

Youth Fitness

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Readiness for Soccer

“Readiness for sports is the match between a child’s level of growth, maturity and development, and the task demands presented in competitive sports.”

Robert M. Malina, Ph.D.

Motor Activity For Children

Components of Physical Fitness

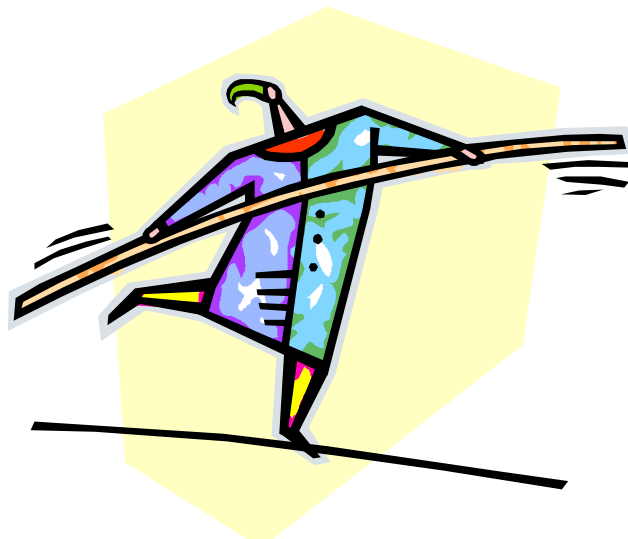
- ❑ Balance
- ❑ Agility
- ❑ Eye/Foot & Eye/Hand coordination
- ❑ Endurance
- ❑ Flexibility
- ❑ Strength
- ❑ Speed
- ❑ Acceleration
- ❑ Power
- ❑ Body Composition (leanness vs. fatness)

Motor Activity For Children

- These components of Physical Fitness are very important for soccer players' aged twelve and younger.
- Different components are emphasized at different ages.

- **Balance** The ability of the body to maintain stability and equilibrium while running or standing on one foot.

 - Requires proprioception in the foot and leg (the brain orchestrating action of the muscles) as well as good core muscle strength
- **Agility** The ability to change direction quickly and easily with the body and the body parts.



❖ Eye/Foot & Eye/Hand Coordination

The skillful and effective interaction of movements involving visualization and actions of the hands or feet.

❖ Eye/Foot & Eye/Hand Coordination

- Prior to age 9 visual tracking acuity is not fully developed. Players have difficulty accurately tracking long kicks or the ball off of the ground.

Eye/Foot & Eye/Hand Coordination



Beginning at approximately age 10 the visual tracking acuity achieves an adult pattern.

Two Forms of Endurance

- **General Endurance**
 - aerobic (with oxygen) and provides the player with long-term endurance
- **Local Muscle Endurance**
 - anaerobic (without oxygen) and corresponds to short-term needs such as sprinting and jumping



Factors Behind Endurance and Kids

□ The Major Factor

Cognitive Development

□ A Minor Factor

Cardiovascular Development

Endurance

- The ability to perform muscle activity multiple times with the onset of fatigue
 - Aerobic Capacity
 - The ability to utilize oxygen while “burning metabolic fuels” during physical activity – provides for long-term endurance
 - A measure of heart and lung fitness by delivering oxygenated blood to the muscles and utilizing that oxygen during glucose metabolism

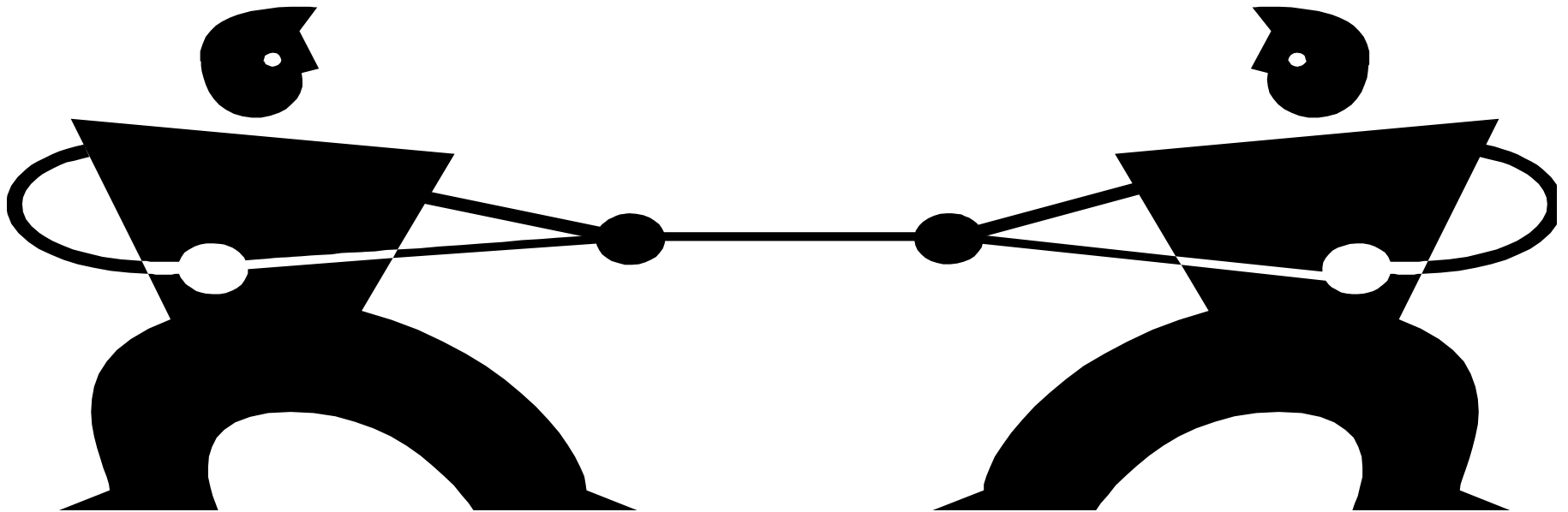
Endurance Training and Kids

- Endurance training becomes effective at 12 to 18 months after PHV (Peak Height Velocity), which is about 13 years, 6 months for boys and 11 years, 6 months for girls.
- Significant results are realized for boys at about 15 years of age and for girls at about 14 years of age and varies with each individual's physical development.

CAUTION

Flexibility

- The ability to conduct movements in certain joints with an appropriate range of motion.
- ▣ Improved flexibility is achieved through stretching and range of motion exercises.



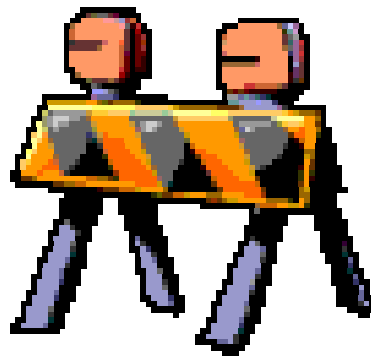
Strength

The ability to overcome resistance or oppose an obstacle through muscular action.



Also - - Strength and Kids

- Strength training, just like endurance training becomes effective at 12 to 18 months after PHV (Peak Height Velocity).
- Significant results are realized for boys at about 15 years of age and for girls at about 14 years of age.
- Source – Istvan Balyi Ph.D.



Speed & Acceleration

- Pure speed- the ability to cover the distance between two points in the shortest amount of time.
- Technical speed- the ability to perform skills at speed.
- Mental speed- ability of the player to be aware of all factors, conditions and options inside and outside of the game.

If You Want to Become a World Class Sprinter?





Power

The application of strength with speed.
Explosive action of performance.

$$\text{Strength} + \text{Speed} = \text{Power}$$

Growth, Maturity & Development

- ❑ Growth: body size, muscle strength, body composition & aerobic capacity
- ❑ Maturity: skeletal age, pubertal age, chronological age, level of proficiency in basic motor skills
- ❑ Development: social, emotional & cognitive competence

Objective

to provide an all around athletic experience.

✓ Activities

that emphasize basic coordination and fitness

✓ Games

and activities that incorporate agility...running, hopping and jumping



Fundamental Movement Patterns

- ❑ Locomotor – body moving through space, such as walking, jumping, hopping, etc
- ❑ Nonlocomotor – specific parts of the body are moved, such as pushing, twisting, etc
- ❑ Manipulative – patterns in which objects are “moved”, such as catching, passing, dribbling; and other activities involving propelling and receiving the ball

Motor Patterns / Motor Skills

- ⇒ Motor Pattern – basic movement involved in the performance of a task. The emphasis is on the movement composing the task.
- ⇒ Motor Skill – focuses on the proficiency of completing the task. Motor skill looks at accuracy, precision and economy of performance.



Fine Motor Skills – Gross Motor Skills

- ❑ Fine motor skills refer to movements requiring precision and dexterity, such as manipulative tasks.
- ❑ Gross motor skills refer to movements of the entire body or major segments of the body.
- ❑ Shooting a ball requires both gross motor and fine motor activity. Speed entails gross motor forces. Accuracy and control come from fine motor activity.

Motor Patterns & Skills

Process & Product

In general, but not always, the process and product of a motor performance are related. Good performers in terms of the product usually demonstrate proficiency in the movement process.

Dr. Stephen Rice

Jersey Shore University Medical Center

Process and Product of Movement

- × Process: the performance of a specific movement in terms of its components ... hip rotation, foot placement, etc
- × Product: is the outcome of the act ... the distance a child jumps, etc

Developmental Sequence

- All physical tasks have a developmental sequence on the pathway to achieving adult patterns.
- Achievement of milestones cannot be predicted based on age, size, weight or strength. Rate of mastery of skills varies widely.
- From infancy, development progresses from head to arms to trunk and then to legs.

Warm-Up

- Rhythmic and Range of Motion exercises
- Use the ball as much as possible
- Gradually increasing the tempo of the activity raises the heart & breathing rates



The warm-up and the cool-down must be the bookends of all training sessions and matches.

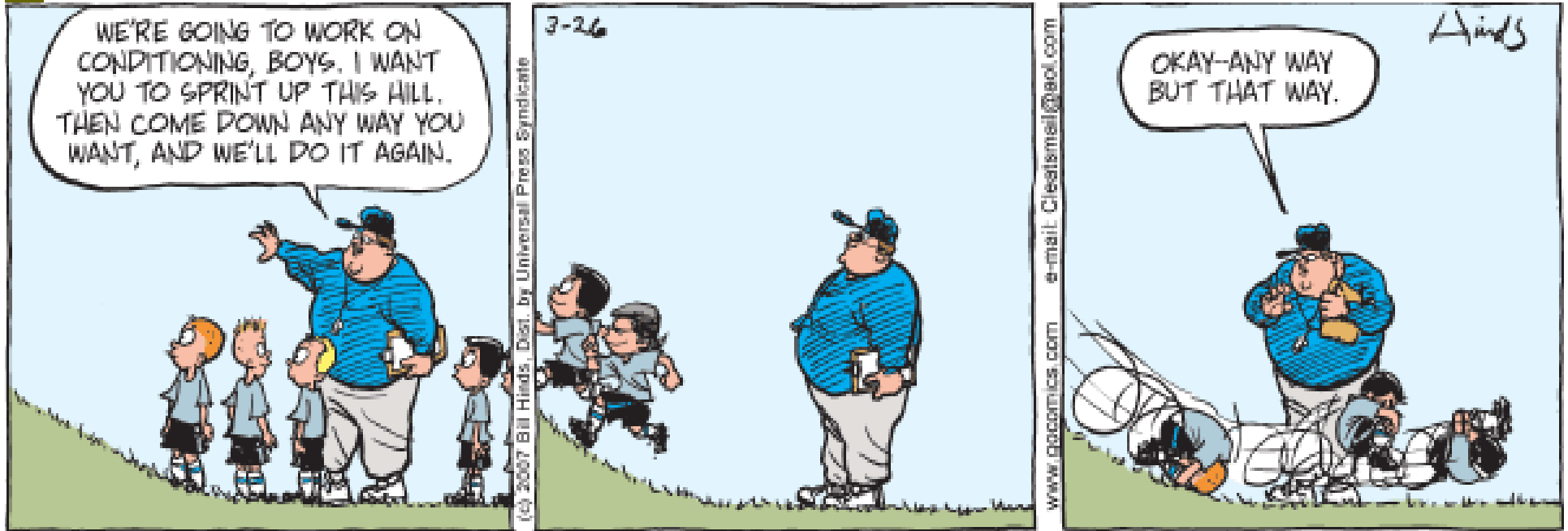
Cool-Down

- smooth transition from vigorous exercise to resting state
- consists of light, fun activities and stretching exercises
- allows players to unwind, physically and mentally

EFFECTIVE COOL-DOWNS

- include light activities such as juggling or passing in pairs or partnernastics
- include two or three stretching exercises to loosen muscles that may have become tight from exertion
- this will minimize muscle soreness (elimination of lactic acid from the muscles) over the short-term
- it will keep your players more agile and responsive throughout their athletic careers

Economical Training



- ❑ Combines more than one component of soccer into the training session
- ❑ Combine fitness training with the development of ball skills
- ❑ This makes the best use of the players' and coach's time

Match Fitness for children -
should not be *work*, but
should be **PLAY**.



Any Questions

