INTRODUCTION

Participation in organized youth sports is increasing, and the opportunities to participate in more competitive environments are happening at younger ages (NCYS, 2008). Integrative neuromuscular training is a conceptual training model that is operationally defined as a supplemental training program that incorporates general (e.g., fundamental movements) and specific (e.g., exercises targeted to motor control deficits) strength and conditioning activities such as resistance, dynamic stability, and plyometric exercises that are designed to enhance both health and skill-related components of physical fitness. Integrative training is designed to help youth to master fundamentals, improve movement mechanics, and gain confidence in their physical abilities while participating in a program that includes variety, progression and proper recovery intervals. The cornerstone of integrative neuromuscular training is age-appropriate education and instruction by qualified professionals who understand the fundamental principles of pediatric exercise science and genuinely appreciate the physical and psychosocial uniqueness of children and adolescents. (Avery, 2011).

Physical activity for children’s growth and development

Physical activity is vital for a child’s development and lays the foundation for a healthy and active life. Early childhood services are ideally placed to foster the development of good physical activity habits early in life and to encourage families to engage in regular physical activity. Childhood services should offer a wide choice of play-based, physically active learning experiences that link to children’s interests, abilities, identity and prior knowledge. Physical activity in childcare needs to be made up of both structured (i.e. intentionally taught) physical activity and unstructured, spontaneous activity. In addition, as active role models, educators can encourage children to participate in physical activity.

Benefits of physical activity in children

- Promoting healthy growth and development
- Helping to achieve and maintain a healthy weight
- Building strong bones and muscles
• Improving cardiovascular fitness
• Improving balance, coordination and strength
• Maintaining and developing flexibility
• Improving posture
• Assisting with the development of gross motor and fine motor skills
• Providing the opportunity to develop fundamental movement skills
• Helping to establish connections between different parts of the brain
• Improving concentration and thinking skills
• Improving confidence and self-esteem
• Relieving stress and promoting relaxation
• Providing opportunities to develop social skills and make friends
• Improving sleep.

INTEGRATIVE NEUROMUSCULAR TRAINING

Integrative Neuromuscular Training involves various activities that target physical, neurocognitive and visual-motor abilities (Myer, 2013).

(i) **Resistance/ strength training**

Exercising your muscles by using opposing force, such as free weights and bands, is called resistance training. When you pick up a heavy object, resistance is what you work against to lift the item. Muscle resistance improves tone, mass and endurance, and it prevents injuries.

(ii) **Dynamic stability exercises**

Dynamic stability exercises are ones that target the trunk—abs and back muscles—to improve posture.

(iii) **Core training**

Core training is a series of exercises that work the transverse abdominis, erector spine, lower lats and the oblique.

(iv) **Agility exercises**

Agility drills and exercises help the athlete move quickly and change direction easier.

Exercise recommended for including INT in a low-volume warm-up program.

- Jogging, skipping, backward running, and carioca.
- Strengthening exercises: Lunges, squats, hamstring-strengthening exercises, and toe raises.
- Plyometrics exercises: Variety of hopping, jumping, and bounding drills.
- Agility exercises: Shuttle, diagonal running and changes directions.

**Benefits of Integrative Neuromuscular Training**

- Optimize growth and development.
- Reduce the rate of injury during sports practice.
- Reduce and correct the improper bio-mechanical movements.
- Help to reduce the incidence of metabolic or musculoskeletal disorders.
- Acquire a great variety of motor skills.
- Enhance muscle strength and exercise technique.
- Improve dynamic stability and postural control.
- Improve predisposition to do other physical activities (sports, games, etc).
- Stimulate an active and healthy lifestyle.
- Improve performance in specific sports tasks (soccer, football, tennis, baseball, rugby, etc..) (Fernando Naclerio, 2011)

**CONCLUSION:**

Integrative neuromuscular training will produce substantial improvements in health- and skill-related fitness components in children, and this type of intervention can be a cost-effective and time-efficient method for enhancing motor skills and promoting physical activity in boys and girls. The integrative neuromuscular training effective youth fitness programs and optimizes training adaptations in young children. The primary goal of integrative neuromuscular training for children and adolescents should be to improve muscle strength and fundamental motor skill performance by performing a variety of exercises with progressive loads that are consistent with individual needs, goals and abilities (Avery, 2014). With a program based on the physical and psychosocial uniqueness of children, integrative neuromuscular training that is sensibly progressed over time and consistent with individual needs, goals and abilities can be integral to development and promotion of a health-oriented approach to lifelong physical activity. (Gregory D et al, 2011)

**REFERENCES:**
1. Avery D. Faigenbaum, EdD, FACSM Department of Health and Exercise Science The College of New Jersey 2011 Northland Regional Chapter of the ACSM Progressive Plyometrics for Kids


