

Physical fitness in preschool children: association with sex, age and weight status

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Background: Because fitness level is a potent biomarker of health from an early age, the improvements of physical fitness performance through the promotion of physical activity could be important for the health of preschool children, particularly in obesity prevention. **Objective:** The purpose of this study is to determine the physical fitness in children aged 3-6 years, discriminating performance by sex, age and body mass index (BMI). **Method:** A total of 3868 children from 3 to 6 years agreed voluntarily to participate. Demographic characteristics revealed that 1961 children were male (age: 55.71 ± 11.11 months old, BMI = 16.03 ± 1.93 kg/m²), and 1907 were female (age 56.16 ± 0.97 months old, BMI = 15.85 ± 1.89 kg/m²), and they were selected from 51 schools in southern Spain. **Results:** Significant differences were found between sexes: boys showed a greater performance on cardio respiratory endurance, reaction time, strength and running speed. We found significant differences by sex in the different age groups (3, 4, 5 and 6 years old). **Conclusions:** Sex differences in physical fitness are evident at an early age; in addition, the relationship between physical fitness and BMI is inconsistent in preschool children. The improvements of physical fitness performance and its association with physical activity could be important for the health of children, particularly in obesity prevention. © 2016 John Wiley & Sons Ltd

children

physical fitness

preschool

aging

body mass

child

endurance

exercise

female

fitness

human

male

muscle strength

obesity

pathophysiology

physiology

preschool child

reaction time

running

sexual characteristics

Aging

Body Mass Index

Child

Child, Preschool

Exercise

Female

Humans

Male

Muscle Strength

Obesity

Overweight

Physical Endurance

Physical Fitness

Reaction Time

Running

Sex Characteristics