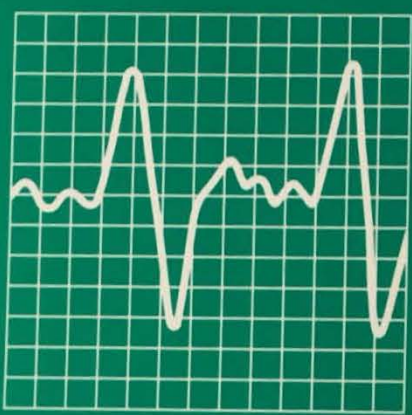


# PEDIATRIC

## Exercise Science



August 1999

Volume 11

Number 3



# PEDIATRIC Exercise Science

August 1999

Volume 11

Number 3



THE OFFICIAL JOURNAL OF THE  
NORTH AMERICAN SOCIETY OF PEDIATRIC EXERCISE AND  
THE EUROPEAN GROUP OF PEDIATRIC WORK PHYSIOLOGY

## CONTENTS

### Editor's Notes

- Crusading for the Balke Protocol ..... 189

- Research Digest ..... 193

### Research Articles

Short Longitudinal Study of Boys Playing Soccer: Parental Height, Birth Weight and Length, Anthropometry, and Pubertal Maturation in Elite and Non-Elite Players

- Lone Hansen, Klaus Klausen, Jens Bangsbo, and Jørn Müller* ..... 199

Physical Activity and Pulmonary Function in Youth: The Québec Family Study

- Joey C. Eisenmann, Peter T. Katzmarzyk, Germain Thériault, Thomas M.K. Song, Robert M. Malina, and Claude Bouchard* ..... 208

Reliability of Isokinetic Concentric and Eccentric Strength in Circumpubertal Soccer Players

- Eleftherios Kellis, Spiros Kellis, Vasilios Gerodimos, and Vasiliki Manou* ..... 218

Validity of Heart Rate, Pedometry, and Accelerometry for Estimating the Energy Cost of Activity in Hong Kong Chinese Boys

- Lobo Louie, Roger G. Eston, Ann V. Rowlands, Kwok Keung Tong, David K. Ingledeu, and Frank H. Fu* ..... 229

- Letter to the Editor ..... 240

- Symposium Proceedings ..... 242

- Symposium Abstracts ..... 251

- Symposium Poster ..... 284

## XXth INTERNATIONAL SYMPOSIUM OF THE EUROPEAN GROUP OF PEDIATRIC WORK PHYSIOLOGY

### Poster

1. Anaerobic Performance of Prepubescent Boys and Girls Compared With Adults  
E. DORÉ, O. DIALLO, M. BEDU,\* E. Van PRAAGH  
Université Blaise Pascal Clermont-Ferrand, UFRSTAPS, \*Université d'Auvergne, UFR  
Médecine, France
2. Effects of 10-Week Training and 8-Week Detraining on Athletic Performance in  
Prepubescent Boys  
O. DIALLO, E. DORÉ, C. HAUTIER, P. DUCHE, E. Van PRAAGH  
Université Blaise Pascal (UFR STAPS), Clermont-Ferrand, France
3. The Comparison of Motor Abilities in Russian Speaking Inhabitants and Estonians  
Living in Estonia  
T. MATSIN, T. JÜRIMÄE, J. JÜRIMÄE, G. VELDRE\*  
Institute of Sport Pedagogy, \*Centre of Physical Anthropology, University of Tartu,  
Tartu, Estonia
4. Motor Fitness and Children's Participation in Organized Sport: The Sportslinx Project  
G. STRATTON  
Centre for Physical Education, Sport and Dance, Liverpool John Moores University,  
Liverpool, UK
5. Valuation of the First 5 Months of Activity of a Sport Pediatrics Center  
M. MONETTI,<sup>1</sup> S. GHIGLIA,<sup>2</sup> O. MONETTI,<sup>3</sup> F. MOSCA<sup>1</sup>  
<sup>1</sup>Operative Unit of Pediatric and Neonatology, <sup>2</sup>Department of Paediatric Cardiology,  
Regina Elena Hospital (I.C.P.), <sup>3</sup>Children's Hospital "De G De Marchi," Milan, Italy
6. Valuation of Body Composition With Bioelectrical Impedance Method Adjoining  
With the Anthropometry on a Group of Young Patients Related to a Center of  
Sport Pediatrics  
M. MONETTI,<sup>1</sup> S. LOI,<sup>2</sup> O. MONETTI,<sup>2</sup> F. MOSCA<sup>1</sup>  
<sup>1</sup>Operative Unit of Paediatric and Neonatology, Regina Elena Hospital (I.C.P.),  
<sup>2</sup>Children's Hospital "De G De Marchi," Milan, Italy
7. Extreme Performance Groups Analysis of Physical Activity and Body Fat Effects in  
Pubertal Children's Physical Fitness  
V.P. LOPES, T. BARBOSA, P. MAGALHÃES  
Higher School of Education, Bragança, Polytechnic Institute, Bragança, Portugal
8. Gender, Socioeconomic Status and Maturation Differences in Pubertal Children's  
Physical Activity  
T. BARBOSA, P. MAGALHÃES, V.P. LOPES  
Higher School of Education, Bragança, Polytechnic Institute, Bragança, Portugal
9. The Involvement in Sport Training Classes and Health-Related Behavior  
D. EENSOO, M. HARRO, J. ALEP

no difference in any FP item in both genders between the extreme groups of PA. This might be due to the lack of precision of this kind of instrument (self-report) to measure the PA of children. In boys, significant differences between extreme groups of BF in all PF items were found, except in SR:  $MWR - t(52) = 5.58, p < .001$ ;  $CU - t(52) = 2.39, p = .020$ ;  $PU - t(52) = 3.95, p = .0002$ . The same results were found in girls:  $MRW - t(50) = 5.58, p = 0$ ;  $CU - t(50) = 2.16, p = .035$ ;  $PU - t(50) = 3.66, p = .0006$ . In both genders and in all PF items the best performance was obtained by the BF < P25% group—that is, by the children with less BF. In conclusion, the PA in this sample has no effect on PF performance. The BF has a negative effect on children's PF performance.

### Gender, Socioeconomic Status, and Maturation Differences in Pubertal Children's Physical Activity

T. Barbosa, P. Magalhães, V.P. Lopes, Higher School of Education, Bragança, Polytechnic Institute, Bragança, Portugal

The purpose of this study was to identify differences in the physical activity of pubertal children according to their gender, their socioeconomic status (SES), and their stage of maturation (SM). With that aim, 223 children were studied (11.21 years old), 111 of them male and 112 female. The Godin Leisure-Time Exercise Questionnaire (Godin and Shephard, 1985) was used to estimate the habitual physical activity (HPA). The SM was estimated, according to the Tanner's method (1962), for: (a) pubic hairs for both genders, (b) genitalia development for males, and (c) breast development for females. The SES was estimated according to the father's occupation using the Portuguese Classification of Jobs (1994). Data analysis was made using the ANOVA with Sheffe as post-hoc test. The reliability of the Godin Leisure-Time Exercise Questionnaire was of 0.68. No significant interactions were found between gender, SES, and SM. The males presented higher values of HPA than females [ $F(1, 221) = 40.29, p < .0001$ ]. In the same way, there were some significant differences in the HPA, according to the SM [ $F(3, 219) = 7.89, p < .0001$ ]. Those significant differences occurred between Stages 1 and 4 ( $p = .0006$ ) and between Stages 2 and 4 ( $p = .0012$ ). In both cases, the children in Stage 4 of maturity presented higher values of HPA than children in Stages 1 and 2 of maturity. However, there were no significant differences according to the SES. Therefore, the results of this study point out that: (a) There is no relationship between the HPA and the SES of pubertal children; (b) males presented higher values of HPA than females; and (c) children in Stage 4 of maturity presented higher values of HPA than children in Stages 1 and 2 of maturity.

### The Involvement in Sport Training Classes and Health-Related Behavior

D. Eensoo, M. Harro, J. Alep, Department of Public Health, University of Tartu, Tartu, Estonia

The purpose of this investigation was to study the association between the involvement in sport training classes (STCL) and health-related behavior. The participants of the study were 1,575 eighth grade students. The children filled in a questionnaire in which they reported their involvement in STCL, alcohol and drug usage, smoking habits, and sexual activities. The number of children who reported to be involved in STCL was 728 (47% of studied children). No significant differences were found in health-related behavior between children who were involved and not involved in STCL. Nevertheless, there was a tendency that children who were involved in STCL smoked and used alcohol less frequently than