeat cesarean deliveries and 5,729 with at least three cesarean deliveries. There were 5,823 cases of placenta previa, 743 cases of accreta and 1,852 women required hysterectomy.

Cases came from a variety of countries, including the United States, Australia, the United Kingdom and Israel, and a variety of practice settings, including both academic and community-based health centers.

Hysterectomy increased with increasing number of cesareans in all studies. The best evidence comes from a 2006 study that used the Eunice Kennedy Shriver Maternal-Fetal Medicine Units Network

cesarean registry database. This study reported that as the number of cesareans went from 1 to 5, the adjusted odds ratio for hysterectomy (compared to the risk in women with vaginal deliveries only) went from 0.7 to 1.4, 3.8, 5.6, and 15.2.

The primary indications for hysterectomy, listed in four studies, were placenta previa/accreta (67%), uterine atony (25%) and uterine rupture/laceration (5%).

The incidence of placenta previa per 1000 delivers rose from 10 with one prior cesarean to 28 with three or more prior cesareans, the authors report.

Compared to women without placenta previa and no prior cesarean delivery, women with placenta previa and three or more prior cesareans had a statistically significant increased risk of accreta (50% to 67% vs 3.3% to 4%), hysterectomy (50% vs 67% vs 0.7% to 4%), and composite maternal morbidity (83% vs 15%).

"As the rate of cesarean deliveries continues to rise, hospitals and physicians need to be prepared to optimize management of women with multiple cesarean deliveries and minimize morbidity and mortality," the investigators conclude.

**SOURCE:** <http://bit.ly/IUfFn1>

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