

CHILDHOOD OVERWEIGHT

A FACT SHEET FOR PROFESSIONALS

UNIVERSITY OF CALIFORNIA
BERKELEY

COOPERATIVE EXTENSION
DEPARTMENT OF NUTRITIONAL SCIENCES

Childhood Overweight Definitions

- Children at or above the 95th percentile of body mass index (BMI) by sex and age are considered overweight. Many call this group obese, although technically the term obesity refers to an excess in body fat relative to lean muscle mass. BMI measures how heavy the body is. There is a good, but not perfect, correlation between body fat and body heaviness.
- Children between the 85th and 94th percentile of BMI are considered at risk of being overweight.
- Body mass index (BMI) is weight (in kilograms) divided by height squared (in meters).

Consequences of Childhood Overweight

- Correlation between childhood and adult overweight
 - Fifty percent of overweight children/teens remain overweight as adults (1).
 - Approximately 26-41% of overweight preschool children will become overweight adults (2).
 - Obesity is associated with the development of diabetes, heart disease, hypertension and some cancers.
- Medical complications of extreme overweight in children (3):
 - Increased stress on weight bearing joints
 - Increased blood pressure
 - Risk of diabetes mellitus
- Psychological consequences of overweight:
 - Children are at increased risk for discrimination, low self-esteem and poor body image.
 - Adolescent girls are less likely to be accepted into college, less likely to be married, and less likely to be economically well off in adulthood (4).

Growing Prevalence of Childhood Overweight Nationally(5)

- There has been a substantial increase in the number of children who are overweight in the United States over the last 30 years, from 5% in the 60s to 11% in the 90s.
- Differences by age, race and sex in overweight prevalence in the 90s are as follows:

Children Aged 6 to 11	<u>Females</u>	<u>Males</u>
White	9.2%	10.3%
Black	16.4%	11.9%
Mexican-American	14.3%	14.6%
Children Aged 12 to 17		
White	8.5%	11.1%
Black	15.7%	10.7%
Mexican-American	14.3%	13.7%

Risk Factors for Childhood Overweight Which Cannot Be Changed

- Parental obesity
 - Children with two obese parents are more than six times as likely to become obese than children with non-obese parents (6).
 - Children with only one obese parent are twice as likely to become obese as adults (7).
- Socio-demographic factors
 - Among white children, those with parents of lower socioeconomic status are more likely to be overweight (8).
 - Girls without siblings are at greater risk for becoming overweight. For each sibling there is a 14% decreased likelihood (8).
 - Girls with older mothers are at increased risk of being overweight (8).

Risk Factors for Childhood Overweight Which Can Be Changed

- Parenting style: A high degree of parental control of diet is linked to a child's inability to regulate food intake, and to the amount of body fat in girls (9).
- Physical activity: Starting in adolescence, girls' physical activity declines 7.4% per year, while boys' activity decreases 2.7% per year (10).
- Television watching: Hours of television watching is associated with overweight in children (11,12). Over one fourth of children report watching four or more hours of television per day (13).
- Skipping meals: Children who ate more times per day were less likely to be heavy than children who ate fewer times per day (kilocalories were the same in both groups) (14).
- Eating patterns: Girls who ate while doing homework, ate while watching television, bought snacks, or ate when not hungry had higher caloric intakes than girls who did not report these behaviors (15).

-
- (1) Dietz WH. Childhood Weight affects adult morbidity and mortality. *J Nutr*, 1998; 128 (2): 411S-414S.
 - (2) Serdula MK, Ivery D, Coates RJ, Freedman DS, Williamson DF, Byers T. Do obese children become obese adults? A review of the literature. *Preventative Medicine*, 1993; 22:163-177.
 - (3) Bray GA. Complications of obesity. *Annals of Internal Medicine*, 1985;103 (6 (Pt 2)):1052-62.
 - (4) Gortmaker SL, Must A, Perrin JM, Sobol AM, Dietz WH. Social and economic consequences of overweight in adolescence and young adulthood. *New Engl J Med*, 1993; 329 (14):1008-12.
 - (5) Troiano R, Flegal KM. Overweight children and adolescents: Description, Epidemiology and Demographics. *Pediatrics*, 1998; 101 (3): 497-503.
 - (6) Lake, JK, Power C, Cole TJ. Child to adult body mass index values in the 1958 British birth cohort: associations with parental obesity. *Arch Dis Child*, 1997. 77:376-380.
 - (7) Whitaker, RC and e.al. Predicting obesity in young adulthood from childhood and parental obesity. *New Engl J Med*, 1997; 337:869-973.
 - (8) Patterson ML, Stern S, Crawford PB, MacMahon RP, Similo SL, Screiber GB, Morrison JA, Waclawiw MA. Sociodemographic factors and obesity in preadolescent black and white girls: NHLBI's Growth and Health Study. *J National Med Assn*, 1997; 89:594-600.
 - (9) Johnson SL, Birch LL. Parents' and children's adiposity and eating style. *Pediatrics*, 1994; 94:653-661.
 - (10) Sallis JF. Epidemiology of physical activity and fitness and adolescents. *Critical Reviews in Food Science and Nutrition*, 1993;33 (4/5):403-408.
 - (11) Obarzanek E, Schreiber, GB, Crawford, PB, Goldman, SR, Barrier, PM, Frederick, MM, and Lakatos, E, "Energy intake and physical activity in relation to indexes of body fat: The NHLBI Growth and Health Study," *Am J Clin Nutr*, 60:15-22, 1994.
 - (12) Robinson, TN. Does Television cause childhood obesity? *JAMA* 1998, March 25, 279 (12): 959-60.
 - (13) Dietz WH, JR, Gortmaker SL. Do we fatten our children at the television set? Obesity and television viewing in children and adolescents. *Pediatrics*, 1985; 75 (5); 807-812.
 - (14) Fabry P, Fodor J, Hejl Z, Braun T, Zvolankova K. The frequency of meals: Its relations to overweight in school children. Changes in weight-height proportion and skinfold thickness. *Am J Clin Nutr*, 1966; 18 (5): 358-361.
 - (15) McNutt SW, Hu Y, Schreiber GB, Crawford PB, Obarzanek E, Mellin L. A longitudinal study of the dietary practice of black and white girls 9 and 10-year-old at enrollment: the NHLBI Growth and Health Study. *J Adolescent Health*, 1997; 20 27-37.