

Birth Weight and Birth Weight for Gestational Age, Waterloo Region, 2013, 2014 & 2015

Table 1. Number and proportion of live births, by birth weight category, Waterloo Region, 2013, 2014, 2015

Place of Residence	Birth weight category	Birth weight in grams	Number of live births			Proportion of live births		
			2013	2014	2015	2013	2014	2015
Waterloo Region	Low	Less than 2,500 g	343	333	363	5.9	5.5	6.1
	Extremely low	Less than 1,000 g	25	35	23	0.4	0.6	0.4
	Very low	1,000 to 1,499 g	26	25	30	0.4	0.4	0.5
	Low	1,500 to 2,499 g	292	273	310	5.0	4.5	5.2
	Healthy	2,500 to 3,999 g	4,761	4,899	4,917	81.3	81.4	82.6
	High	4,000 g or more	753	785	676	12.9	13.0	11.3

Definition:

Birth weight: Number and rate of live births by birth weight category. Low birth weight rate is defined as the number of infants weighing less than 2,500 grams, per 100 live births.

Table 2. Number and proportion of live births, by birth weight category, Ontario, 2013, 2014, 2015

Place of Residence	Birth weight category	Birth weight in grams	Number of live births			Proportion of live births		
			2013	2014	2015	2013	2014	2015
Ontario	Low	Less than 2,500 g	9,020	8,740	8,625	6.5	6.3	6.3
	Extremely low	Less than 1,000 g	657	635	501	0.5	0.5	0.4
	Very low	1,000 to 1,499 g	794	695	642	0.6	0.5	0.5
	Low	1,500 to 2,499 g	7,569	7,410	7,482	5.4	5.4	5.4
	Healthy	2,500 to 3,999 g	115,236	114,769	114,473	82.8	83.1	83.3
	High	4,000 g or more	14,854	14,658	14,243	10.7	10.6	10.4

Definition (continued):

Birth weight categories:

- Extremely low - less than 1,000 grams
- Very low - 1,000 - 1,499 grams
- Low - 1,500 to 2,499 grams
- Low (all) - less than 2,500 grams
- Healthy - 2,500 - 3,999 grams
- High - 4,000 grams or more

Table 3. Number and proportion of singleton infants, by birth weight for gestational age, Waterloo Region and Ontario, 2013, 2014, 2015

Place of Residence	Birth weight for gestational age category	Percentile range	Number of births			Proportion of births		
			2013	2014	2015	2013	2014	2015
Waterloo Region	Small for gestational age	Less than 10th percentile	471	479	495	8.4	8.2	8.6
	Average for gestational age	10 th to 90 th percentile	4,501	4,696	4,666	80.0	80.7	81.2
	Large for gestational age	Greater than 90th percentile	657	646	586	11.7	11.1	10.2
Place of Residence	Birth weight for gestational age category	Percentile range	Number of births			Proportion of births		
			2013	2014	2015	2013	2014	2015
Ontario	Small for gestational age	Less than 10th percentile	12,451	12,516	12,504	9.3	9.4	9.4
	Average for gestational age	10 th to 90 th percentile	107,842	107,483	107,034	80.6	80.6	80.9
	Large for gestational age	Greater than 90th percentile	13,566	13,322	12,790	10.1	10.0	9.7

Definition (continued):

Birth weight for gestational age is a measure of healthy fetal growth and development and is described by comparing an infant's position to growth charts after birth.

An infant is considered to be small for gestational age when the birth weight falls below the 10th percentile. This designation means that 90 per cent of infants born at the same gestational age weigh more than an infant whose weight falls below the 10th percentile. Conversely, an infant is considered to be large for gestational age when the birth weight is above the 90th percentile. Alternative cut-offs for small and large for gestational age are sometimes used, including the 5th and 3rd percentiles, and the 95th and 97th percentiles.

Table 4. Number and rate of low birth weight infants (weighing less than 2,500 grams), by maternal age, municipality, length of gestation, type of birth and maternal smoking status during pregnancy, Waterloo Region, 2015

	Measure	Number	Rate
Maternal age group	19 years or younger	9	6.3
	20 to 24 years	49	6.9
	25 to 29 years	118	6.5
	30 to 34 years	108	5.0
	35 to 39 years	65	6.9
	40 years or older	14	7.6
Municipality	Cambridge	107	7.4
	Kitchener	187	6.9
	Waterloo	38	4.1
	North Dumfries	6	6.8
	Wellesley	NR	NR
	Wilmot	7	3.0
	Woolwich	13	4.7
Length of gestation	Preterm (less than 37 weeks)	228	55.2
	Term (37 to 41 weeks)	135	2.5
	Postterm (42 weeks or more)	0	0.0
Type of birth	Singleton	259	4.5
	Multiple birth	104	50.7
Maternal smoking during pregnancy	Yes	45	9.5
	No	309	5.7

While low birth weight is still an important birth outcome measure, birth weight is best considered within the context of gestational age despite potential challenges with establishing gestational age; that is, constitutionally small babies are not all undersized when important associations are taken into account.

Low birth weight may be associated with premature birth or slow growth of the fetus or both, but each issue has different public health implications. Low birth weight was a common proxy measure of infant morbidity and mortality, and is still used for cross-country comparisons.

Limitations and Notes (continued):

See: Kramer MS, Platt RW, Wen SW, Joseph KS, Allen A, Abrahamowicz M, et al. A new and improved population-based Canadian reference for birth weight for gestational age. *Pediatrics* 2001; Aug;108(2):E35.

Table 5. Number and proportion of infants that were small for gestational age (less than the 10th percentile), by maternal age, municipality, and maternal smoking status during pregnancy, Waterloo Region, 2015

	Measure	Number	Rate
Maternal age group	19 years or younger	14	9.8
	20 to 24 years	75	10.8
	25 to 29 years	132	7.6
	30 to 34 years	177	8.4
	35 to 39 years	80	8.8
	40 years or older	17	9.4
Municipality	Cambridge	125	9.0
	Kitchener	245	9.3
	Waterloo	68	7.6
	North Dumfries	NR	NR
	Wellesley	NR	NR
	Wilmot	17	7.5
	Woolwich	20	7.6
Maternal smoking during pregnancy	Yes	71	15.4
	No	420	8.0

Table 6. Number and proportion of infants that were large for gestational age (greater than the 90th percentile), by maternal age, municipality, and maternal smoking status during pregnancy, Waterloo Region, 2015

	Measure	Number	Rate
Maternal age group	19 years or younger	11	7.7
	20 to 24 years	53	7.6
	25 to 29 years	175	10.1
	30 to 34 years	219	10.5
	35 to 39 years	109	12.0
	40 years or older	19	10.6
Municipality	Cambridge	148	10.6
	Kitchener	240	9.1
	Waterloo	103	11.5
	North Dumfries	9	10.5
	Wellesley	16	12.4
	Wilmot	30	13.3
	Woolwich	32	12.1
Maternal smoking during pregnancy	Yes	22	4.8
	No	564	10.7

Limitations and Notes (continued):

Data on birth weight for gestational age can only be calculated for live-born singleton infants whose birth weight and gestational age can be compared to the Kramer reference charts, i.e., only singleton male or female infants born between 22 to 43 weeks' gestation.

Birth weight for gestational age percentile cut-offs may misclassify newborns of certain immigrant mothers. Newborns of mothers originating from non-European/Western nations tend to be smaller at birth. However, ethnic-specific birth weight curves are currently not available for Ontario. As a result, regions with significant immigrant populations may observe higher small for gestational age rates and lower large for gestational age rates than otherwise expected.

Gestational age data can be affected by recall errors, post-conception bleeding, irregular or long/short menstrual cycles, delayed ovulation, pregnant women or partner's desires to indicate a later conception, and unrecognized fetal loss.

Limitations and Notes (continued):

The 'NR' denotes numbers and rates based on numbers between 1 and 5 that cannot be reported and have been suppressed. Numbers and rates based on numbers that equal 0 or 6 and greater are reportable. Missing values were excluded from the denominator if they represented less than 5% of cases.

The Census subdivisions/Municipalities of Cambridge, Kitchener, North Dumfries, Waterloo, Wellesley, Wilmot and Woolwich used are based on postal code and the latest PCCF from Statistics Canada.

For Waterloo Region, approximately 94.6% of hospitals and 95.1% of Midwifery Practice Groups have acknowledged that their monthly data entry has been verified and is complete for calendar year 2015. Information on pregnancies and births can be added or updated to the BORN Information System at any time. The information summarized in this report represents what was available in the BORN Information System at the date of extraction. These data are provisional and subject to change.

Source:

BORN Information System (2013, 2014, 2015), Extracted: July 27, 2016; BORN Custom Request (2013, 2014, 2015), Extracted September 15, 2016.

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