Low Birthweight Infants

DEFINITION

Low birthweight infants is the percentage of infants born weighing less than 2,500 grams (5 pounds, 8 ounces). The data are reported by place of mother's residence, not place of infant's birth.

SIGNIFICANCE

An infant's birthweight is a key indicator of newborn health. Infants born weighing less than 5 pounds, 8 ounces are at greater risk for physical and developmental problems than infants of normal weights.[1] Some important social and demographic factors that influence infant birthweight are maternal poverty, smoking, prenatal nutrition, and level of educational attainment.[2]

Low birthweight is often a result of a premature birth but can also occur after a full-term pregnancy. In 2006 in the U.S., 43% of all preterm infants (less than 37 weeks gestation) were born with low birthweight, while 3.2% of full-term infants (37 to 41 weeks gestation) were born with low birthweight.[3]

Cigarette smoking during pregnancy is the single most important known cause of low birthweight, with smokers nearly twice as likely to deliver a low birthweight baby as non-smokers.[4] Between 2004 and 2008 in Rhode Island, 10.4% of infants were born to mothers who smoked during their pregnancy.[5]

Children born at low birthweight face greater risks of long-term illness, long-term disability and death than infants of normal birthweight. Children born at very low birthweight (less than 1,500 grams or 3 pounds, 4 ounces) are nearly 100 times more likely to die within the first year of life than infants of normal birthweight. Those who survive are at significantly higher risk of severe problems, including physical and visual difficulties, developmental delays, and cognitive impairments.[6]

Nationally in 2007, 8.2% of infants were born low birth weight. The 2007 national rate of low birthweight is 17% higher than the 1990 national rate (7.0%). Rhode Island's low birthweight rate increased from 6.2% in 1990 to 8.0% in 2007, a 29% increase.[7,8]

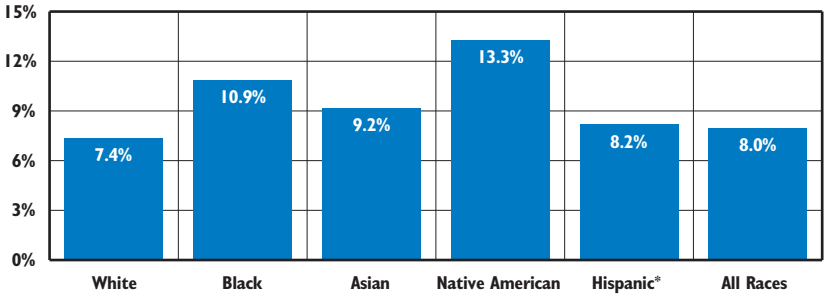
Low Birthweight Infants

	1990	2007
RI	6.2%	8.0%
US	7.0%	8.2%
National Rank*		*21st*
New England Rank**		*5th*

**1st is best; 50th is worst*
***1st is best; 6th is worst*

Sources: 1990 data: The Annie E. Casey Foundation, KIDS COUNT Data Center, datacenter.kidscount.org. 2007 data: Hamilton, B.E., Martin, J.A., & Ventura, S.J. (2009). Births: Preliminary data for 2007. *National Vital Statistics Reports, 57*(12). Hyattsville, MD: Centers for Disease Control and Prevention. Data for 2007 are provisional.

Low Birthweight Infants by Race/Ethnicity, Rhode Island, 2004-2008



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2004-2008. Data for 2008 are provisional. *Hispanic infants can be of any race.

◆ **Low birthweight babies are at greater risk for long-term cognitive problems and poor school performance, and are substantially less likely to complete high school than their peers.[9]**

◆ **Nationally, the percentage of low birthweight infants has been increasing over the past two decades. Racial and ethnic disparities still remain.[10] In Rhode Island between 2004 and 2008, 13.3% of Native American infants, 10.9% of Black infants, 9.2% of Asian infants, and 8.2% of Hispanic infants were born with low birthweight, compared to 7.4% of White infants.[11]**

◆ **In both Rhode Island and the U.S., the rate of low birthweight infant births is higher for women under the age of 20 than for older women and is particularly high for mothers who give birth when they are under age 15.[12,13] Between 2004 and 2008 in Rhode Island, the percentage of low birthweight infants born to mothers under the age of 20 was 9.9%, compared to 7.8% for mothers age 20 and older.[14]**

◆ **In Rhode Island between 2004 and 2008, 1.6% (969) of all live births were born at very low birthweight (less than 1,500 grams).[15]**

Table 20.

Low Birthweight Infants, Rhode Island, 2004-2008

CITY/TOWN	# BIRTHS	# LOW BIRTHWEIGHT	% LOW BIRTHWEIGHT
Barrington	667	28	4.2%
Bristol	921	50	5.4%
Burrillville	754	55	7.3%
Central Falls	2,021	139	6.9%
Charlestown	370	25	NA
Coventry	1,683	133	7.9%
Cranston	4,325	333	7.7%
Cumberland	1,784	116	6.5%
East Greenwich	517	39	7.5%
East Providence	2,606	232	8.9%
Exeter	261	25	NA
Foster	233	16	NA
Glocester	398	29	NA
Hopkinton	458	29	NA
Jamestown	187	11	NA
Johnston	1,390	89	6.4%
Lincoln	909	64	7.0%
Little Compton	141	7	NA
Middletown	984	62	6.3%
Narragansett	492	37	NA
New Shoreham	49	4	NA
Newport	1,516	121	8.0%
North Kingstown	1,272	78	6.1%
North Providence	1,615	124	7.7%
North Smithfield	439	31	NA
Pawtucket	5,668	484	8.5%
Portsmouth	810	52	6.4%
Providence	14,774	1,394	9.4%
Richmond	460	33	NA
Scituate	417	23	NA
Smithfield	730	40	5.5%
South Kingstown	1,161	78	6.7%
Tiverton	625	40	6.4%
Warren	527	30	5.7%
Warwick	4,193	329	7.8%
West Greenwich	245	13	NA
West Warwick	1,989	140	7.0%
Westerly	1,340	103	7.7%
Woonsocket	3,304	330	10.0%
Unknown	*5*	*1*	*NA*
Core Cities	*29,272*	*2,608*	*8.9%*
Remainder of State	*32,963*	*2,358*	*7.2%*
Rhode Island	*62,240*	*4,967*	*8.0%*

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2004-2008. Data for 2008 are provisional.

The denominator is the total number of live births to Rhode Island residents between 2004 and 2008.

Core cities are Central Falls, Newport, Pawtucket, Providence, West Warwick and Woonsocket.

NA: Percentages were not calculated for cities and towns with less than 500 births over the five-year period, as percentages for small denominators are statistically unreliable.

References

[1] *2009 KIDS COUNT data book: State profiles of child well-being.* (2009). Baltimore, MD: The Annie E. Casey Foundation.

[2,4] Shore, R. & Shore, B. (2009). *KIDS COUNT indicator brief: Preventing low birthweight.* Baltimore, MD: The Annie E. Casey Foundation.

[3,12] Martin, J. A., Hamilton, B. E., Sutton, P. D., Ventura, S. J., Menacker, F., Kirmeyer, S. & Matthews, T.J. (2009). Births: Final data for 2006. *National Vital Statistics Reports, 57*(7). Hyattsville, MD: Centers for Disease Control and Prevention.

[5,11,13,14,15] Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2004-2008. Data for 2008 are provisional.

[6,7] U.S. Department of Health and Human Services. (2009). *Child health USA 2008-2009 data book.* Rockville, MD: U.S. Department of Health and Human Services, Maternal and Child Health Bureau.

[8] The Annie E. Casey Foundation, KIDS COUNT Data Center. (n.d.) *Low-birthweight babies (percent).* 1990. Retrieved on January 28, 2010 from www.datacenter.kidscount.org

[9] Shore, R. (2005). *KIDS COUNT indicator brief: Preventing low birth weight.* Baltimore, MD: The Annie E. Casey Foundation.

[10] Hamilton, B.E., Martin, J.A., & Ventura, S.J. (2009). Births: Preliminary data for 2007. *National Vital Statistics Reports, 57*(12). Hyattsville, MD: Centers for Disease Control and Prevention.