

Low Birth Weight Infants

African American mothers were most likely to have a low birth weight baby.

- African Americans had the highest rate of low birth weight infants.
- Richmond mothers were more likely to have low birth weight infants than mothers in the county overall.
- Contra Costa's percentage of low birth weight babies did not meet the Healthy People 2010 objective.

From 2005 to 2007, there were 40,193 live births per year in the county; of these 2,712 (6.7%) were low birth weight. This means that on average 904 low birth weight babies were born to residents of Contra Costa each year. Contra Costa's low birth weight percentage (6.7%) was similar to California's percentage (6.9%) for the same period but did not meet the Healthy People 2010 objective (5.0%).¹

Table 1 ■ Low birth weight by race/ethnicity

Contra Costa County 2005–2007

	Cases	Rate	
White	861	6.0 **	Infants weighing less than 2,500 grams (5 lbs. 8 oz.) are considered low birth weight.
Hispanic	830	5.7 **	
African American	444	12.4 *	
Asian/Pacific Islander (API)	432	7.3	
Total	2,712	6.7	

These are unadjusted crude rates per 100 live births.

Total includes some racial/ethnic groups not shown.

* Significantly higher rate compared to county.

** Significantly lower rate compared to county.

In Contra Costa, the greatest numbers of low birth weight infants were white (861), followed by Hispanic (830). Even though African American women had fewer low birth weight infants (444), they had the highest rate of low birth weight infants (12.4 per 100 live births)—higher compared to the county overall (6.7 per 100 live births), and any other race/ethnicity group listed. The rates of low birth weight among Hispanics (5.7 per 100 live births) and whites (6.0 per 100 live births) were lower than the county overall.

Table 2 ■ Low Birth Weight Births by Selected communities

Contra Costa County 2005–2007

	Cases	Percent	Rate
Richmond	382	14.1%	8.0*
Concord	321	11.8%	5.9
Antioch	315	11.6%	6.6
Pittsburg	239	8.8%	7.2
San Pablo	173	6.4%	7.5
Brentwood	159	5.9%	7.3
Walnut Creek	147	5.4%	7.1
Pleasant Hill	90	3.3%	7.8
Oakley	84	3.1%	6.1
Martinez	79	2.9%	5.4
Bay Point	75	2.8%	6.1
Hercules	60	2.2%	6.8
El Cerrito	40	1.5%	5.0**
Pinole	36	1.3%	6.6
Contra Costa	2,712	100.0%	6.7

These are unadjusted crude rates per 100 live births.

Contra Costa total includes cities and unincorporated areas not shown.

* Significantly higher rate compared to county.

** Significantly lower rate compared to county.

Communities with the greatest number of low birth weight infants were Richmond (382), Concord (321), Antioch (315) and Pittsburg (239).

Richmond had a rate of low birth weight (8.0 per 100 live births) that was significantly higher than the county rate overall (6.7 per 100 live births). El Cerrito had a rate of low birth weight (5.0 per 100 live births) that was significantly lower than the county rate overall.

Table 3 ■ Low birth weight births in selected communities by race/ethnicity

Contra Costa County 2005–2007

	White		Hispanic		African American		API		Total	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Richmond	21	4.0 **	151	6.0	157	14.4 *	31	6.7	382	8.0*
Concord	117	6.0	122	5.0 **	20	12.3 *	49	7.7	321	5.9
Antioch	90	6.8	99	4.9 **	76	11.4 *	38	7.3	315	6.6
Pittsburg	29	6.1	100	5.5	62	12.8 *	35	7.9	239	7.2
San Pablo	12	NA	89	6.0	45	15.2 *	22	7.3	173	7.5
Brentwood	67	6.2	56	7.8	10	NA	18	NA	159	7.3
Walnut Creek	92	7.0	24	8.6	NA	NA	21	5.5	147	7.1
Pleasant Hill	51	7.0	12	NA	NA	NA	23	11.3	90	7.8
Oakley	22	4.0 **	47	7.2	7	NA	NA	NA	84	6.1
Martinez	46	5.2	21	6.6	NA	NA	7	NA	79	5.4
Bay Point	10	NA	42	5.3	9	NA	12	NA	75	6.1
Hercules	11	NA	10	NA	11	NA	27	6.7	60	6.8
El Cerrito	17	NA	NA	NA	NA	NA	15	NA	40	5.0**
Pinole	12	NA	7	NA	11	NA	5	NA	36	6.6
Contra Costa	861	6.0	830	5.7	444	12.4	432	7.3	2,712	6.7

These are unadjusted crude rates per 100 live births.

Contra Costa race/ethnicity totals includes some cities not shown.

Contra Costa and city totals includes some racial/ethnic groups not listed.

* Significantly higher rate compared to county.

** Significantly lower rate compared to county.

The number of low birth weight babies born to African American mothers was highest in Richmond (157), Antioch (76), Pittsburg (62), San Pablo (45) and Concord (20). The rate of low birth weight infants born to African American mothers in San Pablo (15.2 per 100 live births), Richmond (14.4 per 100 live births), Pittsburg (12.8 per 100 live births), Concord (12.3 per 100 live births) and Antioch (11.4 births per 100 live births) was higher than the low birth weight rate for the county and for each of the respective cities overall.

The number of low birth weight babies born to Asian/Pacific Islander mothers was highest in Concord (49), Antioch (38), Pittsburg (35), Richmond (31) and Hercules (27).

The number of low birth weight babies born to Hispanic mothers was highest in Richmond (151), Concord (122), Pittsburg (100), Antioch (99) and San Pablo (89). Although these numbers were high, the low birth weight rates for Hispanics in Antioch (4.9 per 100 live births) and Concord (5.0 per 100 live births) were lower than the county overall.

The number of low birth weight babies born to white mothers was highest in Concord (117), Walnut Creek (92), Antioch (90), Brentwood (67) and Pleasant Hill (51). White mothers in Oakley and Richmond (both 4.0 per 100 live births) had lower rates of low birth weight than the county overall.

What is low birth weight?

Low birth weight is defined as less than 2,500 grams, or approximately 5.5 lbs. Often, low birth weight is further broken down into moderately low birth weight (1,500 to 2,499 grams) and very low birth weight (less than 1,500 grams, or 3.3 lbs.) An infant may be born with a low birth weight due to preterm birth (birth before 37 weeks gestation) or fetal growth restriction (also known as small-for-gestational age).

Why is it important?

Infants who are born low birth weight often face serious health problems as newborns and are at greater risk of dying compared to normal weight infants. Low birth weight infants are also at increased risk of long-term disability and impaired or delayed development. The long-term effects of being born low birth weight include increased risk of having a learning disability, being enrolled in special education classes, having a lower IQ and dropping out of high school.² The risk for many of these problems is greater for very low birth weight babies. Low birth weight may also contribute to chronic health problems in adulthood, such as high blood pressure, type 2 diabetes and heart disease.^{3,4,5} Furthermore, females who are born low birth weight are at increased risk of delivering a low birth weight baby, thereby perpetuating these risks across generations.⁴

Who does it impact the most?

Low birth weight is associated with various medical, socioeconomic, behavioral and environmental risk factors such as smoking, low maternal weight gain or low pre-pregnancy weight, maternal or fetal stress, infections and violence.² Smoking is a significant contributor to low birth weight and accounts for 20% to 30% of all low birth weight births in the United States.⁶

In the United States, there are significant inequities in rates of low birth weight between racial/ethnic groups. Data from 2007 indicate that in the United States, non-Hispanic black women had the highest rates of low birth weight (13.9%), almost two times that of other racial/ethnic groups.⁷ Traditionally, inequities in birth outcomes have only been partially explained by pregnancy-related factors such as smoking, maternal age, education, and quality and frequency of prenatal care. The Life Course Perspective suggests that these inequities result from a complex interplay of biological, behavioral, psychological and social protective and risk factors at play throughout women's lives.⁸ One example supporting this model is recent research that has shown chronic psychosocial stress, such as racial discrimination, is associated with low birth weight.^{9,10}

What can we do about it?

An important component of reducing low birth weight and other birth outcomes is reducing inequities between racial/ethnic groups. Historically, efforts to address inequities in birth outcomes, such as low birth weight, have focused on increasing access to prenatal care, however this has not reduced these inequities.¹¹ The Life Course Perspective suggests that birth outcomes are determined by the entire life course of the woman prior to pregnancy, not just the nine months of pregnancy. As such, efforts to improve birth outcomes should focus on factors at play throughout the life span. The Life Course Perspective proposes that public health efforts to reduce inequities in birth outcomes focus on:¹¹

- Access to quality health care across the life span, including before, during and between pregnancies.
- Enhancing family and community systems that can have broad impacts on families and communities (e.g., father involvement, integration of family support services, reproductive social capital, community building).
- Addressing social and economic inequities that impact health (e.g., education, poverty, support for working mothers, racism).

Data Sources: Low Birth Weight Infants

TABLES

Tables 1, 2, 3: Birth data from the California Department of Public Health (CDPH), Birth Statistical Master Files, 2005-2007. Any analyses or interpretations of the data were reached by the Community Health Assessment, Planning and Evaluation (CHAPE) Unit of Contra Costa Health Services and not the CDPH. Data presented for Hispanics include Hispanic residents of any race. Data presented for whites, Asians/Pacific Islanders and African Americans include non-Hispanic residents. Not all race/ethnicities shown but all are included in totals for the county and for each city. These tables include total low birth weight births to females who are residents of Contra Costa and average crude low birth weight rates for 2005 through 2007.

Crude low birth weight rate is the number of infants weighing less than 2,500 grams divided by the total number of live births multiplied by 100.

TEXT

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