

# The Risks of Cesarean Delivery to Mother and Baby

## A CIMS Fact Sheet

The Coalition for Improving Maternity Services (CIMS) is concerned about the dramatic increase and ongoing overuse of cesarean section. Every year since 1983 no fewer than one in five American women has given birth via major abdominal surgery.<sup>22,34</sup> Today one in four or 25% of women have a cesarean for the birth of their baby.<sup>22</sup> The rate for first-time mothers may approach one in three.<sup>9</sup> Studies show that the cesarean rate could safely be halved.<sup>11</sup> The World Health Organization recommends no more than a 15% cesarean rate.<sup>34</sup> With a million women having cesarean sections every year, this means that 400,000 to 500,000 of them were unnecessary.

No evidence supports the idea that cesareans are as safe as vaginal birth for mother or baby. In fact, the increase in cesarean births risks the health and well being of childbearing women and their babies.

For elective repeat cesarean, the consensus of dozens of studies totaling tens of thousands of women is that elective repeat cesarean section is riskier for the mother and not any safer for the baby.<sup>24,27,28</sup> Recent studies used to conclude otherwise are both seriously flawed and have been misrepresented in the media.<sup>12</sup>

In addition to the hazards of cesarean section per se, the risks of certain complications increase with accumulating surgeries. Studies also show that with a history of previous cesarean, seven out of ten women or more who are allowed to labor without undue restrictions will give birth vaginally, thus ending their exposure to the dangers of cesarean section.<sup>13</sup>

### Hazards of Cesarean Section to the Mother

- ◆ Women run 5 to 7 times the risk of death with cesarean section compared with vaginal birth.<sup>14,29</sup>
- ◆ Complications during and after the surgery include surgical injury to the bladder, uterus and blood vessels (2 per 100),<sup>30</sup> hemorrhage (1 to 6 women per 100 require a blood transfusion),<sup>30</sup> anesthesia accidents, blood clots in the legs (6 to 20 per 1000),<sup>30</sup> pulmonary embolism (1 to 2 per 1000),<sup>30</sup> paralyzed bowel (10 to 20 per 100 mild cases, 1 in 100 severe),<sup>30</sup> and infection (up to 50 times more common).<sup>1</sup>
- ◆ One in ten women report difficulties with normal activities two months after the birth,<sup>23</sup> and one in four report pain at the incision site as a major problem.<sup>9</sup> One in fourteen still report incisional pain six months or more after delivery.<sup>9</sup>
- ◆ Twice as many women require rehospitalization as women having normal vaginal birth.<sup>18</sup>
- ◆ Especially with unplanned cesarean section, women are more likely to experience negative emotions, including lower self-esteem, a sense of failure, loss of control, and disappointment. They may develop postpartum depression or post-traumatic stress syndrome.<sup>9,20,25,31</sup> Some mothers express dominant feelings of fear and anxiety about their cesarean as long as five years later.<sup>16</sup>
- ◆ Women having cesarean sections are less likely to decide to become pregnant again.<sup>16</sup>
- ◆ As is true of all abdominal surgery, internal scar tissue can cause pelvic pain, pain during sexual intercourse, and bowel problems.
- ◆ Reproductive consequences compared with vaginal birth include increased infertility,<sup>16</sup> miscarriage,<sup>15</sup> placenta previa (placenta overlays the cervix),<sup>19</sup> placental abruption (the placenta detaches partially or completely before the birth),<sup>19</sup> and premature birth.<sup>8</sup> Even in women planning repeat cesarean, uterine rupture occurs at a rate of 1 in 500 versus 1 in 10,000 in women with no uterine scar.<sup>27</sup>

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Continued from reverse

## Hazards of Cesarean Section to the Baby

- ◆ Especially with planned cesarean, some babies will inadvertently be delivered prematurely.<sup>1</sup> Babies born even slightly before they are ready may experience breathing and breastfeeding problems.<sup>21</sup>
- ◆ One to two babies per 100 will be cut during the surgery.<sup>33</sup>
- ◆ Studies comparing elective cesarean section or cesarean section for reasons unrelated to the baby with vaginal birth find that babies are 50% more likely to have low Apgar scores, 5 times more likely to require assistance with breathing, and 5 times more likely to be admitted to intermediate or intensive care.<sup>4</sup>
- ◆ Babies born after elective cesarean section are more than four times as likely to develop persistent pulmonary hypertension compared with babies born vaginally.<sup>17</sup> Persistent pulmonary hypertension is life threatening.
- ◆ Mothers are more likely to have difficulties forming an attachment with the infant.<sup>20,25</sup> This may be because women are less likely to hold and breastfeed their infants after birth and have rooming-in and because of the difficulties of caring for an infant while recovering from major surgery.
- ◆ Babies are less likely to be breastfed.<sup>9</sup> The adverse health consequences of formula feeding are numerous and can be severe. (See CIMS fact sheet, **Breastfeeding Is Priceless.**)

## Hazards of Elective Repeat Cesarean Section

- ◆ Elective cesarean section carries twice the risk of maternal death compared with vaginal birth.<sup>10</sup>
- ◆ Old scar tissue increases the likelihood of surgical injury.
- ◆ One more woman in every 100 with a history of more than one cesarean will have an ectopic pregnancy (embryo implants outside the womb).<sup>15</sup> Hemorrhage associated with ectopic pregnancy is one of the leading causes of maternal death in the US.<sup>7</sup>
- ◆ Compared with women with no uterine scar, women have more than 4 times the risk of placenta previa with one prior cesarean, 7 times the risk with two to three prior cesareans, and 45 times the risk with four or more prior cesareans.<sup>3</sup> Placenta previa more than doubles the chance of the baby dying and increases the rate of preterm birth more than 6-fold.<sup>8</sup>
- ◆ Compared with women with prior births and no previous cesareans, women with one prior cesarean or more have as much as 3 times the risk of placental abruption.<sup>15</sup> With placental abruption, 6 in every 100 babies will die, and 3 in 10 will be born too early.<sup>19</sup>
- ◆ The odds of placenta accreta (placenta grows into or even through the uterus) jump from 1 in 1,000 with one prior cesarean to 1 in 100 with more than one prior cesarean.<sup>5</sup> Nearly all women with this complication will require a hysterectomy, nearly half will have a massive hemorrhage, and as many as 1 in 11 babies and 1 in 14 mothers will die.<sup>26</sup> The incidence of placenta accreta has increased 10-fold in the last 50 years and now occurs in 1 in 2,500 births.<sup>2</sup>
- ◆ Women having elective repeat cesareans are more likely to experience hemorrhage requiring transfusion, blood clots, and infection.<sup>24,27,28</sup>
- ◆ Postpartum recovery after repeat cesarean section is even more difficult when there is another child or children to care for.

For a complementary copy of this fact sheet with references, or other Coalition for Maternity Services publications, please contact:



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## REFERENCES

1. ACOG. *Evaluation of Cesarean Delivery*. Washington, DC: ACOG, 2000.
2. ACOG. Placenta accreta. *Committee Opinion* No. 266, Jan 2002.
3. Ananth CV, Smulian JC, and Vintzileos AM. The association of placenta previa with history of cesarean delivery and abortion: a metaanalysis. *Am J Obstet Gynecol* 1997;177(5):1071-8.
4. Annibale DJ et al. Comparative neonatal morbidity of abdominal and vaginal deliveries after uncomplicated pregnancies. *Arch Pediatr Adolesc Med* 1995;149(8):862-7.
5. Asakura H and Myers SA. More than one previous cesarean delivery: a 5-year experience with 435 patients. *Obstet Gynecol* 1995;85(6):924-9.
6. Centers for Disease Control. Achievements in public health, 1900-1999: healthier mothers and babies. *MMWR* 1999; 48(38):849-58.
7. Centers for Disease Control. National Hospital Discharge Survey of the National Center for Health Statistics, Table 1, 1990.
8. Crane JM, van den Hof MC, Dodds L, Armson BA, Liston R. Neonatal outcomes with placenta previa. *Obstet Gynecol* 1999; 93(4):541-4.
9. Declercq ER, Sakala C, Corry MP. *Listening to Mothers: Report of the First National U.S. Survey of Women's Childbearing Experiences*. New York: Maternity Center Association, Oct 2002.
10. Enkin M et al. *A Guide to Effective Care in Pregnancy and Childbirth*. 3d ed. Oxford: Oxford University Press, 2000.
11. Goer H. Cesareans: Everything you need to know. [http://www.parentsplace.com/expert/birthguru/articles/0,10335,243386\\_241096,00.html](http://www.parentsplace.com/expert/birthguru/articles/0,10335,243386_241096,00.html)
12. Goer H. "Spin-doctoring" the research. *Birth* 2003;30(2):124-9.
13. Goer H. *The Thinking Woman's Guide to a Better Birth*. New York: Perigee Books, 1999, p 169.
14. Hall MH. Commentary: confidential enquiry into maternal death. *Br J Obstet Gynaecol* 1990;97:752-3.
15. Hemminki E and Merilainen J. Long-term effects of cesarean sections: ectopic pregnancies and placental problems. *Am J Obstet Gynecol* 1996;174(5):1569-74.
16. Jolly J, Walker J, and Bhabra K. Subsequent obstetric performance related to primary mode of delivery. *Br J Obstet Gynaecol* 1999;106(3):227-32.
17. Levine EM et al. Mode of delivery and risk of respiratory diseases in newborns. *Obstet Gynecol* 2001;97(3):439-42.
18. Lydon-Rochelle M et al. Association between method of delivery and maternal rehospitalization. *JAMA* 2000;283:2411-6.
19. Lydon-Rochelle M et al.. First-birth cesarean and placental abruption or previa at second birth. *Obstet Gynecol* 2001;97(5 Pt 1):765-9.
20. Lydon-Rochelle MT, Holt VL, and Martin DP. Delivery method and self-reported postpartum general health status among primiparous women. *Paediatric Perinatal Epidemiology* 2001;15:232-40.
21. March of Dimes. Medical references: preterm birth. [http://www.marchofdimes.com/printableArticles/681\\_1157.asp?printable=true](http://www.marchofdimes.com/printableArticles/681_1157.asp?printable=true)
22. Martin JA et al. Births: preliminary data for 2001. *Nat Vital Stat Rep* 2002;50(10):1-20.
23. Miovich SM et al. Major concerns of women after cesarean delivery. *J Obstet Gynecol Neonatal Nurs* 1994;23(1):53-9.
24. Mozurkewich EL and Hutton EK. Elective repeat cesarean delivery versus trial of labor: a meta-analysis of the literature from 1989 to 1999. *Am J Obstet Gynecol* 2000;183:1187-97.
25. Mutryn C. Psychosocial impact of cesarean section on the family: a literature review. *Soc Sci Med* 1993;37(10):1271-81.
26. O'Brien JM, Barton JR, and Donaldson ES. The management of placenta percreta: conservative and operative strategies. *Am J Obstet Gynecol* 1996;175(6):1632-8.
27. Rageth JC, Juzi C, and Grossenbacher H. Delivery after previous cesarean: a risk evaluation. Swiss Working Group of Obstetric and Gynecologic Institutions. *Obstet Gynecol* 1999;93(3):332-7.
28. Roberts RG, Bell HS, Wall EM, et al. Trial of labor or repeated cesarean section: The woman's choice. *Arch Fam Med* 1997;6:120-125.
29. Schuitemaker N et al. Maternal mortality after cesarean in The Netherlands. *Acta Obstet Gynecol Scand* 1997;76(4):332-4.
30. Shearer EL. Cesarian section: medical benefits and costs. *Soc Sci Med* 1993;37(10):1223-31.
31. Soet JE, Brack GA, and Dilorio C. Prevalence and predictors of women's experience of psychological trauma during childbirth. *Birth* 2003;30(1):36-46.
32. U.S. Department of Health and Human Services. Rates of cesarean delivery—United States, 1991. *MMWR* 1993;42(15):285-300.
33. van Ham MA, van Dongen PW, Mulder J. Maternal consequences of caesarean section. A retrospective study of intra-operative and postoperative maternal complications of cesarean section during a 10-year period. *Eur J Obstet Gynecol Reprod Biol* 1997;74(1):1-6.
34. World Health Organization. Appropriate technology for birth. *Lancet* 1985;2(8452):436-437.