Title: **Children and Exercise Appropriate Practices**

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Introduction: Short-burst fitness can be described as the ability to perform brief, high-intensity activities (Rowland, 2005). This is the typical activity pattern of children. Bailey et al. (1995) observed children between the ages of six and 10 over a 12-hour period and reported a median duration of three seconds for intense activities, with 95 percent of intense activities lasting under 15 seconds. The majority of activity was of low-to-moderate intensity, yet it was still intermittent in nature with an overall median activity duration of six seconds. Historically, short burst activities have not been regarded as essential for achieving optimal health in the general population. However, it is important to note that when encouraged to exercise, children are more inclined to engage in short-burst activities and that in the pediatric population this form of exercise is extremely valuable in promoting healthy body composition, muscle development, bone density, and an active lifestyle (Rowland). Hence, short-burst activities should be incorporated into elementary physical education. For example, chasing, fleeing, and dodging activities, such as tag games, provide children with short -burst activity.
Therefore, the purpose of this article is to review concepts of pediatric exercise physiology that are essential to physical education programs for children.

Methods: For assessing Children and Exercise Appropriate Practices, a review article on the last existent researches carried out.

Results: The results highlighted that the associations between children's activity and health were similar regardless of how the child accumulated the activity. In other words, a child who accumulated short bursts of moderate or vigorous exercise throughout the day was just as healthy as a child who did a similar amount of activity over longer sessions. Measures of short-burst fitness include the Wingate bike test and 40-meter to 50-meter sprints. One clear trend in the literature is that there is a progressive increase in short -burst fitness as children grow. This is attributed to enhanced efficiency for movement and utilization of glycolysis (related to increasing levels of muscular glycogen and activity of glycolytic enzymes such as phosphofructokinase; Malina et al., 2004). Regardless, short-burst activities are developmentally appropriate for K-6 children and should constitute a significant portion of their physical education programming.

Conclusion: The promotion of physical activity and physical fitness are central tenets of physical education. It is often assumed that these two concepts go hand in hand, in that those who participate in regular physical activity are physically fit. However, in children, the relationship between habitual activity and fitness is not particularly strong (Payne & Morrow, 1993). Much of the disparity between activity levels and physical fitness in children can be attributed to varying rates of growth and development (Corbin, 2004). Maturation (or lack thereof) has a significant effect on how children respond to exercise (Corbin, 2002). An understanding of how growth and development during childhood affect fitness, of physiological responses to

exercise, and of exercise programming is particularly important for physical educators working in an elementary school setting.

References:

American College of Sports Medicine. (2004). Position stand: Physical activity and bone health. Medicine & Science in Sports S Exercise, 36, 1985-1996.

American College of Sports Medicine. (2006). ACSM 's guidelines for exercise testing and prescription (7th ed.). Philadelphia: Lippincott, Williams & Wilkins.

Anonymous. NewsRx Health & Science. (2009) . University of Exeter; Sporadic play activity as beneficial to child health as continuous bouts of exercise, study suggests . Atlanta: May 31, 2009. pg. 57

Bailey, R. C., Olson, J., Pepper, S. L, Porszasz, J., Barstow, T. J., & Cooper, D. M. (1995). The level and tempo of children's physical activities: An observational study. Medicine & Science in Sports S Exercise, 27, 1033-1041.

Blimkie, C. J. R. (1 993). Resistance training during preadolescence: Issues and controversies. Sports Medicine, /5, 389-407.

Centers for Disease Control and Prevention. (2000). 2000 CDC growth charts: United States. Retrieved March 20, 2008, from http://www.cdc.gov/growthcharts/.

Clark, J. E. (2007). On the problem of motor skill development. Journal of Physical Education, Recreation & Donee, 78(5), 39-44.

Corbin, C. B. (2002), Physical activity for everyone; What every physical educator should know about promoting lifelong physical activity. Journal of Teaching in Physical Education, 21, 128-144.

Corbin, C. B. (2004). What every physical educator should know about teaching physical activity and fitness. Teaching Elementary Physical Education, 15(1), 7-9.

Ernst, M. P., Pangrazi, R. P., & Corbin, C. B. (1998). Physical education: Making a transition toward activity, iournal of Physical Education, Recreation S Dance, 69(9), 29-32.

Faigenbaum, A. D. (2001). Strength training and children's health. Joumal of Physical Education, Recreation & Donee, 72(3), 24-30.

Faigenbaum, A., & Mediate, P. (2006). Medicine ball for all: A novel program that enhances physical fitness in school-age youths, fournal of Physical Education, Recreation & Donee, 77(7), 25-30, 45.

Falk, B., & Tenenbaum, G. (1 996). The effectiveness of resistance training in children: A meta-analysis. Sports Medicine, 22, 176-186.

Gilbert, J. A. (2005). Using target heart-rate zones in your class, tournai of Physical Education, Recreation & Dance, 76(3), 22-26.

Malina, R. M., Bouchard, C., & Bar-Or, O. (2004). Growth, maturation, and physical activity (2nd ed.). Champaign, IL: Human Kinetics.

Meredith, M. D., & Welk, G. J. (Eds.). (2004). Fitnessgram/Activitygram test administration manual (3rd ed.). Champaign, IL: Human Kinetics.

Michele F.(2009).Children and Exercise Appropriate Practices for Grades K-6. Journal of Physical Education, Recreation & Dance. Reston: Apr . Vol. 80, Iss. 4; pg. 18, 7 pgs.

National Association for Sport and Physical Education. (2004). Physical activity for children: A statement of guidelines for children ages 5-12 (2nd ed.). Reston, VA: Author.

National Strength and Conditioning Association. (1996). Youth resistance training: Position statement paper and literature review. Strength and Conditioning, 18(6), 62-76.
Payne, V. G., & Morrow, J. R. (1 993). Exercise and VO^sub 2^ max in children: A meta-analysis. Research Quarterly in Exercise and Sport, 64, 305-313.
Rowland, T. W. (2005). Children's exercise physiology (2nd ed.). Champaign, IL: Human Kinetics.
Sallis, J. F., Buono, M. J., & Freedson, P. S. (1991). Bias in estimating caloric expenditure from physical activity in children: Implications for epidemiological studies. Sports Medicine, 11, 203-209.
Strong, W. B., Malina, R. M., Blimkie, C. |. R., Daniels, S. R., Dishman, R. K., Gutin, B., et al. (2005). Evidence-based physical activity for school-age youth, tournai of Pediatrics, 146, 732-737.
Vehrs, P., & Hager, R. (2006). Assessment and interpretation of body composition in physical education, iournal of Physical Education, Recreation & Dance, 77(7), 46-51.
Wilmore, J. H., & Costili, D. L. (2004), Physiology of sport and exercise (3rd ed.). Champaign, IL: Human Kinetics.