

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 and death than babies of normal weights. Factors that influence infant birthweight include maternal smoking, poverty, level of educational attainment, infections, exposure to violence, stress, prenatal nutrition, and environmental hazards.^{1,2,3}

Low birthweight is often a result of a premature birth but can also occur after a full-term pregnancy. Fetal growth restriction results in low birthweight babies and may be caused by infection, birth defects, or simply because the baby's parents are small.⁴

Smoking during pregnancy increases risk of low birthweight.^{5,6} In Rhode Island between 2018 and 2022, 4.0% of births were to mothers who smoked during their pregnancy. During that time, Rhode Island smokers (14.3%) were more likely to deliver a low birthweight infant compared to women who did not smoke (7.4%).⁷

Children born at very low birthweight (less than 3.3 pounds or 1,500 grams) are almost 100 times more likely to die within the first year of life than infants of normal birthweight. Those who survive are at higher risk of long-term health issues, including heart disease, diabetes, obesity, and intellectual and developmental disabilities. Low birthweight babies are also at greater risk for long-term learning difficulties and mental health issues than their peers.^{8,9,10}

In the U.S. in 2021, 8.5% of infants were born at low birthweight, which is a slight increase from 8.1% in 2011. In Rhode Island in 2021, 7.9% of infants were born at low birthweight.^{11,12} The low birthweight related infant mortality rate decreased between 2020 and 2021 but still remains a top cause of infant mortality in the U.S.¹³

Low Birthweight Infants		
	2011	2021
RI	7.4%	7.9%
US	8.1%	8.5%
National Rank*		21st
New England Rank**		5th

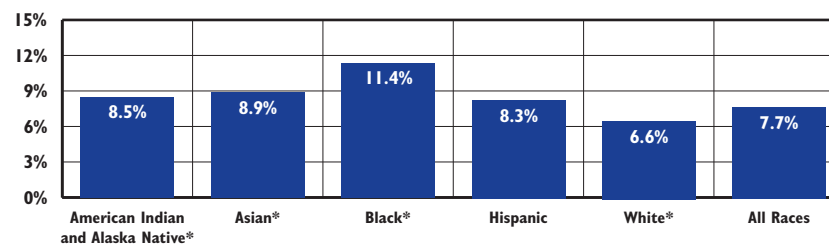
*1st is best; 50th is worst

**1st is best; 6th is worst

Source: For 2011: Martin, J. A., et al. (2013). Births: Final data for 2011. *National Vital Statistics Reports*, 62(1), 1-70. For 2021: Martin, J. A., Hamilton, B. E., Osterman, M. J. K., Driscoll, A. K., & Drake, P. (2023). Births: Final data for 2021. *National Vital Statistics Reports*, 72(1), 1-43.



Low Birthweight Infants by Race/Ethnicity, Rhode Island, 2018-2022*



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022. *Race categories are non-Hispanic.

★ In Rhode Island between 2018 and 2022, 8.5% of American Indian and Alaskan Native infants, 8.9% of Asian infants, 11.4% of Black infants, and 8.3% of Hispanic infants, were born at low birthweight, compared to 6.6% of white infants.¹⁴ Nationally, there are racial and ethnic disparities in low birthweight including for Black, Native American, and Native Hawaiian and Other Pacific Islander Infants.¹⁵

★ Factors that persist throughout Women of Color's lives, —such as increased stress, income inequality, insufficient health care, toxic environmental exposures, lack of safe and affordable housing, and/or discrimination — have been shown to increase the likelihood of delivering a low birthweight baby.^{16,17}

★ Between 2018 and 2022 in Rhode Island, 9.7% of births among women under age 20 were low birthweight compared to 7.6% of those over age 20; 8.8% of infants born to women living in the four core cities were low birthweight compared to 7.0% in the remainder of the state; and 8.9% of infants born to women with a high school degree or less were low birthweight, compared to 7.0% of those born to women with higher education levels.¹⁸

★ Rhode Island women who deliver a low birthweight infant are more likely to report smoking while pregnant, feeling unsafe in their neighborhood, delayed or no prenatal care, a depression diagnosis, and domestic violence; as well as health issues during their pregnancy (such as high blood pressure or hypertension) than those with a normal weight baby.^{19,20}

★ Between 2018 and 2022 in Rhode Island, 1.3% of all live births were born at very low birthweight (less than 1,500 grams or 3.3 pounds).²¹

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Table 19. Low Birthweight Infants, Rhode Island, 2018-2022

CITY/TOWN	# BIRTHS	# LOW BIRTHWEIGHT	% LOW BIRTHWEIGHT
Barrington	585	37	6.3
Bristol	673	47	7.0
Burrillville	654	44	6.7
Central Falls	1,505	125	8.3
Charlestown	280	16	5.7 ^
Coventry	1,491	92	6.2
Cranston	3,810	311	8.2
Cumberland	1,740	117	6.7
East Greenwich	614	32	5.2
East Providence	2,229	165	7.4
Exeter	242	13	5.4 ^
Foster	208	17	8.2 ^
Glocester	359	20	5.6 ^
Hopkinton	316	14	4.4 ^
Jamestown	131	10	*
Johnston	1,361	105	7.7
Lincoln	914	55	6.0
Little Compton	77	3	*
Middletown	763	54	7.1
Narragansett	273	22	8.1 ^
New Shoreham	31	2	*
Newport	1,048	70	6.7
North Kingstown	1,094	54	4.9
North Providence	1,605	139	8.7
North Smithfield	481	29	6.0
Pawtucket	4,332	400	9.2
Portsmouth	659	41	6.2
Providence	11,726	1,027	8.8
Richmond	348	15	4.3 ^
Scituate	445	33	7.4
Smithfield	747	41	5.5
South Kingstown	827	51	6.2
Tiverton	550	39	7.1
Warren	405	29	7.2
Warwick	3,528	246	7.0
West Greenwich	249	17	6.8 ^
West Warwick	1,462	124	8.5
Westerly	874	67	7.7
Woonsocket	2,604	230	8.8
Unknown	235	16	*
Four Core Cities	20,167	1,782	8.8
Remainder of State	31,308	2,187	7.0
Rhode Island	51,475	3,969	7.7

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022. Data from January 2024 and future reports with birth counts may change.

The denominator is the total number of live births to Rhode Island residents between 2018 and 2022.

*The data are statistically unreliable and rates are not reported and should not be calculated.

^The data are statistically unstable and rates or percentages should be interpreted with caution.

Unknown: Births were to Rhode Island residents, but specific city/town information was unavailable.

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

References

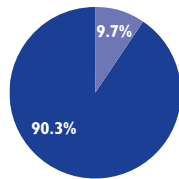
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Low Birthweight by Mother's Insurance Type, Rhode Island, 2018-2022

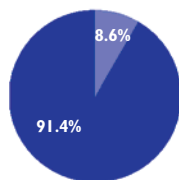
Uninsured

9.7% Low Birthweight
90.3% Normal Birthweight



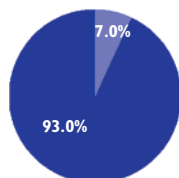
Public Insurance (Rite Care)

8.6% Low Birthweight
91.4% Normal Birthweight



Private Insurance

7.0% Low Birthweight
93.0% Normal Birthweight



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022. Data for births in 2022 are provisional.