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

Total expenditure / Resting expenditure

- Resting
- Diet
- Activity
Activity Index and age

Speakman and Westerterp. Am J Clin Nutr 2010;92:826-34
Activity Index and age

Activity Index vs. Age (year)

- Men: Solid line
- Women: Dashed line

Westerterp. Proc Nutr Soc 2017
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


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

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.