

Measuring physical activity across the lifespan and its link to the double burden of malnutrition

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Outline

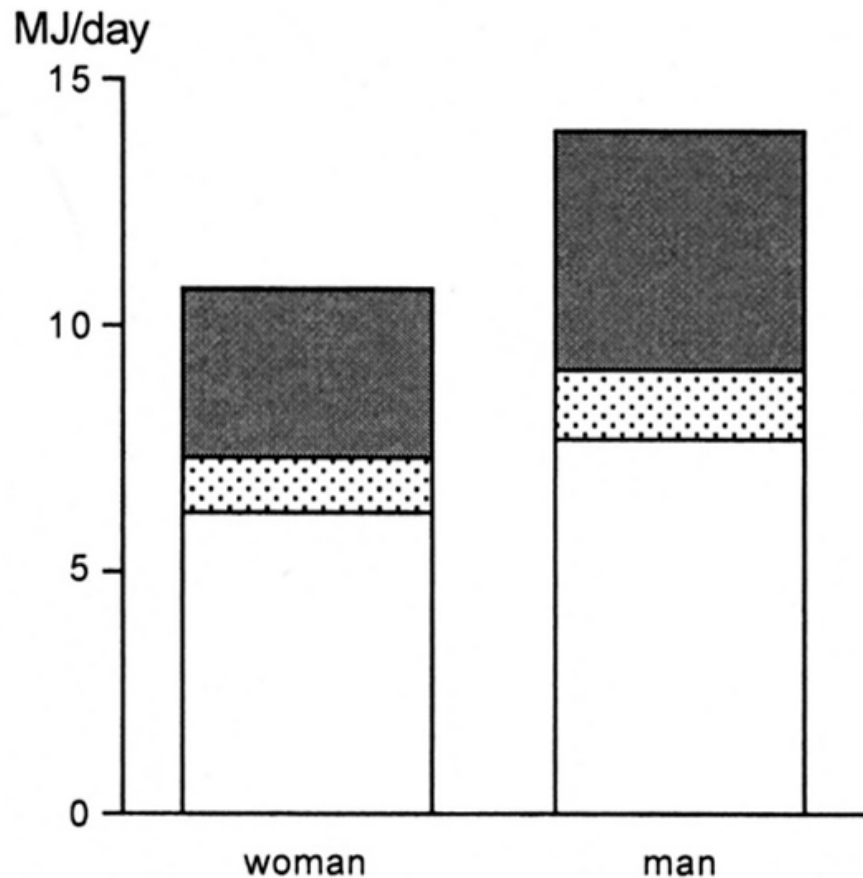
Physical activity and age

Body composition and age

Physical activity and body composition

Physical activity and body composition and age

Activity index



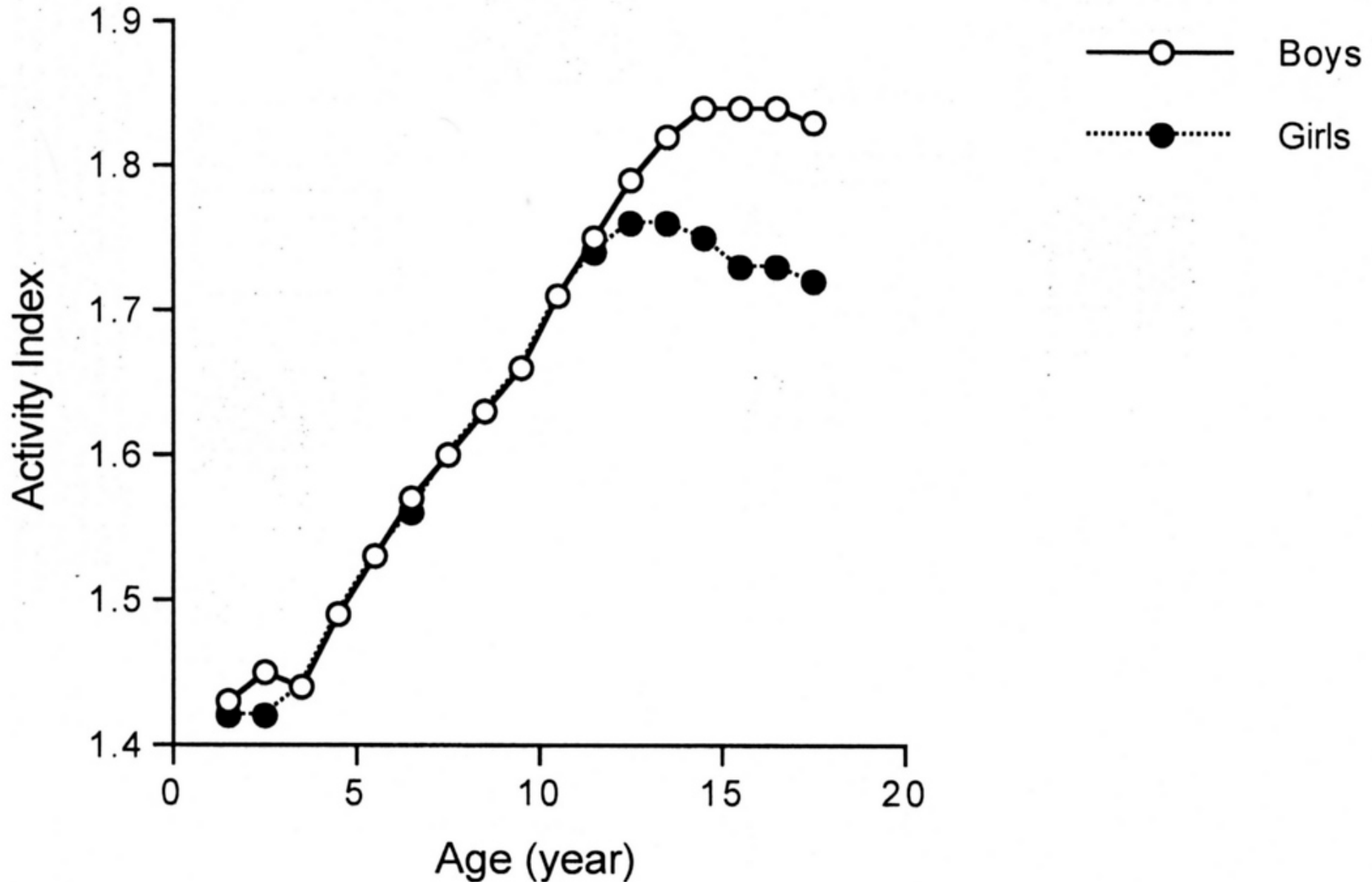
Activity index:

$\text{Total expenditure} / \text{Resting expenditure}$

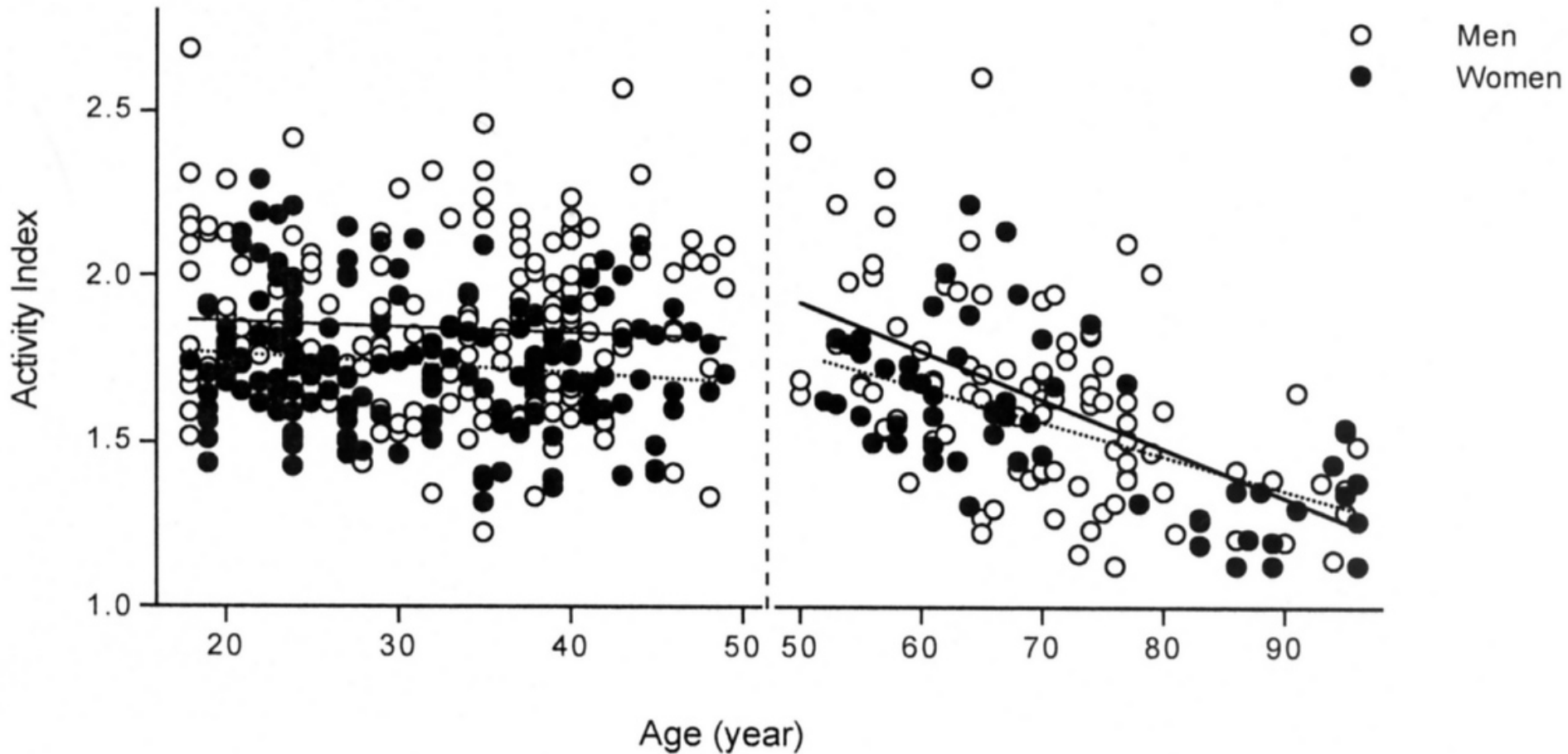
- Resting
- Diet
- Activity



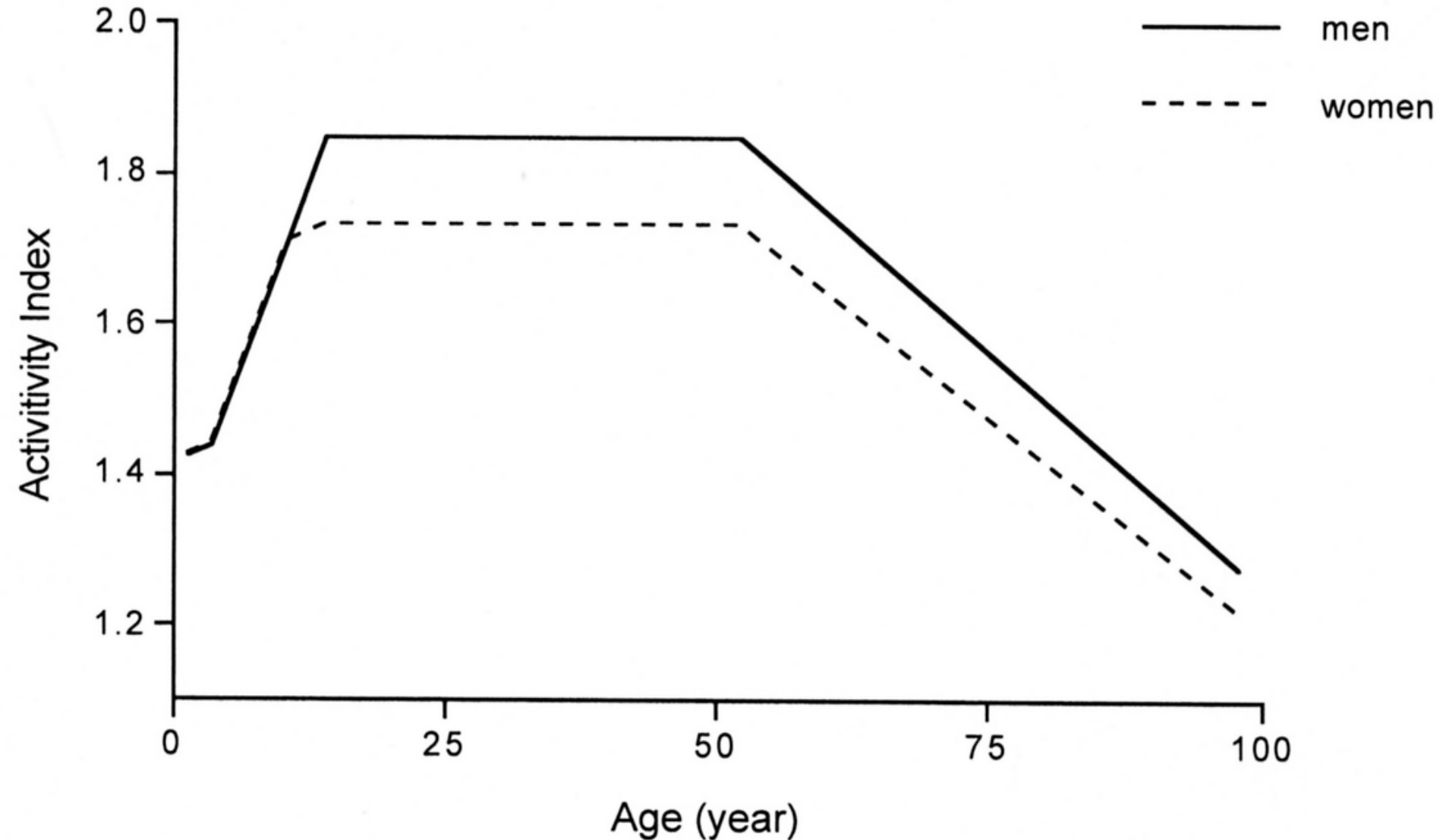
Activity index and age



Activity Index and age



Activity Index and age

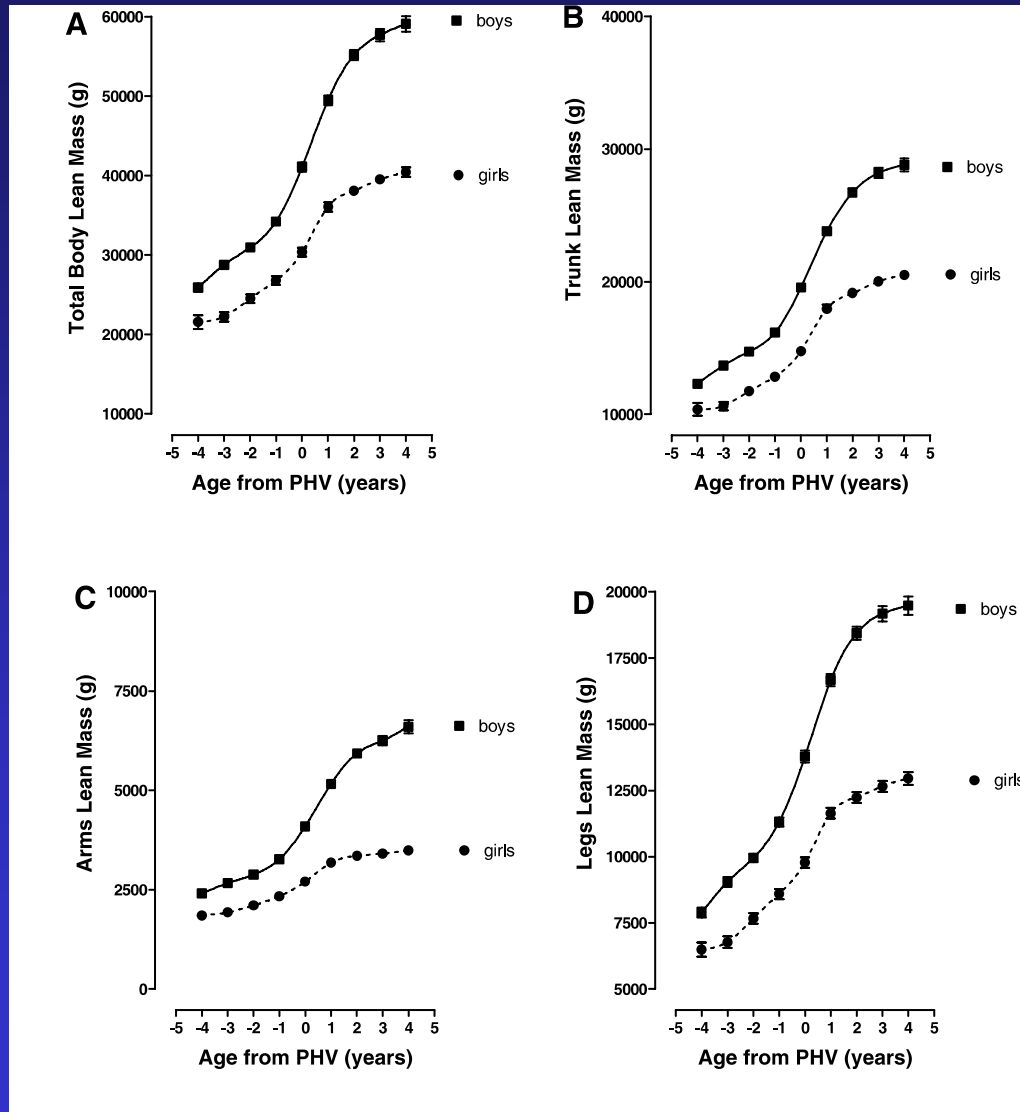


Conclusions

Activity energy expenditure:

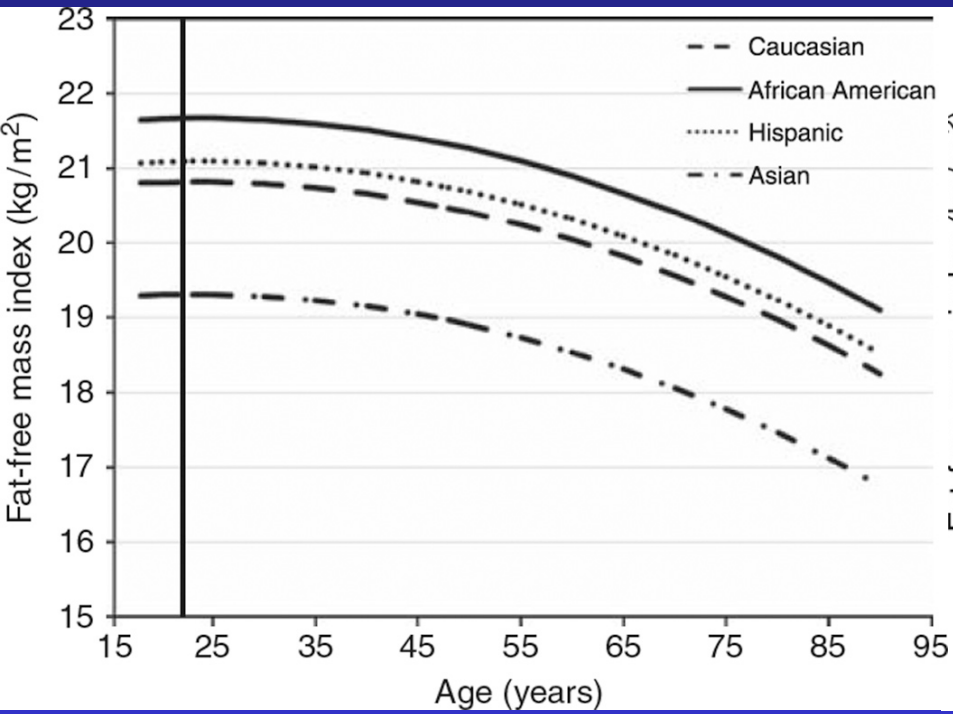
- increases with age
- peaks at reproductive age
- decreases after the age of 50 y

Body composition and age

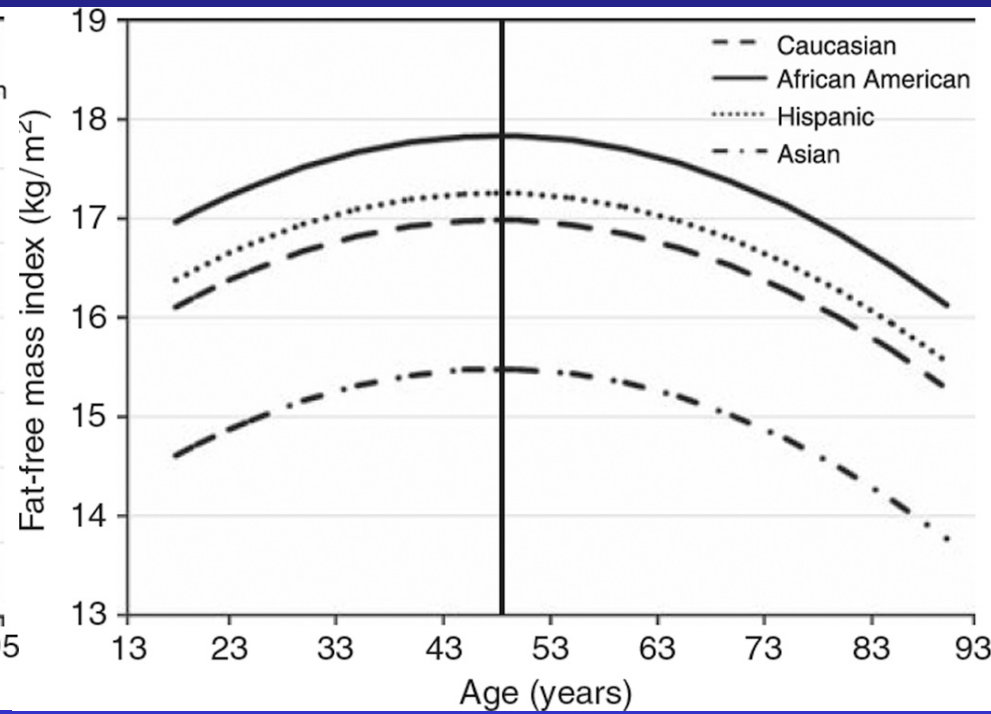


Body composition and age

men



women



Conclusions

Fat-free mass index peaks:

- in the mid 20s for males, when testosterone peaks
- in the mid 40s for females, where after estrogen declines with the end of ovulation

Physical activity and body composition

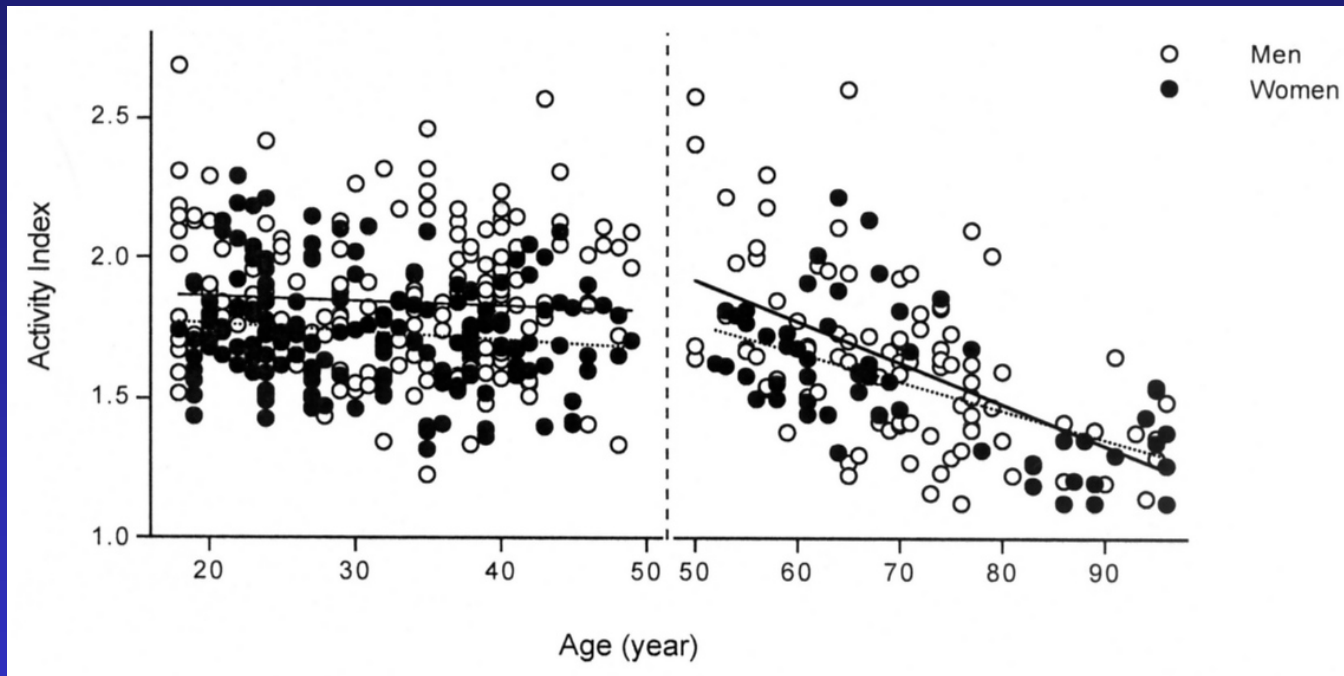
Physical activity is associated with improved body composition and growth pattern of children

(Deheeger et al. Int J Obes 2007;21:372-9)

Habitual physical activity positively affects growth of lean body mass during adolescence

(Baxter-Jones et al. J Appl Physiol 2008;105:734-41)

Physical activity and body composition



Greater physical activity is not associated with higher fat-free mass in adults

(Speakman and Westerterp. Am J Clin Nutr 2010;92:826-34)

Conclusions

A physically active lifestyle at early age is a key determinant to develop a healthy lean body mass and subsequent prevention of excess fat gain