

Multimedia Appendix 1: Formula for calculating energy expenditure

The following is the formula for calculating energy expenditure (EE) for each activity.

The totals of all values comprise the Physical Activity Index Score (PAI).

$EE = (N \times D \times MET \text{ value})/91$, where:

- N = number of times the individual participated in the activity in the past 3 months
- D = average duration of each activity session in hours
- MET = metabolic equivalent value or the energy cost of the activity expressed in kcal/kg/hr.
MET reflects intensity of an activity and is expressed as multiples of the resting metabolic rate (RMR), which is approximated as 1 kcal/kg/hr: 1 MET = RMR.
- 91 = number of days in 3 months that is included to convert activity in the past 3 months to an average daily value in kcal/kg/d

These totals are used to categorize individuals as inactive (PAI <1.5 kcal/kg/d),

moderately active (PAI 1.5 to <3 kcal/kg/d), and active (PAI ≥3 kcal/kg/d).

Source:

Taylor HL, Jacobs DR, Schucker B, Knudsen J, Leon AS, Debacker G. A questionnaire for leisure time physical activities. *J Chronic Dis* 1978;31:741-55. PMID: 748370

