

Energy expenditure and nutrition status of ballet, jazz and contemporary dance students

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ABSTRACT

Purpose: To evaluate of the energy expenditure in 3 types of dance classes (ballet, Jazz, and contemporary), as well as of the daily energy balance depending on dance type.

Materials and methods: 40 females attending dance classes with a median age of 21.0 (19.0-25.0) and 10 males with a median age of 27.0 (20.0-28.0) participated in this study. The energy cost of each dance class was measured using the BodyMedia SenseWear Sensor and total daily energy expenditure was evaluated using a 3-day recording of physical activity. The dietary intake was evaluated with a 3-day food diary recording. Statistical analysis was performed using the SPSS software.

Results: Median energy expenditure varied from 306 (277-328) Kcals/class for contemporary dance to 327 (290-355) Kcals/class for ballet and 369 (333-394) Kcals/class for jazz for females with

significant differences between contemporary and jazz classes. For males, energy expenditure was 508 (447-589) Kcals/class and 564 (538-593) Kcals/class for ballet and jazz classes, respectively. Females had lower values for all anthropometric measurements, energy intake, macronutrient intakes, and energy expenditure, compared with males. The anthropometric characteristics did not differ between dance types. Both female and male dance students were in a negative energy balance.

Conclusions: The use of sensors such as BodyMedia SenseWear together with keeping daily diaries make measurement of physical activity in dancing reliable and accurate. Exercise expenditure differs across types of dance in females but not in males. Both sexes had inadequate energy and carbohydrate intakes.

Key words: Energy balance, dietary intake, Body Media SenseWear, dance