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Prevalence of High Weight-for-recumbent Length Among Infants and Toddlers From Birth to 24 Months of Age: United States, 1971–1974 Through 2013–2014

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Excess weight in infants is often defined using weight-for-recumbent length. The Centers for Disease Control and Prevention (CDC) recommends using the World Health Organization (WHO) growth standards to monitor growth in children under age 2 years in the United States. The recommended definition of excess weight in infants is +2 *z* scores (corresponding to the 97.7th percentile) on the WHO sex-specific weight-for-recumbent length growth standards. Some analyses have used the 95th percentile on the CDC sex-specific weight-for-recumbent length growth charts as a cut point for excess weight in infants. Consequently, this report presents estimates of excess weight using both definitions.

Based on the WHO growth standards, results from the 2013–2014 National Health and Nutrition Examination Survey (NHANES), using measured recumbent lengths and weights, indicate that an estimated 8% of infants and children under age 24 months have high weight-for-recumbent length. Based on the CDC growth charts, just over 9% of infants and children under 24 months have high weight-for-recumbent length.

Table 1 shows the unweighted sample sizes for infants and toddlers with measured recumbent length and weight by age for each survey cycle. Because data collection began at different ages in different surveys, Table 2 shows the prevalence of high weight-for-recumbent length from birth to 24 months, from 6 to 24 months, and from 12 to 24 months by survey years. The 1976–1980 NHANES included individuals only as young as 6 months, while the 1988–1994 NHANES included individuals aged 2 months and over. Beginning in 1999–2000, NHANES included individuals from birth. Therefore, trends from 1976–1980 to the present can only be reported for the 6–24 month age group.

NHANES surveys use a stratified, multistage, probability sample of the civilian noninstitutionalized U.S. population. A household interview and a physical examination are conducted for each survey participant. During the physical examination, conducted in mobile examination centers, recumbent length and weight are measured as part of a more comprehensive set of body measurements. These measurements are taken by trained health technicians, using standardized measuring procedures and equipment. Observations for persons missing a valid recumbent length or weight measurement were not included in the data analysis.

For additional information on NHANES methods, visit:
http://www.cdc.gov/nchs/nhanes/survey_methods.htm.

Reference

- Grummer-Strawn LM, Reinold C, Krebs NF, Centers for Disease Control and Prevention (CDC). Use of World Health Organization and CDC growth charts for children aged 0–59 months in the United States. MMWR Recomm Rep 59(RR–9):1–15. 2010. Available from: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5909a1.htm.

This *Health E-Stat* supersedes the earlier version below:

- Prevalence of Overweight, Infants and Children Less Than 2 Years of Age: United States, 2003–2004. Available from: http://www.cdc.gov/nchs/data/hestat/overweight/overweight_child_under02.htm.

Table 1. Unweighted sample size for infants and toddlers from birth to 24 months with measured weight and recumbent length, by age: United States, 1971–1974 through 2013–2014

Survey period	Age (months)		
	Birth to under 24	6–24	12–24
	Sample size		
1971–1974	---	---	553
1976–1980	---	1,014	719
1988–1994	---	2,442	1,287
1999–2000	671	466	256
2001–2002	667	488	256
2003–2004	766	574	332
2005–2006	822	602	345
2007–2008	719	524	295
2009–2010	703	521	317
2011–2012	584	403	219
2013–2014	609	450	240

--- Data not available.

SOURCE: NCHS, National Health and Nutrition Examination Survey.

Table 2. High weight-for-recumbent length among infants and toddlers from birth to 24 months, by age: United States, 1971–1974 through 2013–2014

Survey period	WHO growth standards[1]						CDC growth charts[2]					
	Birth to under 24 months		6–24 months		12–24 months		Birth to under 24 months		6–24 months		12–24 months	
	Percent (standard error)											
1971–1974	---	---	---	---	6.5	(1.2)	---	---	---	---	6.7	(1.3)
1976–1980	---	---	6.3	(1.0)	6.8	(1.1)	---	---	7.1	(1.0)	7.2	(1.2)
1988–1994	---	---	7.8	(0.7)	8.0	(1.0)	---	---	8.8	(0.7)	8.5	(1.1)
1999–2000	9.2	(1.3)	9.8	(1.7)	7.9	(2.1)	10.4	(1.6)	10.5	(1.6)	7.8	(2.1)
2001–2002	7.8	(1.1)	7.7	(1.3)	6.3	(1.3)	7.9	(1.1)	7.8	(1.3)	6.4	(1.3)
2003–2004	8.5	(1.2)	9.0	(1.7)	9.0	(2.1)	9.5	(1.3)	10.1	(1.6)	9.8	(2.1)
2005–2006	7.1	(1.0)	7.1	(1.4)	6.7	(1.7)	8.2	(1.1)	8.1	(1.5)	6.9	(1.7)
2007–2008	8.8	(0.9)	9.7	(1.1)	9.7	(1.8)	9.5	(1.1)	10.4	(1.2)	10.1	(1.2)
2009–2010	8.6	(1.3)	9.6	(1.7)	9.4	(2.1)	9.7	(1.1)	10.7	(1.6)	9.6	(2.0)
2011–2012	7.1	(1.3)	8.2	(1.6)	7.1	(2.2)	8.1	(1.2)	8.2	(1.6)	6.3	(2.0)
2013–2014	8.1	(1.2)	8.4	(1.5)	7.9	(1.8)	9.1	(1.4)	9.5	(1.7)	8.3	(1.7)

--- Data not available.

[1]High weight-for-recumbent length is greater than or equal to the 97.7th percentile (+2 standard deviations) of the sex-specific weight-for-recumbent length WHO growth standards (available from: http://www.cdc.gov/growthcharts/who_charts.htm).

[2]High weight-for-recumbent length is greater than or equal to the 95th percentile of the sex-specific weight-for-recumbent length 2000 CDC growth charts (available from: http://www.cdc.gov/growthcharts/cdc_charts.htm).

NOTE: WHO is World Health Organization; CDC is Centers for Disease Control and Prevention.

SOURCE: NCHS, National Health and Nutrition Examination Survey.