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Exercise Deficit Disorder in Youth: Play Now or Pay Later

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Session Description. Recent epidemiological reports indicate that contemporary youth are not as active as they used to be, and this decline in physical activity seems to progressively decrease after age 6. Since physical fitness in youth is recognized as a power marker of health, evidenced-based interventions and public health policies are needed to identify children at risk for physical inactivity and promote positive lifestyle choices. Exercise deficit disorder or EDD is a term that is used to describe a condition characterized by reduced levels of regular physical activity that are below recommendations consistent with positive health outcomes. The use of this term conveys a fresh view of this conventional health care concern that can be used to raise public awareness about the importance of regular exercise for school-age youth. Moreover, new insights into the design of youth fitness programs may prove to be valuable for physical education teachers and youth coaches who develop and prescribe exercise programs for younger populations. Integrative neuromuscular training is designed to enhance both health- and skill-related components of physical fitness and has proven to be safe, cost-effective, worthwhile and enjoyable for children and adolescents. Integrative neuromuscular training provides an opportunity for children to master fundamental movement skills, increase muscle strength, improve movement mechanics, and gain confidence in their physical abilities. In this lecture, participants will learn about the impact of a sedentary lifestyle during childhood on life-long pathological processes and the importance of implementing integrated neuromuscular training into the physical education curriculum and sports training programs.

Session Outline

- I. Exercise and health**
 - a. Hippocrates was right
 - b. Establish healthy habits early in life
 - c. Fundamental movement skills and lifetime physical activity

- II. Current trends in youth *unfitness***
 - a. Epidemiological reports and physical inactivity
 - b. Secular trends in neuromuscular fitness
 - c. Body composition trajectories and fundamental movement skills
 - d. Troubling diagnosis of type 2 diabetes in school-age youth

III. Exercise deficit disorder or EDD

- a. Global physical activity recommendations for youth: How much is enough?
- b. Signs and symptoms of EDD: The silent condition
- c. Identifying inactive youth: How, when, and why?
- d. No child is immune from EDD: Target normal weight, inactive youth too!
- e. Preventative strategies are needed
 - i. Obtain a “play history’ on every child
 - ii. Prescribe daily exercises and activities
 - iii. Work with other professionals (e.g., school nurses, physical therapists)
 - iv. Educate families
 - v. Initiate school- and community-sponsored activity programs

IV. The Next Step

- a. Reversing current trends in physical inactivity
- b. Changing the current culture: High tech vs low tech
 - i. Health-related physical activity
 - ii. Skill-related physical activity
- c. Nature vs nurture: Can we modify motor development during the growing years?

V. Exercise is Sports Medicine

- a. Is 60 minute of MVPA optimal?
- b. Integration vs isolation

VI. Integrative neuromuscular training (INT) for youth

- a. Potential benefits and concerns
- b. Beyond sets, reps and exercises
- c. Exercise, instruction and supervision
- d. Progression and program variation
- e. Program ideas with body weight, medicine balls and balloons

VII. Suggested Readings

- Faigenbaum, A., Myer, G. Exercise deficit disorder in youth: Play now or pay later. *Current Sports Medicine Reports, in press (2012)*
- Faigenbaum, A., Gipson-Jones, T. Myer, G. Exercise deficit disorder in youth: An emergent health care concern for school nurses. *Journal of School Nursing, in press*
- Faigenbaum, A., et al (2011). Effects of integrative neuromuscular training on fitness performance in children. *Pediatr Exerc Sci, 23, 573-584*
- Faigenbaum, A., Stracolinni, A., Myer, G. (2011). Exercise deficit disorder in youth: The hidden truth. *Acta Paediatrica, 100, 1423-1425.*
- Myer, G. et al. (2011). Integrative training for children and adolescents: Techniques and practices for reducing sports-related injuries and enhancing athletic performance and in young athletes. *Phys Sports Med, 39:74-84*
- Myer, G., et al (2011). When to initiate integrative neuromuscular training to reduce risk of sports-related injuries in youth? *Curr Sports Med Reports. 9: 161-168.*