

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. Factors that influence infant birthweight include maternal smoking, poverty, periodontal health, level of educational attainment, violence, stress, prenatal nutrition, and environmental hazards.^{1,2,3}

Low birthweight often is a result of a premature birth but also can occur after a full-term pregnancy. In 2014 in the U.S., 57.9% of all preterm infants (under 37 weeks gestation) were born at low birthweight, while 2.7% of full-term infants (37 to 41 weeks gestation) were born at low birthweight.⁴

Cigarette smoking during pregnancy is a leading cause of low birthweight.^{5,6} In Rhode Island, 7.6% of babies born between 2010 and 2014 had mothers who smoked during their pregnancy. During that time, Rhode Island smokers (12.3%) were nearly twice as likely to deliver a low birthweight infant as women who did not smoke (6.9%).⁷

Children born at low birthweight face greater risks of physical and developmental health problems and death than infants of normal birthweight. Children born at very low birthweight (less than 1,500 grams or 3 pounds, 4 ounces) are more than 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 sensory difficulties, developmental delays, and cognitive impairments. Low birthweight babies are also at greater risk for long-term cognitive problems and school difficulties, and are less likely to complete high school than their peers.^{8,9,10}

In the U.S. in 2014, 8.0% of infants were born at low birthweight, which was a 14% increase from 7.0% in 1990. Rhode Island's low birthweight rate increased from 6.2% in 1990 to 7.1% in 2014, a 15% increase.^{11,12} The *Healthy People 2020* national target is 7.8%.¹³

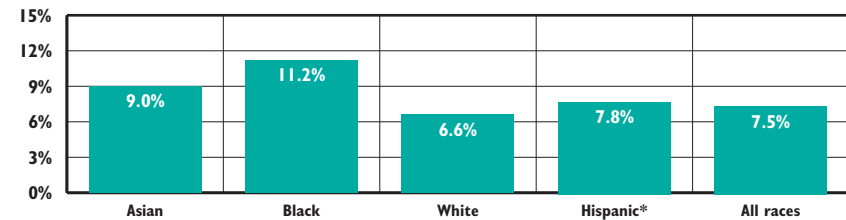
Low Birthweight Infants		
	2004	2014
RI	8.0%	7.1%
US	8.1%	8.0%
National Rank*	15th	
New England Rank**	2nd	

*1st is best; 50th is worst

**1st is best; 6th is worst

Source: For 2014: Hamilton, B. E., et al. (2015). Births: Final data for 2014. *National Vital Statistics Reports*, 64(12), 1-63. For 2004: Martin, J. A., et al. (2006). Births: Final data for 2004. *National Vital Statistics Reports*, 55(1), 1-102.

Low Birthweight Infants by Race/Ethnicity, Rhode Island, 2010-2014



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2010-2014. *Hispanic infants can be of any race. Data for births in 2014 are provisional.

- ◆ There are racial and ethnic disparities in rates of low birthweight.¹⁴ In Rhode Island between 2010 and 2014, 11.2% of Black infants, 9.0% of Asian infants, and 7.8% of Hispanic infants were born at low birthweight, compared to 6.6% of White infants.¹⁵
- ◆ Factors that persist throughout a woman's life, such as increased stress, insufficient health care, and/or lack of social supports, have been shown to increase the likelihood of delivering a low birthweight baby, particularly among Black women and other racial and ethnic minorities.^{16,17}
- ◆ Between 2010 and 2014 in Rhode Island, 9.1% of births among women under age 20 were low birthweight compared to 7.4% of those over age 20; 8.7% of infants born to women living in the four core cities were low birthweight compared to 6.6% in the remainder of the state; and 8.2% of infants born to women with a high school degree or less were low birthweight, compared to 6.3% of those born to women with higher education levels.¹⁸
- ◆ Among women with private health insurance coverage in Rhode Island between 2010 and 2014, 6.6% of births were low birthweight, compared with 8.2% of those with public insurance (RIte Care or Medicaid) and 14.1% of births to women with no insurance.¹⁹
- ◆ Rhode Island women who deliver a low birthweight infant are more likely to report smoking while pregnant, delayed or no prenatal care, a depression diagnosis, and intimate partner violence than those with a normal weight baby, as well as health issues during their pregnancy such as high blood pressure, hypertension, preeclampsia, or toxemia.²⁰
- ◆ Between 2010 and 2014 in Rhode Island, 1.5% of all live births were born at very low birthweight (less than 1,500 grams).²¹

Table 20. Low Birthweight Infants, Rhode Island, 2010-2014

CITY/TOWN	# BIRTHS	# LOW BIRTHWEIGHT	% LOW BIRTHWEIGHT
Barrington	503	23	4.6%
Bristol	778	46	5.9%
Burrillville	632	47	7.4%
Central Falls	1,619	124	7.7%
Charlestown	260	12	NA
Coventry	1,417	96	6.8%
Cranston	3,887	305	7.8%
Cumberland	1,613	91	5.6%
East Greenwich	552	44	8.0%
East Providence	2,453	149	6.1%
Exeter	256	11	NA
Foster	163	8	NA
Glocester	342	19	NA
Hopkinton	357	22	NA
Jamestown	117	7	NA
Johnston	1,282	84	6.6%
Lincoln	901	67	7.4%
Little Compton	79	3	NA
Middletown	834	51	6.1%
Narragansett	373	22	NA
New Shoreham	56	3	NA
Newport	1,295	88	6.8%
North Kingstown	1,020	57	5.6%
North Providence	1,582	123	7.8%
North Smithfield	412	38	NA
Pawtucket	4,941	420	8.5%
Portsmouth	573	31	5.4%
Providence	12,890	1160	9.0%
Richmond	348	18	NA
Scituate	331	16	NA
Smithfield	593	32	5.4%
South Kingstown	897	53	5.9%
Tiverton	528	31	5.9%
Warren	458	39	NA
Warwick	3,831	249	6.5%
West Greenwich	241	14	NA
West Warwick	1,789	141	7.9%
Westerly	959	54	5.6%
Woonsocket	2,946	254	8.6%
Unknown	41	1	NA
Four Core Cities	22,396	1,958	8.7%
Remainder of State	31,712	2,094	6.6%
Rhode Island	54,149	4,053	7.5%

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2010-2014. Data for births in 2014 are provisional and do not include births among Rhode Island residents that occurred out-of-state.

The denominator is the total number of live births to Rhode Island residents from 2010-2014.

NA: Rates should not be calculated due to small numbers and the lack of statistical reliability.

Core cities are Central Falls, Pawtucket, Providence, and Woonsocket.

References

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- ¹⁰ *Child health USA 2014*. (2015). Rockville, MD: U.S. Department of Health and Human Services, Maternal and Child Health Bureau.
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