



Exercise Biochemistry Review

Proceedings of IBEC 2018, Beijing, China, October 23-25
PO-108

The relationship between Obesity and Sleep behavior in adolescents

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Objective With the increasing detection rate of overweight and obesity in adolescents, many kinds of fat-related hazards affect the quality of life. This paper aims to study the relationship between overweight and obesity and sleep behavior in adolescents. To provide theoretical basis for adolescent obesity intervention policy according to the relevant links.

Methods A questionnaire survey was conducted on 156 (84 males, 72 females) aged 12 to 18 years old to collect information on their basic physical condition and sleep related behaviors, and the questionnaire was collected on the spot. Subjects were divided into three groups according to BMI: normal, overweight and obese. The gender and BMI groups were analyzed and compared.

Results (1) Obesity The rate of obesity in boys was higher than that in girls, ($P < 0.05$). (2) The rate of staying up late during workday (71.7%) and early rising (83.0%) in obese group was higher than that in girls (83.0%). In obese group, the sleeping time was longer (25.16 ± 6.3 min) and had no siesta behavior (30.8%). In normal group, 15-30min (38.6%), ($P < 0.05$). (3) BMI (29.86 ± 7.53) in boys was significantly higher than that in girls (26.85 ± 5.50), ($P < 0.05$). (3), BMI in boys (29.86 ± 7.53) was significantly higher than that in girls (26.85 ± 5.50), ($P < 0.05$). Male students with no siesta behavior and nap time in 15-30 minutes accounted for more (25.5%), while female students had more lunch break time between 30 and 60 minutes (36.9%). (4) Male students' nap time and sleep duration were negatively correlated with BMI, ($P < 0.05$). BMI was proportional to nap time and sleep time, but was inversely proportional to sleep time, ($P < 0.05$).

Conclusions Sleep behavior of adolescent boys and girls may have an effect on body weight status. Staying up late, lack of sleep and lack of lunch time will aggravate obesity and reduce sleep barrier. In addition, shortening sleep time can improve overweight and obesity status.