

REFERENCES

1. Kriemler S, Manser-Wenger S, Zahner L, et al. Reduced cardiorespiratory fitness, low physical activity and an urban environment are independently associated with increased cardiovascular risk in children. *Diabetologia* 2008;**51**:1408-15.
2. Ortega F, Ruiz J, Castillo M, et al. Physical fitness in childhood and adolescence: a powerful marker of health. *Int J Obes* 2008;**32**:1-11.
3. Kim J, Must A, Fitzmaurice G, et al. Relationship of physical fitness to prevalence and incidence of overweight among schoolchildren. *Obes Res* 2005;**13**:1246-54.
4. Metcalf B, Hosking J, Jeffery A, et al. Fatness leads to inactivity, but inactivity does not lead to fatness: a longitudinal study in children (EarlyBird 45). *Arch Dis Child* 2011;**96**:942-7.
5. World Health Organization. Global Health Risks. Mortality and burden of disease attributable to selected major risks. WHO Library Cataloguing-in-Publication Data, 2009: 10. http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf
6. Kristensen P, Møller N, Korsholm L, et al. Tracking of objectively measured physical activity from childhood to adolescence: the European Youth Heart Study. *Scand J Med Sci Sports* 2008;**18**:171-8.
7. McMurray R, Harrell J, Bangdiwala S, et al. Tracking of physical activity and aerobic power from childhood through adolescence. *Med Sci Sports Exerc* 2003;**35**:1914-22.
8. Janz K, Dawson J, Mahoney L. Tracking physical fitness and physical activity from childhood to adolescence: the Muscatine study. *Med Sci Sports Exerc* 2000;**32**:1250-7.
9. Telama R, Yang X, Viikari J, et al. Physical activity from childhood to adulthood: a 21-year tracking study. *Am J Prev Med* 2005;**28**:267-73.
10. Bouchard C, Lesage R, Lortie G, et al. Aerobic performance in brothers, dizygotic and monozygotic twins. *Med Sci Sports Exerc* 1986;**18**:639-46.

11. Maes H, Beunen G, Vlietinck R, et al. Inheritance of physical fitness in 10-yr-old twins and their parents. *Med Sci Sports Exerc* 1996;**28**:1479-91.
12. Bouchard C, Daw E, Rice T, et al. Familial resemblance for VO₂max in the sedentary state: the HERITAGE family study. *Med Sci Sports Exerc* 1998;**30**:252-8.
13. Bouchard C, Rankinen T. Individual differences in response to regular physical activity. *Med Sci Sports Exerc* 2001;**33**:S446-51; discussion S452-43.
14. Timmons J, Knudsen S, Rankinen T, et al. Using molecular classification to predict gains in maximal aerobic capacity following endurance exercise training in humans. *J Appl Physiol* 2010;**108**:1487-96.
15. Hands B, Larkin D, Parker H, et al. The relationship among physical activity, motor competence and health-related fitness in 14-year-old adolescents. *Scand J Med Sci Sports* 2009;**19**:655-63.
16. Katzmarzyk P, Malina R, Song T, et al. Physical activity and health-related fitness in youth: a multivariate analysis. *Med Sci Sports Exerc* 1998;**30**:709-14.
17. Stigman S, Rintala P, Kukkonen-Harjula K, et al. Eight-year-old children with high cardiorespiratory fitness have lower overall and abdominal fatness. *Int J Pediatr Obes* 2009;**4**:98-105.
18. Niinikoski H, Lagström H, Jokinen E, et al. Impact of repeated dietary counseling between infancy and 14 years of age on dietary intakes and serum lipids and lipoproteins: the STRIP study. *Circulation* 2007;**116**:1032-40.
19. Raitakari O, Taimela S, Porkka K, et al. Patterns of intense physical activity among 15- to 30-year-old Finns. The Cardiovascular Risk in Young Finns Study. *Scand J Med Sci Sports* 1996;**6**:36-9.
20. Pahkala K, Heinonen OJ, Lagström H, et al. Vascular endothelial function and leisure-time physical activity in adolescents. *Circulation* 2008;**118**:2353-9.

21. Mansikkaniemi K, Juonala M, Taimela S, et al. Cross-sectional associations between physical activity and selected coronary heart disease risk factors in young adults. The Cardiovascular Risk in Young Finns Study. *Ann Med* Published Online First: 1 Jul 2011. doi:10.3109/07853890.2011.590146
22. Yang X, Telama R, Viikari J, et al. Risk of obesity in relation to physical activity tracking from youth to adulthood. *Med Sci Sports Exerc* 2006;**38**:919-25.
23. Tomkinson G, Léger L, Olds T, et al. Secular trends in the performance of children and adolescents (1980-2000): an analysis of 55 studies of the 20m shuttle run test in 11 countries. *Sports Med* 2003;**33**:285-300.
24. American College of Sports Medicine. ACSM's guidelines for exercise testing and prescription, 6th edition. Baltimore: Williams & Wilkins 2000: 304.
25. Cole TJ, Bellizzi MC, Flegal KM, Dietz WH. Establishing a standard definition for child overweight and obesity worldwide: international survey. *BMJ* 2000;**320**:1240-3.
26. Tanner JM. Growth at Adolescence. 2nd ed. Oxford, UK: Blackwell; 1962.
27. Mota J, Ribeiro J, Carvalho J, et al. Cardiorespiratory fitness status and body mass index change over time: a 2-year longitudinal study in elementary school children. *Int J Pediatr Obes* 2009;**4**:338-42.
28. McGavock J, Torrance B, McGuire K, et al. Cardiorespiratory fitness and the risk of overweight in youth: the Healthy Hearts Longitudinal Study of Cardiometabolic Health. *Obesity* 2009;**17**:1802-7.
29. Dwyer T, Magnussen C, Schmidt M, et al. Decline in physical fitness from childhood to adulthood associated with increased obesity and insulin resistance in adults. *Diabetes Care* 2009;**32**:683-7.

30. Ekelund U, Anderssen S, Froberg K, et al. Independent associations of physical activity and cardiorespiratory fitness with metabolic risk factors in children: the European Youth Heart Study. *Diabetologia* 2007;**50**:1832-40.
31. Blair S, Kampert J, Kohl HW 3rd, et al. Influences of cardiorespiratory fitness and other precursors on cardiovascular disease and all-cause mortality in men and women. *JAMA* 1996;**276**:205-10.
32. Must A, Jacques P, Dallal G, et al. Long-term morbidity and mortality of overweight adolescents. A follow-up of the Harvard Growth Study of 1922 to 1935. *N Engl J Med* 1992;**327**:1350-5.
33. Freedman D, Patel D, Srinivasan S, et al. The contribution of childhood obesity to adult carotid intima-media thickness: the Bogalusa Heart Study. *Int J Obes* 2008;**32**:749-56.
34. Janssen I, Katzmarzyk P, Boyce W, et al. Comparison of overweight and obesity prevalence in school-aged youth from 34 countries and their relationships with physical activity and dietary patterns. *Obes Rev* 2005;**6**:123-32.
35. Must A, Tybor D. Physical activity and sedentary behavior: a review of longitudinal studies of weight and adiposity in youth. *Int J Obes* 2005;**29** Suppl 2:S84-96.
36. Ness A, Leary S, Mattocks C, et al. Objectively measured physical activity and fat mass in a large cohort of children. *PLoS Med* 2007;**4**:e97.
37. Bray M, Hagberg J, Pérusse L, et al. The human gene map for performance and health-related fitness phenotypes: the 2006-2007 update. *Med Sci Sports Exerc* 2009;**41**:35-73.
38. Kimm S, Glynn N, Kriska A, et al. Decline in physical activity in black girls and white girls during adolescence. *N Engl J Med* 2002;**347**:709-15.
39. Riddoch C, Andersen LB, Wedderkopp N, et al. Physical activity levels and patterns of 9- and 15-yr-old European children. *Med Sci Sports Exerc* 2004;**36**:86-92.

40. Tudor-Locke C, Johnson W, Katzmarzyk P. Accelerometer-Determined Steps/Day in U.S. Children and Youth. *Med Sci Sports Exerc* 2010;**42**:2244-50.
41. Basterfield L, Adamson AJ, Frary JK, et al. Longitudinal study of physical activity and sedentary behavior in children. *Pediatrics* 2011;**127**:e24-30.
42. Epstein LH, Paluch RA, Kalakanis LE, Goldfield GS, Cerny FJ, Roemmich JN. How much activity do youth get? A quantitative review of heart-rate measured activity. *Pediatrics* 2001;**108**:E44.
43. Armstrong N, Welsman JR. The physical activity patterns of European youth with reference to methods of assessment. *Sports Med* 2006;**36**:1067-86.