



Con il patrocinio di:



III CONGRESSO SIRIDAP
SEMINARIO INTERNAZIONALE

L'ALTRA FACCIA DELLA MEDAGLIA

THE OTHER SIDE OF THE COIN

IPERATTIVITÀ, SPORT E DISTURBI DEL
COMPORTAMENTO ALIMENTARE

*HYPERACTIVITY, SPORT AND EATING
DISORDERS*

25 - 26 MAGGIO 2018
TEATRO COMUNALE
TODI (PG)

Sono previsti ECM per tutte le figure sanitarie fino ad
un massimo di 200 persone.

Informazioni:
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La “professionalità” sportiva in adolescenza è un fattore di rischio?

Giorgio Galanti

Ordinario di Medicina Interna

Direttore S.O.D.c di Medicina dello Sport e dell'Esercizio

Scuola di Specializzazione in Medicina dello Sport

Coordinatore Medico e Responsabile Scientifico ACF Fiorentina



Il Giovane Atleta

I bambini e gli adolescenti non devono essere considerati versioni in miniatura degli adulti. Sono unici in ogni fase del loro sviluppo.



Growth and Maturation



Accrescimento, sviluppo e maturazione

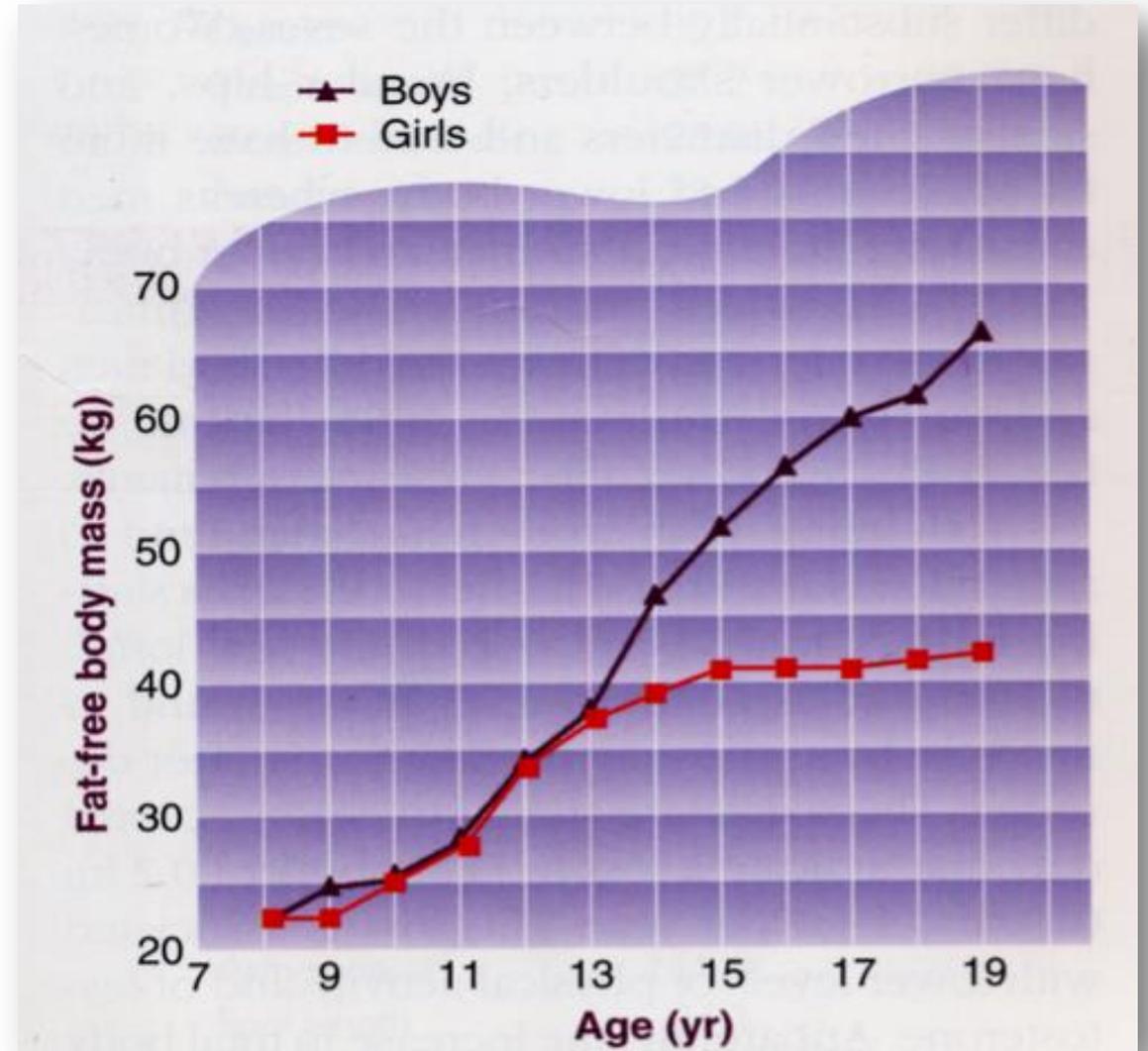
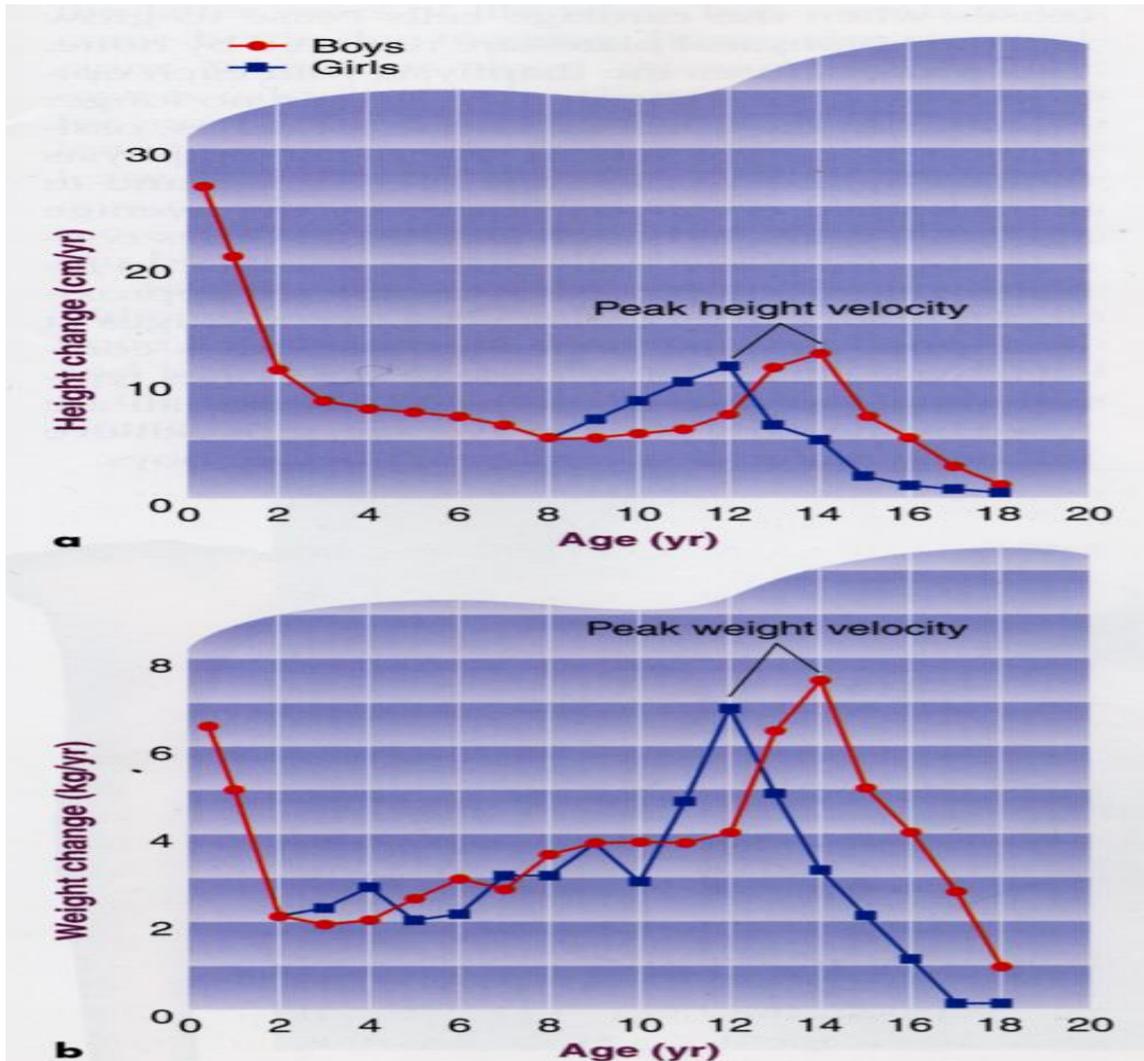
**Lo stato di maturità di un bambino
o di un adolescente può essere
definito da:**

- età cronologica**
- età scheletrica**
- fase di maturazione sessuale**

Effetti dell'esercizio sulla crescita e maturazione

- **Le Risposte dello sviluppo dell'individuo all'attività fisica e all'allenamento regolare non sono sufficienti per alterare la programmazione genotipica del processo di crescita e maturazione.**
- **L'allenamento regolare non ha effetti apparenti sulla crescita in altezza, ma influenza notevolmente il peso e la composizione corporea, risultando in riduzione del grasso corporeo totale, massa magra maggiore, massa corporea totale maggiore**

Height Weight FFM changes with age



Esercizio e Crescita Ossea

- ❖ **L'Esercizio fisico e una dieta adeguata (dieta ricca di calcio) sono essenziali per una corretta crescita ossea. L'esercizio influisce principalmente sull'osso in larghezza, densità e forza, ma ha poco o nessun effetto sull'allungamento.**
- ❖ **L'Esercizio nei soggetti in via di sviluppo permette il raggiungimento di un valore superiore di picco di massa ossea, questo significa un passo fondamentale nella prevenzione dell'osteoporosi**

Sport Specialization: Does Early Sports Specialization Increase Negative Outcomes and Reduce the Opportunity for Success in Young Athletes?

**Gregory D. Myer, Neeru Jayanthi, John P. Difiori,
Avery D. Faigenbaum, Adam W. Kiefer, David Logerstedt, and Lyle J. Micheli**

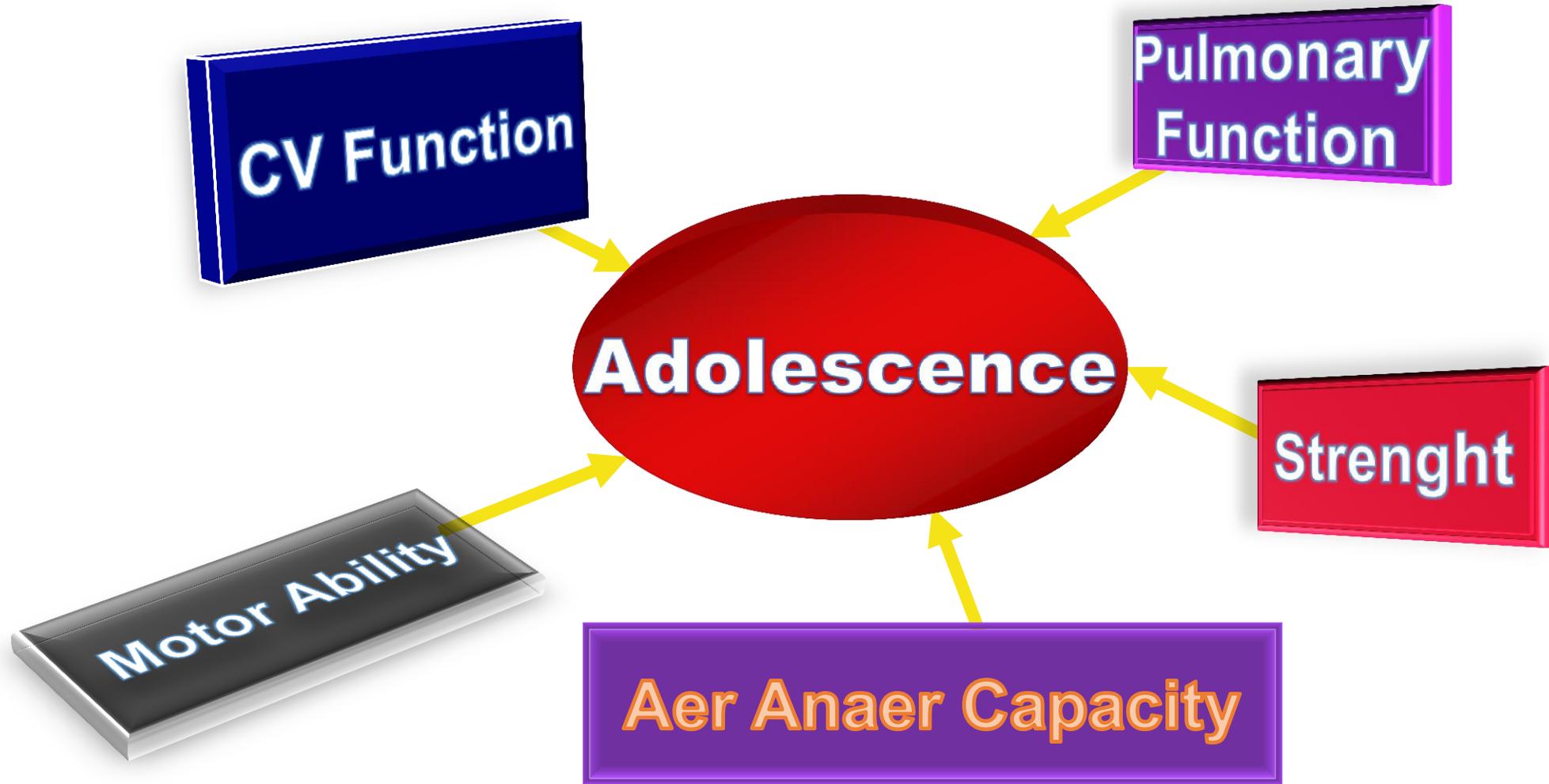
Sports Specialization, : Alternative Solutions to Early Sport Specialization in Youth Athletes

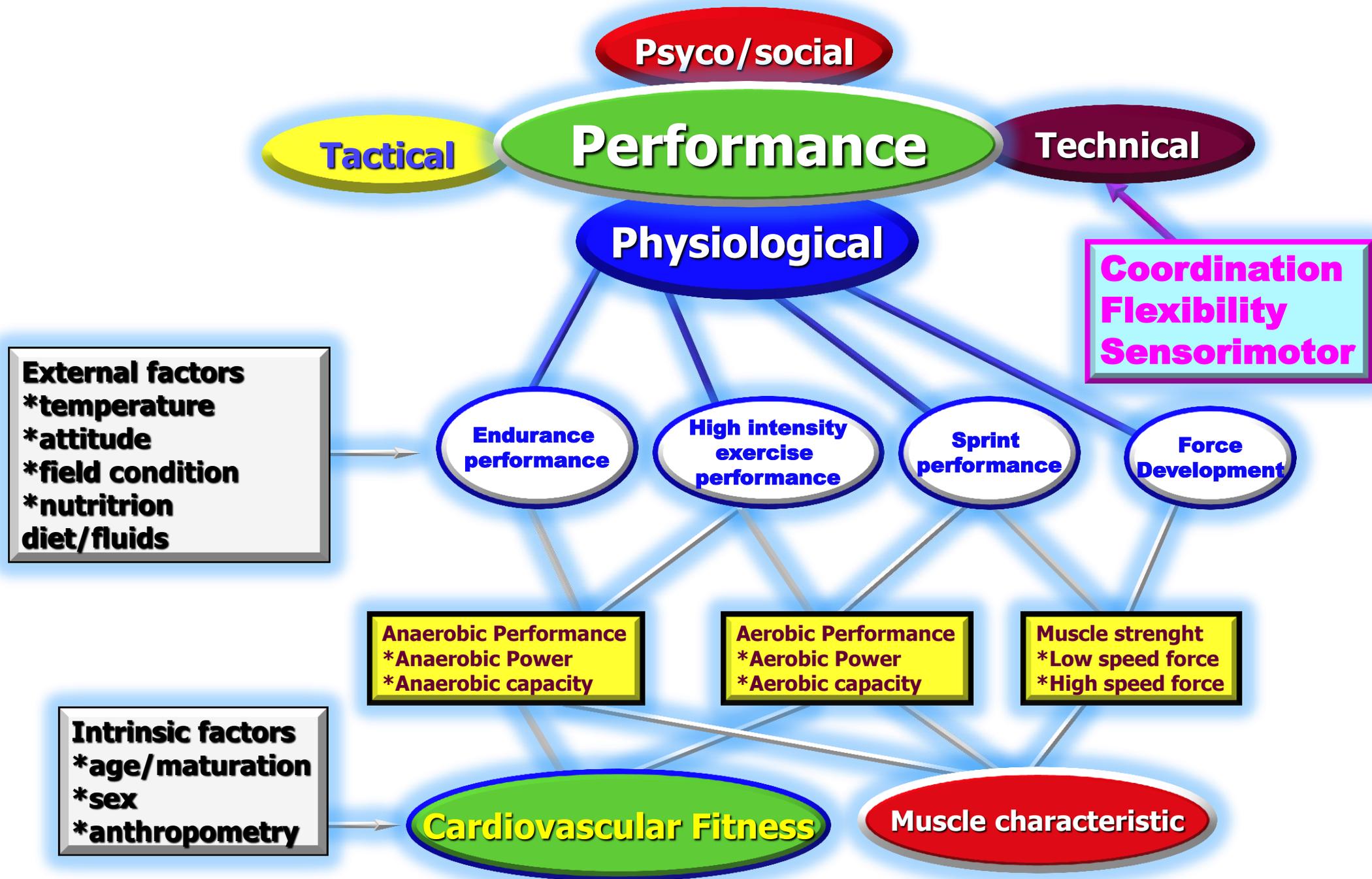
**Gregory D. Myer, Neeru Jayanthi, John P. Difiori,
Avery D. Faigenbaum, Adam W. Kiefer, David Logerstedt, and Lyle J. Micheli**

- **Between 30 million and 45 million youths participate in sports. Only 0.3% selected at the youngest level in each sport eventually ranked among 10 best international senior athletes.**
- **Youth sports are the leading cause of adolescent injuries, with 3.5 million children under the age of 14 being treated for sports-related injuries annually. With so many injuries, one of the best ways to protect youths is by teaching proper technique**

- **Children and adolescents are being exposed to competitive sport and intensive training programs at ever younger ages.**
- **So it is important to understand the children's physiological responses to exercise and training and how this responses differ from those of the adult athletes, in order to avoid doing harm trough inappropriate practices and attitudes.**

Growth and Maturation during Adolescence



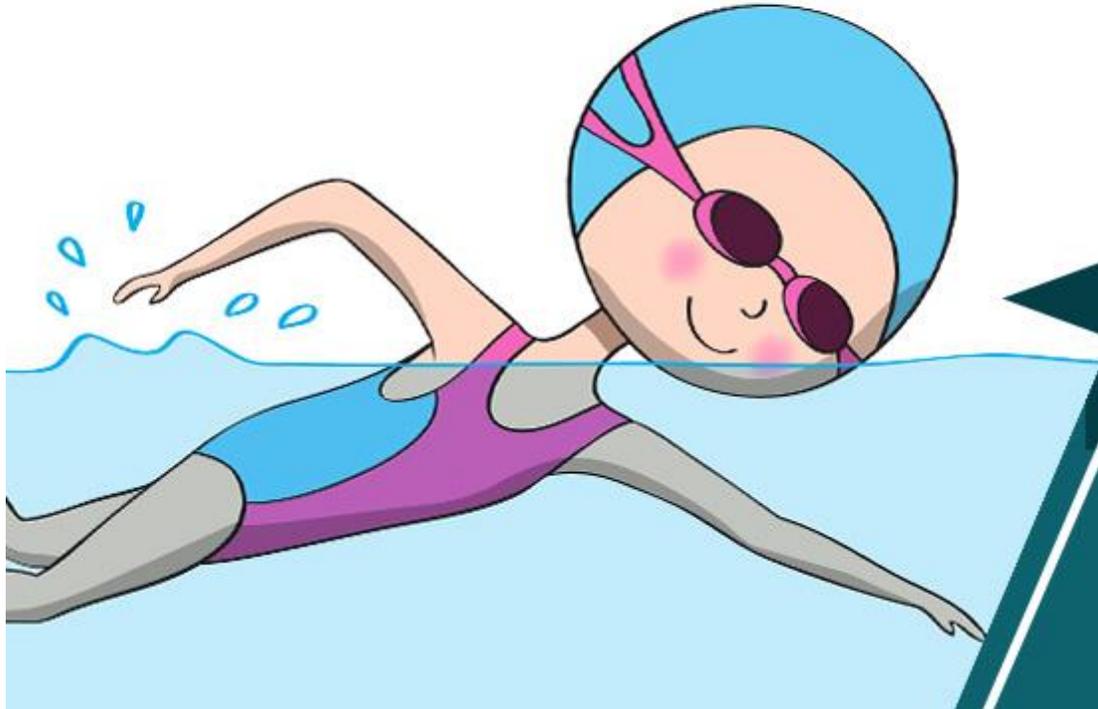


Declarative memory

Memorize
information



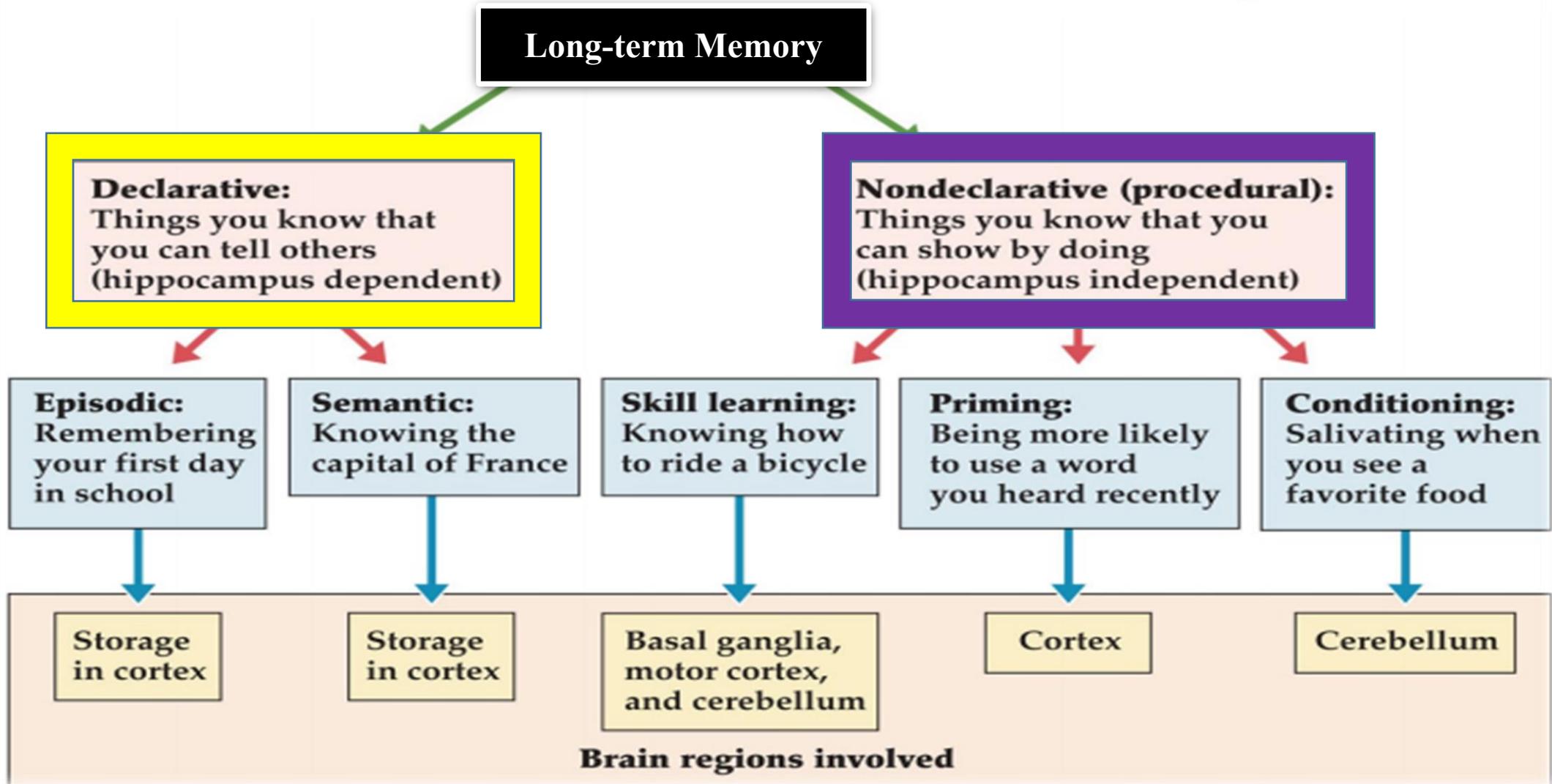
Buzzle.com



Nondeclarative memory

Perform skills
without recalling.

Subtypes of Declarative and Nondeclarative Memory



Long Term Memory Types

- Episodic



- Last birthday?

Semantic



Name the largest mountain in Aust.

Procedural



How to play baseball



Young People and Sport Activity: The importance of learning and memory

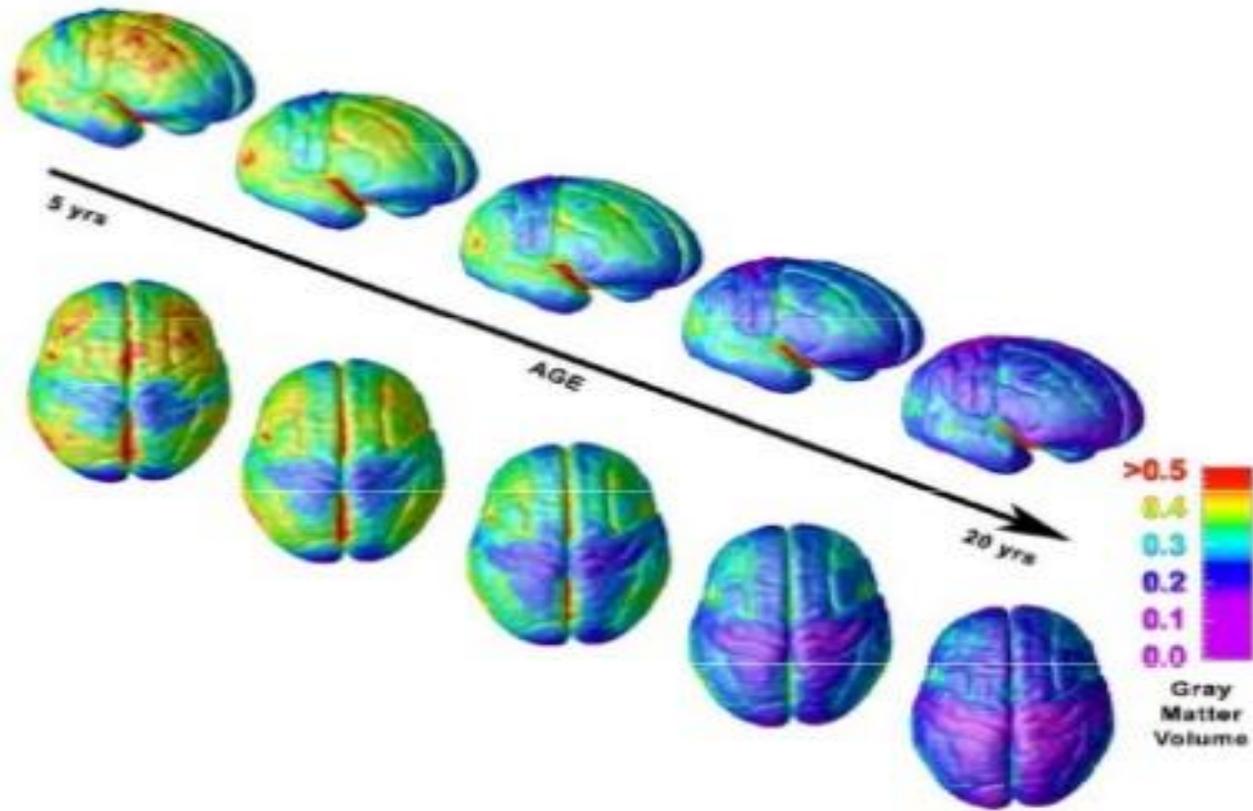


The development of motor skills

- **Development of motor skills proceeds according to the laws that govern physiological maturation of children.**
- **The development of movement patterns progress from simple arm or leg actions to highly integrated total body coordination.**
- **The rate of development depends not only on quality of environmental stimulus but also on the stage of brain development**



Development of Grey Matter



Grey matter develops quickly during childhood, but slows during adolescence.

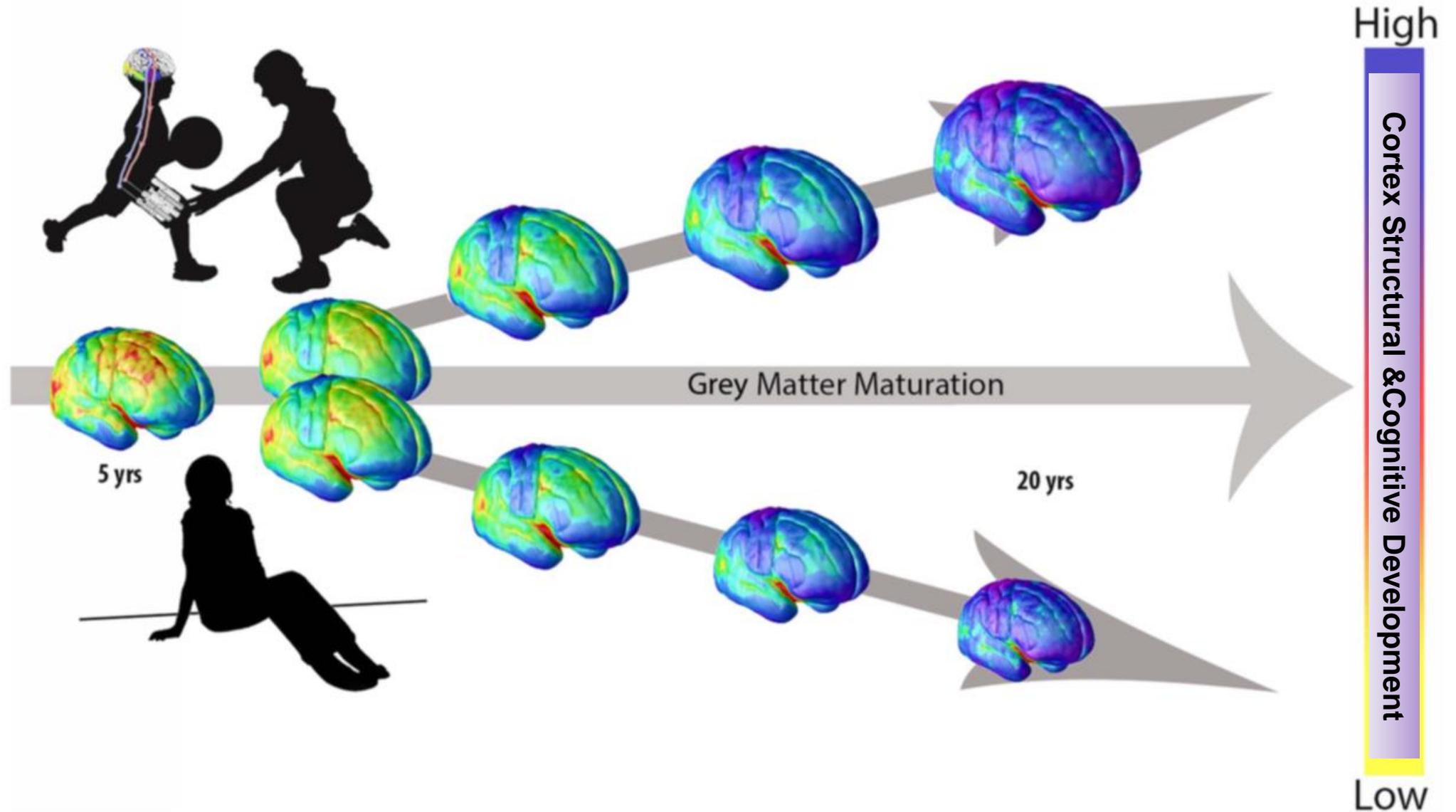


Grey matter volume peaks at age 11 in **girls** and at age 13 in **boys**.

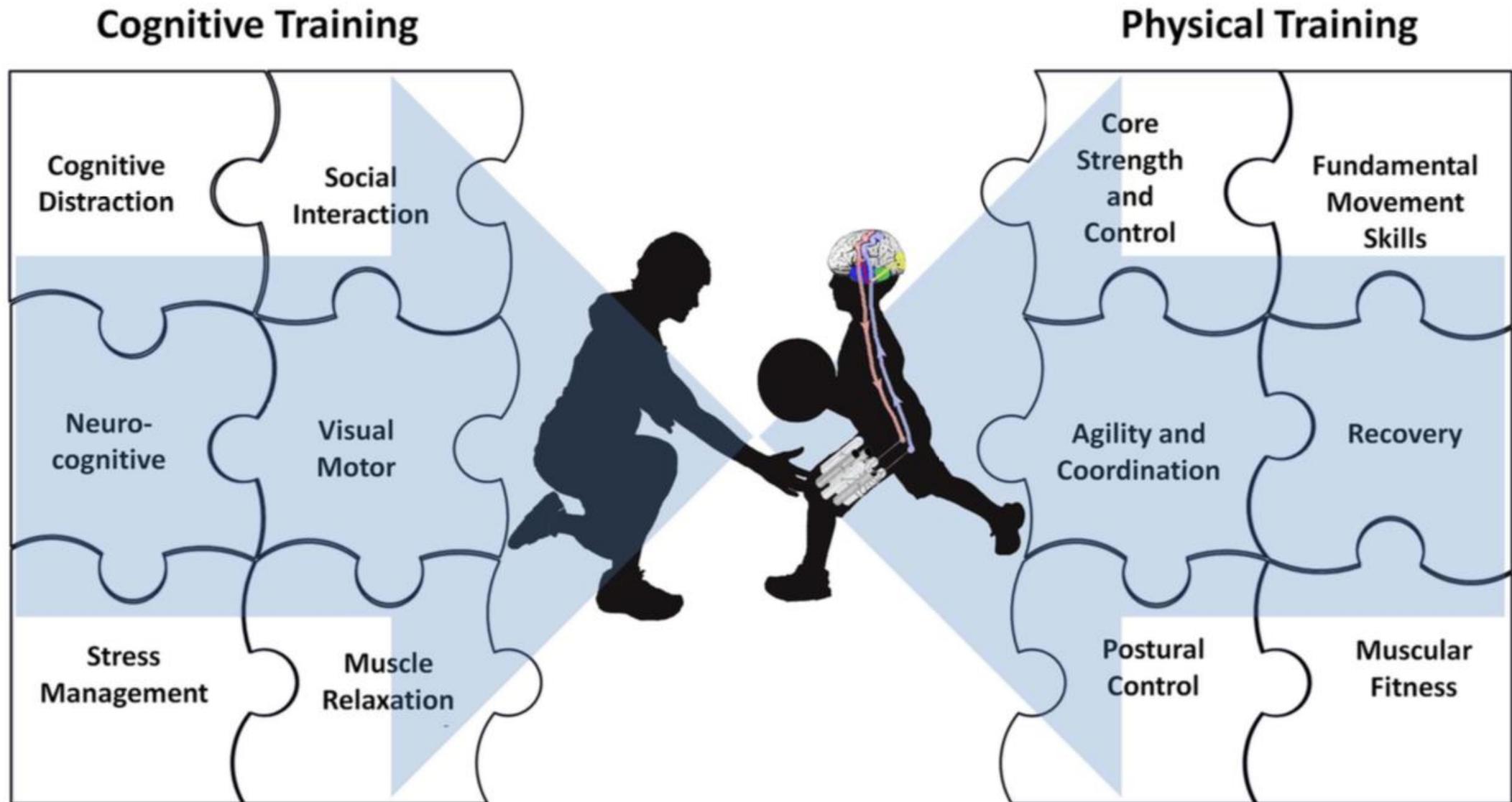


Then, the volume of grey matter begins to decline.

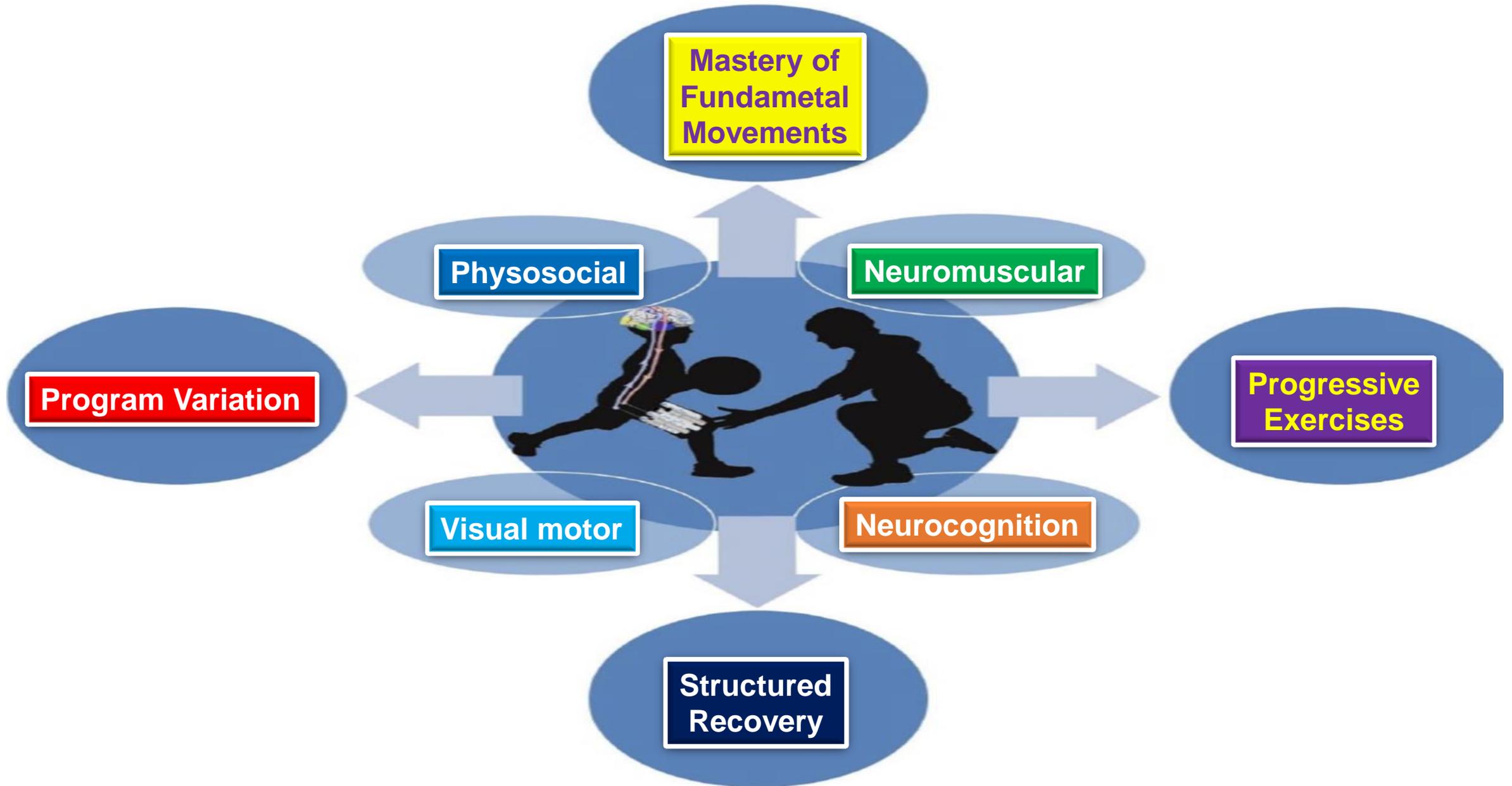
Following brain maturation, a young adult's corticomotor plasticity and potential for adapting dynamic interceptive actions may be strongly diminished. Integrative N T implemented prior to maturation may facilitate fundamental motor skill development. Conceptual model indicating the potential for integrative neuromuscular training during childhood to influence increased neuromuscular, cortex structural and cognitive development. Likewise, the down arrow indicates the potential for physical inactivity during the important growing years that can influence increased risk of metabolic syndrome and deficits in cortex and structural development.



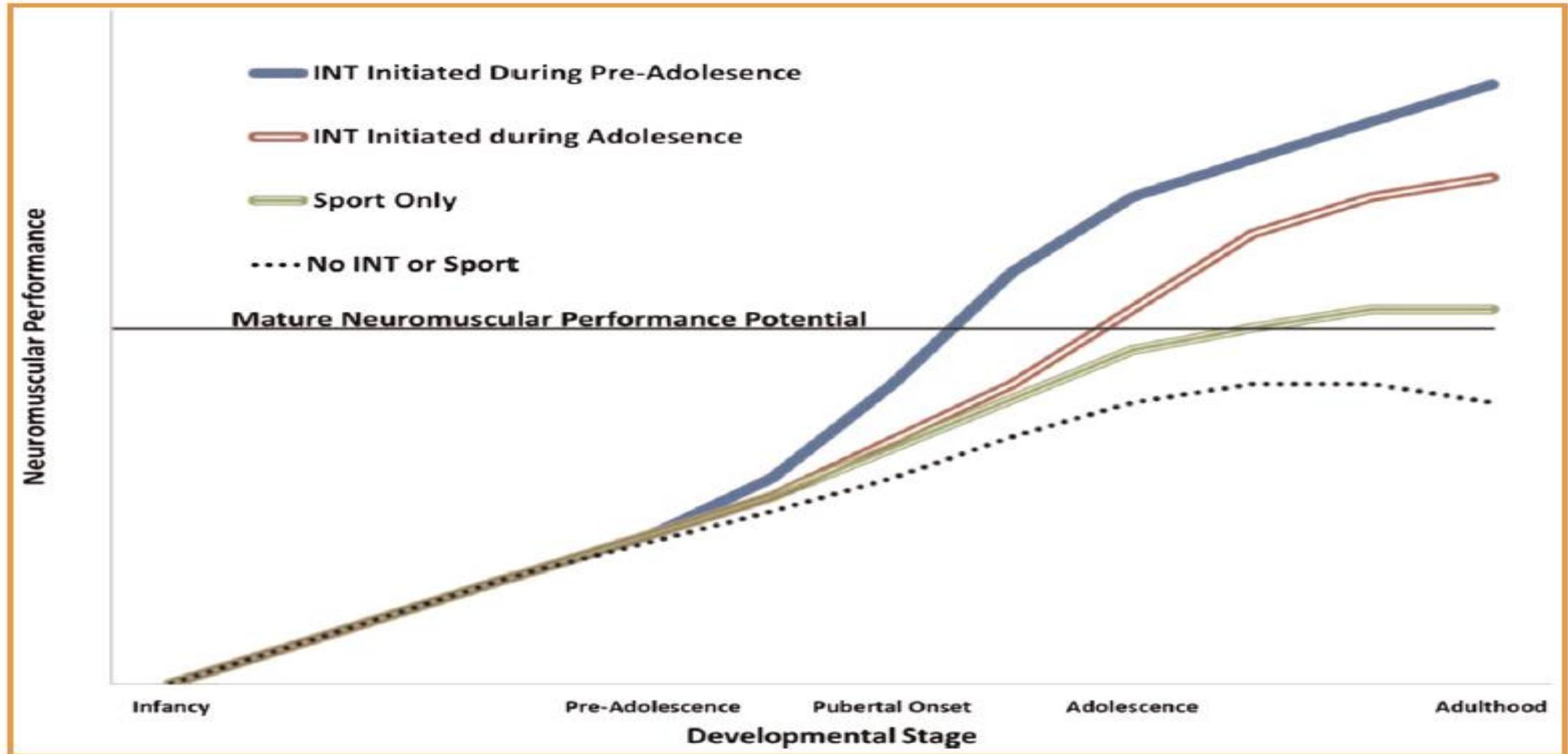
Integrative training model indicating a focus on integration of physical and cognitive training that is consistent with programming for youth.

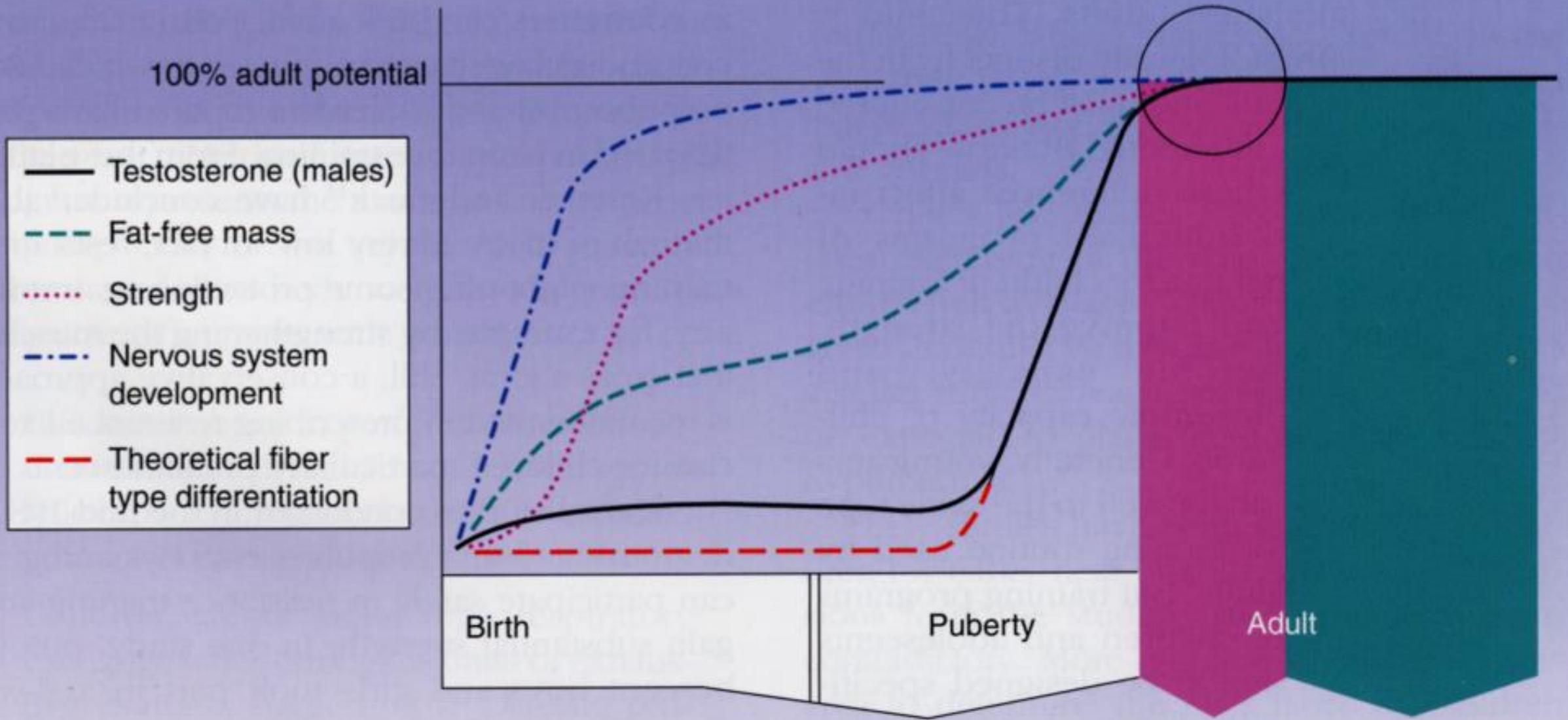


Qualified education and instruction support the complex programming components for effective implementation of integrative neuromuscular training.



Theoretical plot of the potential for improved motor skill development in generation Y with integrative neuromuscular training INT during youth.





Developmental Factors

The 12 fundamental movement skills



The static balance



The vertical jump



The sprint run



The catch



The hop



The leap



The side gallop



The kick



The skip



The two-hand strike



The overarm throw



The dodge

Manipulative Skills

Dribble (Feet)



THROW

TOSS



STRIKE



KICK



CATCH



DRIBBLE (HAND)



Twirl



PUNT



VOLLEY



Sport activity

behavioral

weight

impression

lifestyle

overeating

sickness

mental

vomit

overweight

health

body

trauma

self

nervosa slim

conscious
form **loss**
psychological

eating

treatment

fear

diETING

condition

starvation

diet

thin

anxiety

concept

vomiting

idea problem numbing pressure

disease
healthcare

disorder

fat

illness

embarrassed
avoidance
anorexic
shape guilty

stress

bulimic illnesses helplessness compulsive
food risk unhealthy bulimia

purging

anorexia

medical

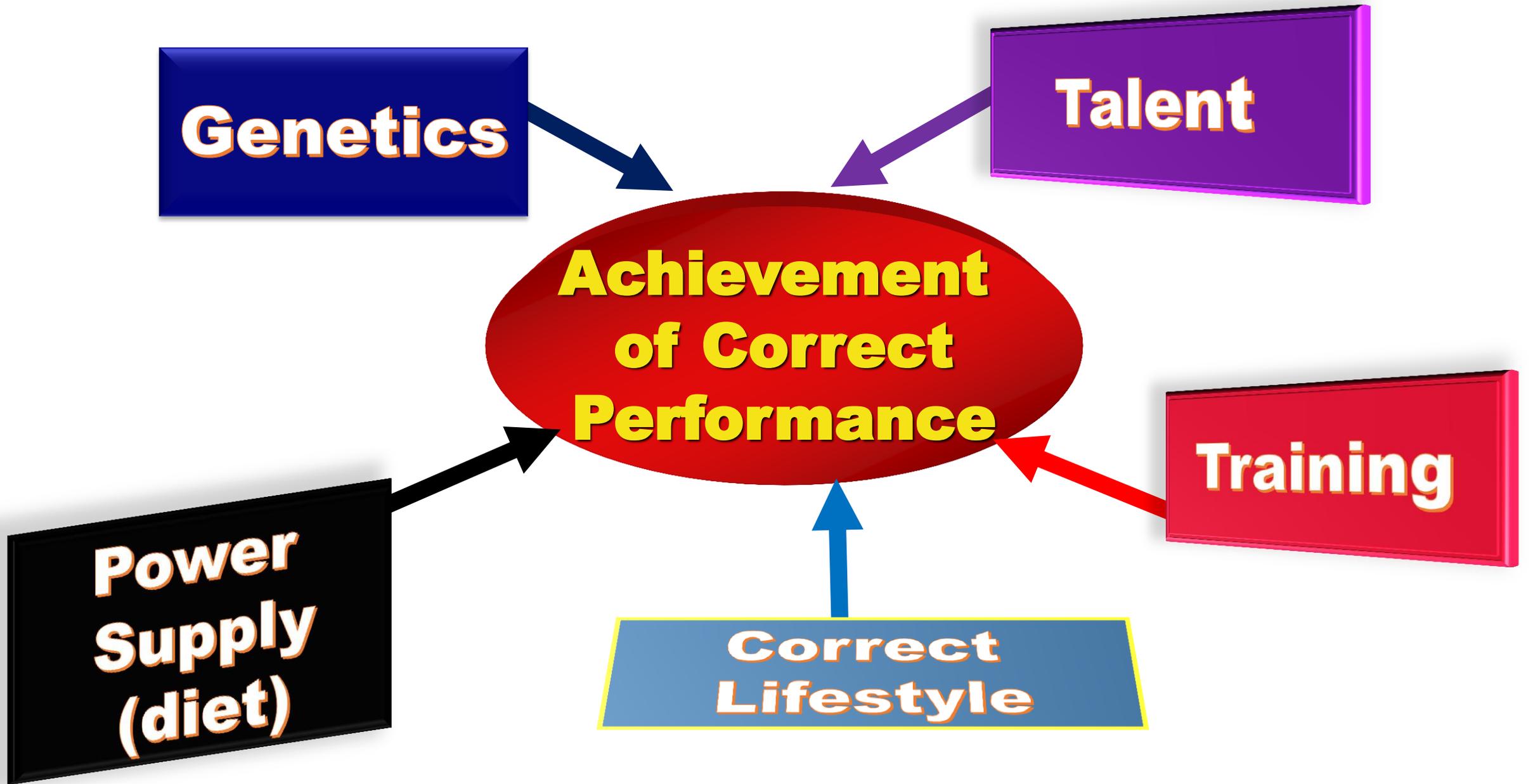
behavior

sick

extreme

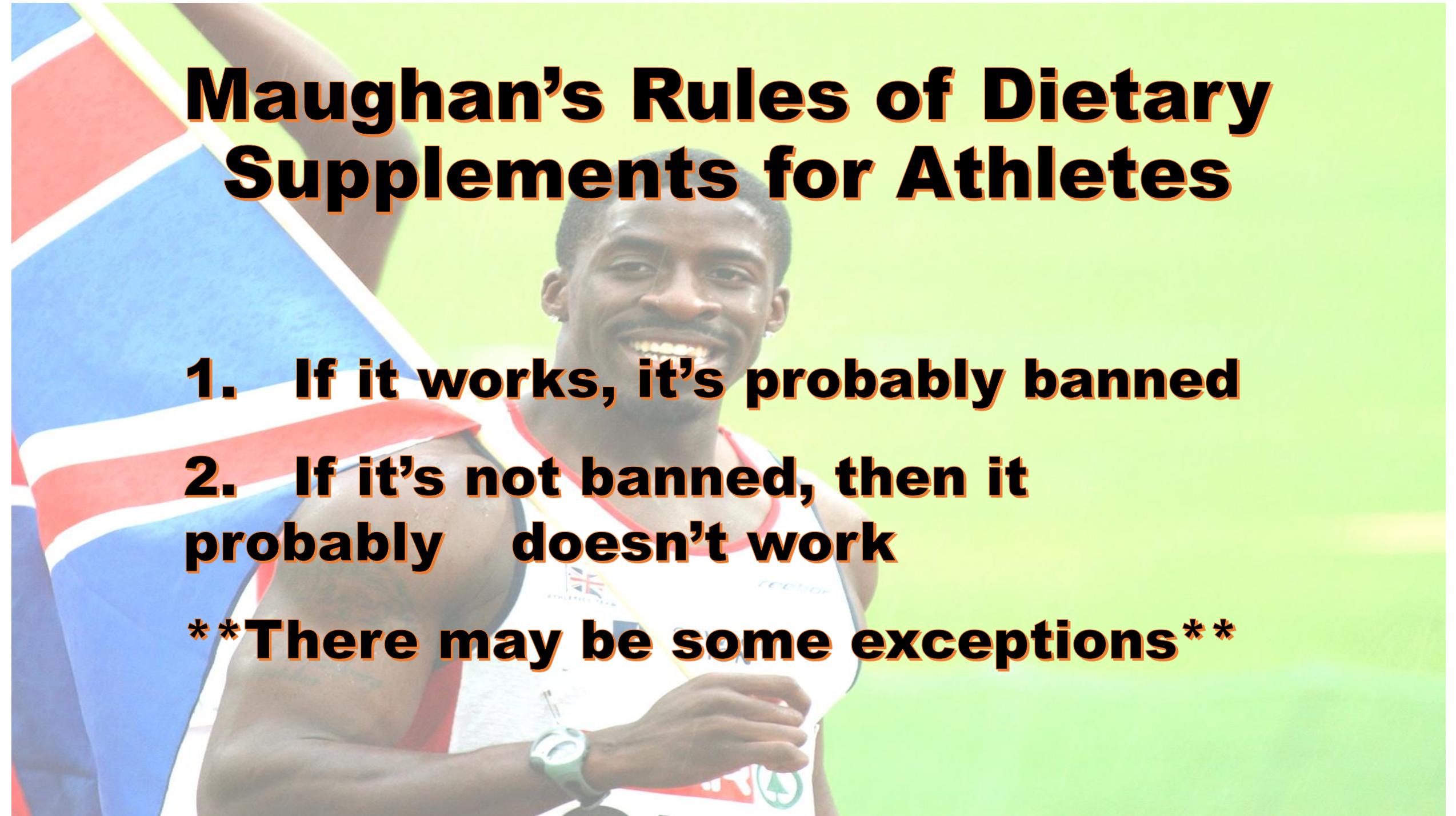
danger
depression

anxiety



Athletes and Integration

- **Research carried out in more than 40 years do not support the idea that the use of vitamin supplements improves performance and the ability to train hard aside of well-nourished and healthy people**
- ***W.McArdle 2005***



Maughan's Rules of Dietary Supplements for Athletes

1. If it works, it's probably banned

2. If it's not banned, then it probably doesn't work

****There may be some exceptions****

Athletes Diet and Integration

- **A balanced and diversified diet, designed for a specific sport, does not require any integration.**
- **In extreme endurance sports a sometimes very intense physical performance is required, hence the possible use of supplements.**

Participation in sports



- **Participation in sports has a number of positive effects on athletes. They tend to live healthier lives than non-athletes, and they gain skills in teamwork, discipline and decision-making that their non-athlete peers may not.**
- **However, some aspects of the sports environment can increase the risk of disordered eating and eating disorders. That means athletes and those who oversee athletics must be vigilant to detect signs of trouble.**
- **Disordered eating and eating disorders are related but not always the same. All eating disorders involve disordered eating, but not all disordered eating meets diagnostic criteria for an eating disorder.**

Ron Thompson is a consulting psychologist for the Indiana University NCAA

In girls, the pressure to meet unrealistic weight goals often leads to the spectrum of disordered eating, including anorexia and/or bulimia nervosa.

These disorders may affect the growth process, influence hormonal function, cause amenorrhoea, low bone mineral density and other serious illnesses which can be life-threatening.



POTENTIAL RISKS OF SPECIALIZATION

- **Social Isolation**
- **Overdependence**
- **Burnout**
- **Manipulation**
- **Injury**
- **Compromised Growth and Maturation**

- **Mental burnout is an important consideration when it comes to sports for young kids because the problem is usually with the parents. They're pressuring kids by making sure that everything is organized, that they get the best coach or play with the travel team, and the kid doesn't always want to do that.**
- **Kids need some room and distance to keep sports fun. We clearly want to encourage sports and physical activity, but kids don't necessarily have to prepare at age 9 to get a scholarship, and they're not necessarily going to be better at the sport because they practiced it at age 7 every day after school.**

Prevention

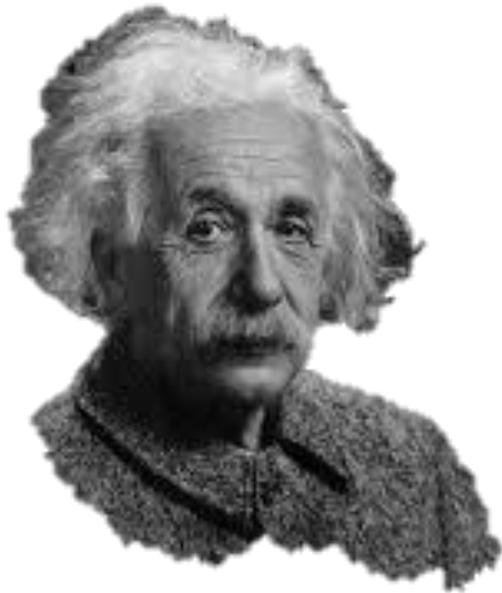
The coaches and the medical team must be aware that prevention can also be implemented through education by emphasizing the correct use of nutrition as a preventive function, suggesting especially in young people an adequate nutritional intake, in quantity and quality, including micronutrients such as Vitamin D, calcium and iron, and above all by convincing athletes that bone health sports performance depends on the interaction between adequate nutrition and exercise.

- ❖ **There is also an urgent need to demystify the myths concerning the association between excessive reduction of body weight and body fat content and improvement of sports performance.**
- ❖ **Educational programs are the best method to prevent eating disorders and eating disorders in athletes. For secondary prevention, early identification is essential and should be done with pre-competition exams, the recognition of food markers, and the use of self-administered validated questionnaires or clinical interviews.**

Conclusion

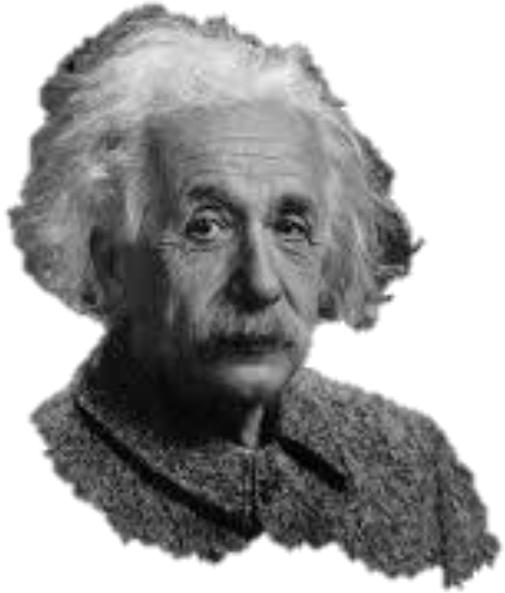
- **Young sport participants, including talented athletes, are children and adolescents with the needs of children and adolescents.**
- **Unfortunately, talented young athletes are often pawns in a complex matrix as the sport, adults who run the sport, parents, schools, sporting goods and services industries, media, and in some cases international politics.**
- **Sport scientists can be in a tenuous position studying the development of young athletes while avoiding manipulation by or entrapment in the matrix.**

- ***It's great to be outdoors, great to engage in physical activity, and it's fun to play sports. But encourage parents to mix the sports and not overuse different body parts. You don't want kids getting tennis elbow or wrecking their arms as a pitcher because they tried too many fastballs or curveballs.***
- ***Listen to your kids, let them vary their sports, and they'll get there soon enough on the specialization. They don't have to pretend that they're on the road to try to qualify for the Olympic team when they're very young.***
- ***You don't want to turn off kids from fun because that turns them off from physical activity, which leads to health problems later. So, prudence and a little bit of balance is the advice that physicians have to give when it comes to athletics.***



Most teachers waste their time by asking questions which are intended to discover what's pupil does not know, whereas the true art of question has for its purpose to discover what the pupil knows or is capable of knowing."

Albert Einstein



**Everybody is a genius.
But if you judge a fish
by its ability to
climb a tree,it will live its
whole life believing that it is
stupid
Albert Einstein**