

Idaho Resident Cesarean Births

In 2008, one-fourth (24.4 percent) of all births among Idaho mothers were cesarean deliveries. Nationally, one-in-three births (32.3 percent) were delivered by cesarean section in 2008 (preliminary). In the past ten years, the Idaho cesarean rate increased by 38.6 percent from 17.6 in 1999 to 24.4 in 2008, while the U.S. rate increased by 46.8 percent. The cesarean rates in 2008 were the highest ever reported in Idaho and in the United States.¹

Idaho Resident Cesarean Highlights Five-Year Aggregate 2004-2008

Age

Mothers ages 35 and over were at a 1.5 times greater risk of having a cesarean (33.2 percent) than mothers ages 18 to 34 (22.3 percent).

Education

The total cesarean rate for mothers who completed a masters, doctorate or professional degree was 28.6.

Plurality

Plural births (twins, triplets, or higher order births) were three times more likely to be delivered via cesarean than singleton births.

Risk Factors in this Pregnancy

The Idaho birth certificate reports if mothers had risks associated with their current pregnancy. The following cesarean rates are for Idaho resident mothers who: have had a previous cesarean delivery (84.0), pregnancy resulted from infertility treatment (50.9), had vaginal bleeding during pregnancy (35.2), had a previous poor pregnancy outcome (34.0), or had a previous preterm birth (28.0).

Trial of Labor

Thirty one percent (31.7) of women who had a cesarean delivery attempted a trial of labor for a vaginal delivery.

Healthy People 2010

HP2010 defines "low risk" births as: 1) first-time mothers having a 2) single child that is 3) positioned head down in the womb, and sets a goal that no more than 15 percent of these "low risk" births should be cesarean deliveries.² From 2004 to 2008, the primary cesarean rate among "low risk" births to Idaho residents ranged from 17.6 percent in 2004 to 20.3 percent in 2008.

Idaho Resident and U.S. Live Births Number and Rates of Cesarean Deliveries by Year 1999-2008

Year	Idaho Total Live Births	Idaho Total Cesarean Births		U.S. Total Live Births	U.S. Total Cesarean Births	
		Number	Rate*		Number	Rate*
1999	19,870	3,489	17.6	3,959,417	862,086	22.0
2000	20,305	3,786	18.6	4,058,814	923,991	22.9
2001	20,686	3,932	19.0	4,025,933	978,411	24.4
2002	20,973	4,187	20.0	4,021,726	1,043,846	26.1
2003	21,794	4,654	21.4	4,089,950	1,119,388	27.5
2004	22,529	5,006	22.3	4,112,052	1,190,210	29.1
2005	23,064	5,204	22.6	4,138,349	1,248,815	30.3
2006	24,185	5,505	22.8	4,265,555	1,321,054	31.1
2007	25,023	5,992	24.0	NA	NA	31.8**
2008	25,156	6,125	24.4	NA	NA	32.3**

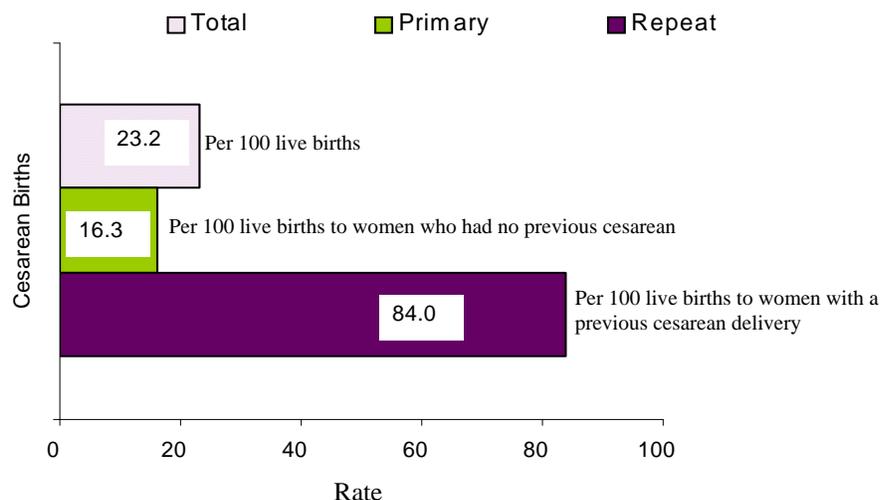
*Total cesarean rate: Number of cesarean deliveries per 100 live births.

**2007 and 2008 rates are preliminary.

Women who have a primary cesarean delivery are more likely to have a subsequent cesarean delivery.³ For women who have a first cesarean delivery, their next delivery will be either a repeat cesarean or a vaginal birth after cesarean (VBAC). The Idaho resident repeat cesarean rate increased by 5.4 percent, from 2004 to 2008, from 81.0 to 85.4 per 100 women with a previous cesarean while the VBAC rate decreased 23.1 percent.

Idaho resident total cesarean birth rate from 2004 to 2008 was 23.2 per 100 live births. The primary cesarean rate was 16.3 per 100 live births to women who had no previous cesarean. The repeat cesarean rate was 84.0 per 100 live births to women who had a previous cesarean.

Idaho Resident Births Percent Primary and Repeat Cesarean Deliveries Five-Year Aggregate 2004-2008



High-Risk Cesarean Births

Plurality

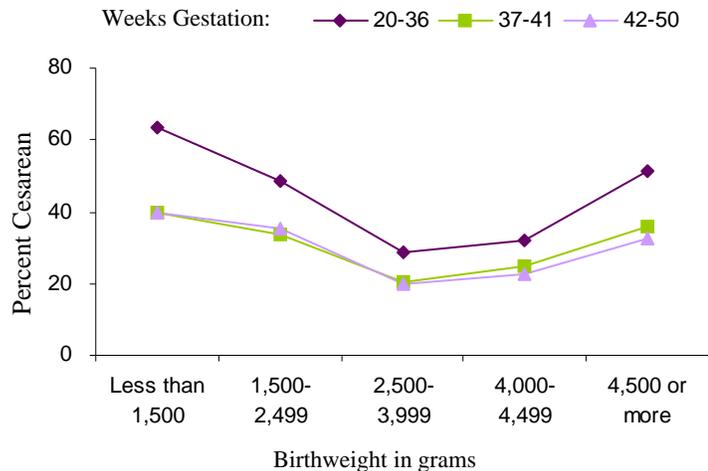
Cesarean rates vary by length of gestation and plurality. The total cesarean rate for term gestation (37-41 weeks) was 21.5. The total cesarean rate was highest for very preterm births (20-27 weeks), at 46.1 percent. Cesarean rates for singleton births were also highest for very preterm births, at 40.1 percent. Twins, triplets, or higher order births were most likely to be delivered preterm and had a preterm cesarean rate of 71.7 percent. The plural births had a relative risk of 3.1 times that of singleton births for being born via cesarean, from 2004 to 2008.

Idaho Resident Cesarean Births Numbers and Rates for Length of Gestation by Plurality Five-Year Aggregate, 2004-2008

Length of Gestation	Total Cesarean Births		Plurality			
			Singleton		Twins, Triplets/+	
	Number	Rate	Number	Rate	Number	Rate
Total	27,832	23.2	25,355	21.8	2,477	66.9
Very preterm (20-27 Weeks)	266	46.1	173	40.1	93	63.7
Preterm (28-36 Weeks)	4,691	38.0	3,121	30.8	1,570	71.7
Term (37-41 Weeks)	21,323	21.5	20,533	20.9	790	60.3
Postterm (42-50 Weeks)	1,538	20.7	1,514	20.5	24	57.1

Note: Rates will not sum to 100 due to different denominators used to calculate rates.

Idaho Resident Cesarean Births Length of Gestation by Birthweight Five-Year Aggregate, 2004-2008



Birthweight

Birthweight is closely related to the risk of a cesarean delivery, and newborns with the lowest and highest birthweight are the most likely to be delivered by cesarean. The cesarean rate for very low birthweight infants (less than 1,500 grams or 3 pounds 4 ounces) was 59.6 percent. The rate was 21.2 percent for birthweight of 2,500-3,999 grams (5 pounds 9 ounces to 8 pounds 13 ounces), and 36.0 percent for babies weighing 4,500 grams (9 pounds 15 ounces) or more. This same pattern of high cesarean rates at each end of the birthweight distribution was evident for all periods of gestation. The lowest cesarean rate was for babies weighing 2,500-3,999 grams with gestational ages of 42 weeks or more at 19.9 percent.

Diabetes

Diabetes is associated with a very high risk of cesarean delivery, and babies of diabetic mothers tend to be large for their gestational age.² Diabetes can influence length of gestation for cesarean deliveries. Women who had diabetes (prepregnancy and gestational) were at 1.6 times the risk of delivering their baby via cesarean (36.7 percent), compared with women who did not have diabetes (22.6 percent), (based on Idaho resident live births from 2004 to 2008).

Hypertension

Idaho resident mothers with hypertension, either prepregnancy (chronic) or gestational, had a total cesarean rate of 36.2 percent from 2004 to 2008. Hypertension during pregnancy may lead to pregnancy-induced hypertension (PIH), preeclampsia (a form of toxemia of pregnancy, characterized by hypertension, fluid retention, and albuminuria (protein in the urine), sometimes progressing to eclampsia) or eclampsia (a form of toxemia of pregnancy, characterized by hypertension, albuminuria, and convulsions).² On the Idaho birth certificate, preeclampsia and eclampsia are included in gestational hypertension. From 2004 to 2008, the cesarean rate for Idaho mother's with gestational hypertension was 35.1 percent, compared with 44.2 percent for mothers with prepregnancy hypertension and 22.3 percent for mothers without hypertension (prepregnancy or gestational).

Notes:

1. Menacker F. Recent trends in cesarean delivery in the U.S., NCHS Data Brief, No. 35. National Center for Health Statistics, 2010.
2. Menacker F. Trends in cesarean rates for first births and repeat cesarean rates for low-risk women: United States, 1990-2003. National Vital Statistics Reports; Vol. 54, No. 4.
3. Taffel SM. Cesarean Delivery in the United States, 1990. National Center for Health Statistics. Vital Health Stat 21 (51). 1994.

Total cesarean rate: the number of all live births that were delivered by cesarean section per 100 live births; primary cesarean rate: the number of first cesarean births to the total number of births to women who have not had a previous cesarean; and repeat cesarean rate: the number of repeat cesarean births to the total number of women with a previous cesarean.

Limitations: The birth certificate may identify cesarean deliveries but it does not collect all the information on why a cesarean was done. The method of delivery reported on the birth certificate relates only to the final method of delivery, which may differ from the method initially chosen by the mother or her health care provider.