“The rate of uterine rupture was 50 times higher among women attempting [VBAC] than among women attempting a second vaginal delivery.”

Vaginal Birth After Cesarean Birth (VBAC) Is Not Safe for All Women

Melissa M. Kaczmarczyk, Par Sparen, Paul Terry, Sven Cnattingius

Melissa Kaczmarczyk and Paul Terry are researchers at Emory University, and Par Sparen and Sven Cnattingius are researchers at the Karolinska Institutet. In the following viewpoint, they present the findings of their recent study in which they conclude that women who delivered their first child by cesarean section are at higher risk of suffering uterine rupture during an attempt at vaginal birth (VBAC) than women who had given birth vaginally the first time. In addition, the researchers note that the potential for uterine rupture during VBAC is independent of, but can be influenced by, other factors.

As you read, consider the following questions:

1. As reported by the authors, what is the percentage of uterine ruptures among women who attempt VBAC?
2. How much of an increase in risk of uterine rupture did labor induction have during VBAC, according to Kaczmarczyk, Terry, Sparen, and Cnattingius?
3. In addition to prior cesarean sections, what other procedures do the authors list that can cause a uterine scar?

**Uterine rupture** is a catastrophic event, most often resulting from the tearing of a previous caesarean scar during labour. In addition to previous caesarean, known or suspected risk factors for uterine rupture include induction of labour, maternal age, height, body mass index (BMI), education, cigarette smoking, birthweight, gestational age, instrumental vaginal delivery, and interpregnancy interval. However, effect sizes of these risk factors remain unclear due to methodological differences between studies, such as small sample sizes, lack of population-based studies, varying inclusion criteria, the potential recall bias in case-control studies, and discrepancies in the definition of uterine rupture. In addition, relatively few studies have examined the risk factors for uterine rupture in all women, regardless of history of caesarean.

Although the incidence of uterine rupture is low, with an average incidence of approximately 1% among women attempting vaginal birth after caesarean delivery, the increased maternal and neonatal morbidity and mortality associated with this condition serve to highlight the importance of prevention. Moreover, the rate of caesarean sections, most notably those that are elective, is increasing in developed countries. Consequently, it is possible that rates of uterine rupture will increase in these populations as well.

To further elucidate the risk factors for uterine rupture, we examined data from a nationwide prospective cohort study in Sweden of women attempting vaginal birth in their second