

Are overweight children more likely to be overweight adults?

Evidence-based answer

Yes. Overweight at any age in childhood increases the risk for overweight in adulthood. The relative risk (RR) ranges from 1.9 to 10.1 and increases as children get older. Not all overweight children

become overweight adults, however (strength of recommendation: **A**, systematic review of consistent prospective and retrospective cohort studies).

Clinical commentary

Take a direct approach to excess weight

For reasons of sensitivity and “correctness,” clinicians often avoid using the term *obesity* when talking about children. Does our zeal to be polite actually make things worse?

Studies show that parents often fail to recognize that their children are overweight.¹ And physicians caring for overweight children often fail to record overweight as a diagnosis in their young patients’ medical records.²

Failure to document excess weight in

children virtually guarantees that little if any constructive weight-oriented counseling occurs. By refusing to face the issue head-on, we enable denial of this essential point: Overweight children are far more likely to become obese adults. As we have done with tobacco, it’s now time to *ask* about weight problems in children, *advise* families about strategies for safe weight management, and *assist* where needed.

Mark B. Stephens, MD, MS
Uniformed Services Hospital, Bethesda, Md

Evidence summary

The Centers for Disease Control and Prevention (CDC) doesn’t use the term *obesity* to describe weight in children. Instead, the CDC defines overweight as body mass index (BMI) or weight-for-length for age and sex greater than the 95th percentile. Children above the 85th percentile are called “at risk for overweight.” A national expert panel recently recommended changing “at risk for overweight” to “overweight” and “overweight” to “obese”—the terminology used in this Clinical Inquiry.³

Studies find a clear connection

A 2008 systematic review found 25 prospective or retrospective longitudinal studies that examined the risk of overweight in adulthood based on overweight in childhood or adolescence. Studies had to include at least 1 anthropomorphic measurement before age 18 and at least 1 after age 18. The informativeness and validity of the studies were assessed using a standard evaluation tool. Because the review sought to provide results that could be generalized to large populations, it didn’t include studies of specific popula-

Kathleen Rowland, MD
Department of Family Medicine,
University of Chicago

John Coffey, MLS
Michigan State University,
East Lansing

FAST TRACK

Overweight at any age in childhood increases the risk for overweight in adulthood, and the risk increases with age.

FAST TRACK

Overweight and obese boys are at greater risk of overweight in adulthood than overweight and obese girls.

tions, such as former premature infants.

All of the 13 studies judged to be high quality found an elevated RR or odds ratio (OR) for adult obesity among participants who had been overweight as children. The authors didn't calculate a composite measure of effect, but RRs in the individual studies ranged from 1.9 to 10.1.⁴

Older overweight children are at heightened risk

The systematic review considered children (≤ 12 years) and adolescents (> 12 years) separately. Four high-quality studies assessed how many overweight children became overweight adults; 2 high-quality studies examined how many overweight children became obese adults. Overweight children had RRs between 1.9 and 3.6 for being overweight in adulthood compared with average-weight children; 1 study reported an OR of 7.0.

One study showed older overweight children to be at greater risk than younger children for overweight in adulthood: children who were overweight at 2 years of age had an RR of 2.7, whereas children who were overweight at 11 years had an RR of 3.6.

Obese children had similar results. A study of 4 age cohorts showed that children who were obese at 1 or 2 years of age had an OR of 1.3 for obesity in adulthood compared with average-weight peers. Obese children in the 3- to 5-year-old cohort had an OR of 4.7; obese children in the 6- to 9-year-old cohort had an OR of 8.8; and obese 10- to 14-year-olds had an OR of 22.3.

Risk increases with age

As with children, overweight adolescents had a higher risk of being overweight in adulthood. And the association between older age and higher ORs persisted into adolescence. One study found an OR of 17.5 for adult overweight among youngsters who were overweight at 10 to 14 years of age and an OR of 22.3 for adolescents who were overweight at 15 to 17 years.

Boys are at greater risk than girls

The systematic review also revealed sex differences. Two studies showed that overweight or obese boys were not only more likely to be overweight in adulthood than their average-weight peers (OR=15.0 in 1 study; RR=9.8 in the other), but also more likely to be overweight later in life than overweight or obese girls. The girls had an OR of 12.0 for adult overweight in 1 study and an RR of 6.8 in the other.

Recommendations

The American Academy of Family Physicians emphasizes that weight management in childhood is an important goal, but notes a lack of evidence regarding the effectiveness of screening and treating overweight in children.⁵ The American Academy of Pediatrics recommends calculating and plotting BMI yearly to identify excessive weight gain.⁶

The United States Preventive Services Task Force, citing lack of evidence for treatment benefit, finds insufficient evidence for or against screening for overweight in children.⁷ ■

References

1. Carnell S, Edwards C, Croker H, et al. Parental perceptions of overweight in 3-5 y olds. *Int J Obesity*. 2005;29:353-355.
2. Bardia A, Holtan SG, Slezak JM, et al. Diagnosis of obesity by primary-care physicians and impact on obesity management. *Mayo Clin Proc*. 2007;82:927-932.
3. Barlow SE, Expert Committee. Expert committee recommendations regarding the prevention, assessment, and treatment of child and adolescent overweight and obesity: summary report. *Pediatrics*. 2007;120(suppl 4):S164-S192.
4. Singh AS, Mulder C, Twisk JW, et al. Tracking of childhood overweight into adulthood: a systematic review of the literature. *Obes Rev*. 2008;9:474-488.
5. American Academy of Family Physicians. Recommendations for clinical preventive services. Available at: www.aafp.org/online/en/home/clinical/exam/k-o.html. Accessed September 17, 2007.
6. Krebs NF, Jacobson MS, American Academy of Pediatrics Committee on Nutrition. Prevention of pediatric overweight and obesity. *Pediatrics*. 2003;112:424-430.
7. US Preventive Services Task Force. Screening and interventions for overweight in children and adolescents. In: *Guide to Clinical Preventive Services, 2006. Recommendation Statement*. Rockville, MD: AHRQ; July 2005. AHRQ publication 05-0574-A.