

日常生活における身体活動量の推定

— 身体活動レベル評価表の作成 —

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Estimating Energy Expenditure in Daily Life : Developing the Physical Activity Level Scale

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Abstract

The purpose of this study was to develop the "Physical Activity Level Scale (PALS)", which was designed to easily estimate energy expenditure incurred in daily life. The PALS is composed of five sentences representing lifestyles, which are related to daily physical activities. The subjects select one sentence that is most representative of their physical activity level. The five levels of PALS can estimate daily energy expenditure based on the basal metabolic rate. The test-retest analysis of PALS data from 391 female undergraduates demonstrated high reliability. The PALS correlated well with established measures of physical activity. The levels of PALS were related to sedentary time, as well as to exercise and sports in daily life. A checklist for quantitatively recording physical activities in daily life was conducted to assess the validity of energy expenditure estimated by PALS. The two scales were well correlated. The above data confirmed the reliability and the validity of PALS as an instrument for effortlessly measuring daily physical activity. In 270 adults aged 20-75 who were surveyed using PALS, 84% reported low levels of physical activity (level 1-3). Only 16% reported optimal physical activity (level 4-5). There was sex difference in the levels of physical activity, but age difference wasn't shown.

Key words: physical-activity, energy-expenditure, basal metabolic rate