

Who wouldn't get excited about working with professional athletes? In the Strength and Conditioning and Coaching world some consider it the ultimate goal to reach the level in your career where you are working with professional athletes. Often this is a dream for anyone connected to the sports performance space in anyway – whether it be strength conditioning, chiropractic, sports nutrition, or whatever... the draw is the pros. But, what is often overlooked is the path of development those pros have traveled...

Outside of the Box

The truth of the matter is we tend to get things ass backwards here in the United States. Look around and you will find the best and most qualified coaches working at the collegiate or elite level and volunteer mom and dad working with the youth. (Not that I don't love you mom and dad) This concept seems reasonable for most Americans; but take a look at what happens overseas in countries like China, Russia, UK, and Australia and you will find something quite

**THINK
OUTSIDE**



different - the best coaches working with the youth!

The Path to Elite

What many have a hard time swallowing is the simple truth that it takes a good chunk of time to build and develop properly as an athlete. According to the research it takes 8-12 years of training to reach the level that would be considered elite (Bayli). With the American "quick fix" attitude these days putting the time into 'slow cooking' the athlete isn't as accepted – but it is the proper thing to do and what is going to pay off in the long run. As an example, to make a great roast you don't throw it on the grill in the open flame; sure it will cook fast but it won't taste very good. You cook a good roast in the slow cooker (or crock pot if prefer) – just as we should be slow cooking our athletes.

“There is no short cut to success in athletic preparation” – Bayli

The Long-term Athlete Development Model – Chronological vs. Biological

In special circumstances in sports such as competitive gymnastics, diving, rhythmic gymnastics the onset of specialization is much earlier in the biological age continuum. However, this onset has crept its way into many team sports which should follow a late specialization model. Before we get into the developmental model from a conceptual standpoint, we must understand the difference between biological age and chronological age and... yes there is a difference.

Chronological age is the actual age on paper of the athlete; whereas, biological age is the age in which the athlete is from a physical development or physiological standpoint, emotional maturation, and psychological development. During childhood and the adolescent stages of life it is very important to be aware of where the athlete is from a biological perspective.

One method to determine an athlete's biological age is to use the onset of peak height velocity or monitoring the growth spurt. With regard to the central nervous system and energy system development the growth spurt time becomes quite a valuable reference point to take advantage of windows of opportunity to train certain athletic qualities.

The Long-term Athlete Development Model – Late Specialization Model

In most cases following the late specialization model of long-term athletes development is the best option. As stated previously there are certain sports in which a different model is followed that involves an earlier onset of specialization – but for most sports specialization occurring before the age of ten most often sets up the athlete for subpar development and in worst cases burnout and dropout from sport all together.

	Early Specialization	Late Specialization
Progression	Rapid progress	Slower progress
Personal Best	At 15-16 yrs of age	After 18+
Consistency	Roller coaster performances	More consistent performances
Career Longevity	Quite the sport before reaching 18	Longer sport career
Injuries	Frequent injuries	Less injuries

Think of that guy in grade school basketball with the hairy armpits, beard, and could run and jump like MJ. He was the one on the 6th or 7th grade "traveling team." Now think about where he was in his senior year of high school. Chances are he got passed up athletically and/or was in jail.

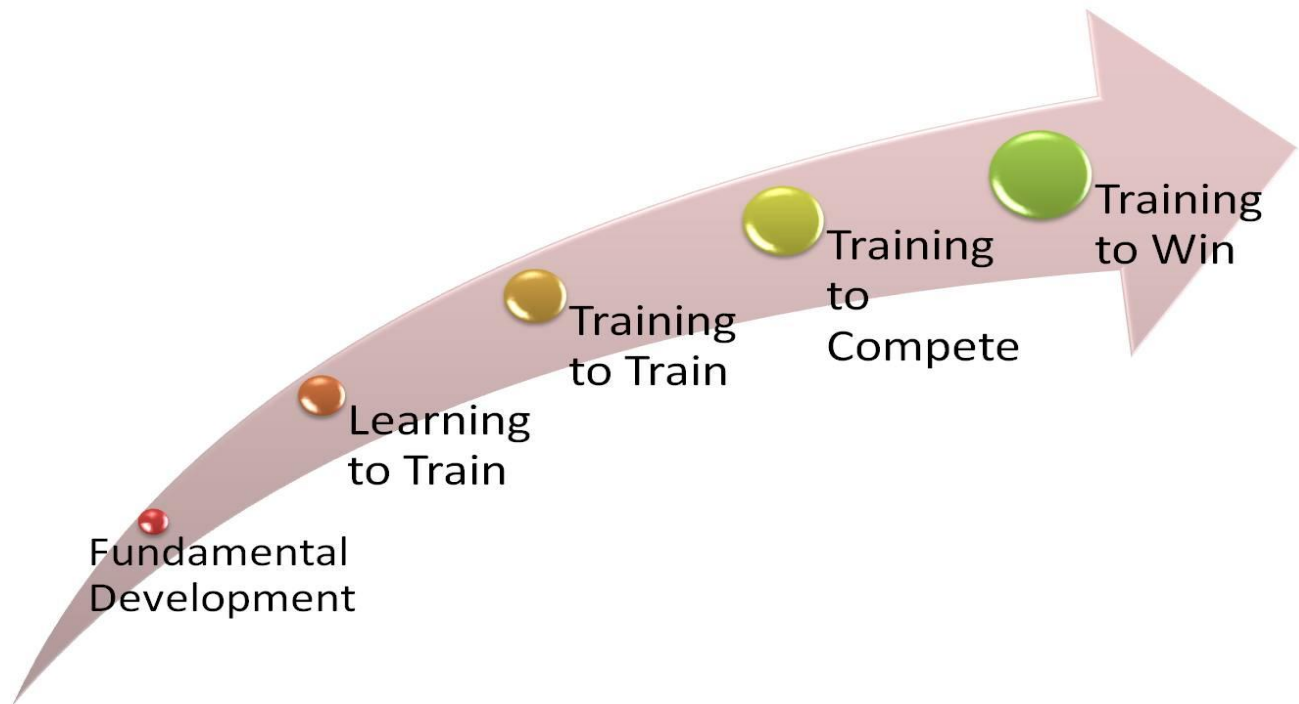
The 6 Phase Model of Long-Term Athlete Development:

1. Fundamental development and physical literacy
2. Learning to train
3. Training to train
4. Training to compete

5. Training to win

6. Retirement and retainment

(a very important phase in particular for high level athletes. Most often athletes are not accustomed to retirement from sport and ultimately struggle with body composition, emotional and psychological stressors as a result of inadequate transition out of elite level play. In the United States we do a poor job in general of retiring our athletes)



The Model in Action - Fundamental

In the early phases of athletic development the emphasis should be fun and on basic movement literacy with emphasis on locomotion and stability. It is astonishing how many kids have bypassed the fundamental stage and struggle with the basics of locomotion - yet it is expected they perform at a high level of competition weekend after weekend.

Build the fundamentals first – agility, balance, coordination, correct techniques and motor patterns. This should be accomplished between ages 6-9 in boys and 6-8 years old in girls. During the first phase of development the athlete should participate in things such as gymnastics, body weight movements, running, swimming, and agility.

The Model in Action – Learning to Train

During the learning to train stage athletes will learn the necessary skills and a variety of them with regard to sport performance. This phase occurs between the ages of 9-12 in boys and 8-11

in girls. These ages are key in skill acquisition and essential window of opportunity for kids to learn new skills that are cornerstone for athletic development.

The Model in Action – Training to Train

Here is where the game changes a bit and we need to pay attention to what is happening with the biological age of the athlete. We know that all kids do not mature the same way, you may remember the kids in grade school that seemed like giants and could pass for high schoolers. It is during the third stage of long-term athlete development where we begin to take note of separation in rates of maturation.

The key during this stage in development is making sure the kids are adhering to a ratio of training to competition that is around 60:40. Kids should be training the basics, learning tactical and technical skills, understanding how to deal with mental stressors of competition.

The Model in Action – Training to Compete

It is during this stage in development where we now dial in our training programs to a much greater degree. Specific attention to fitness, sports specific fitness, recovery, psychology, and technical development are considered. You could think of this as fine tuning the engine for optimal performance.

The Model in Action – Training to Win

This phase is the final step in athletic preparation and therefore the pieces of the puzzle such as physical, tactical, mental, technical skills should be well established. Consideration of active rest periods and breaks allow the athlete to recover mentally from the demands of high level competition. The key here is the athlete has fully developed from a physical preparation standpoint.

The Windows of Opportunity

It is well known that there are sensitive ages for the development of certain athletic qualities. Does this mean that if you don't cash in on these opportunities you are doomed – perhaps not but for optimal development it is essential to be aware of the times your athletes are prime for adaptation of specific athletic qualities.

FIRST WINDOW: Speed Development

Girls: ages 6-8 Boys: ages 7-9

During this first window emphasis should be placed on linear and lateral multidirectional speed. Use low volumes and fun agility speed quickness games.

SECOND WINDOW: Motor Coordination Development

Girls: ages 8-11 Boys: ages 9-12

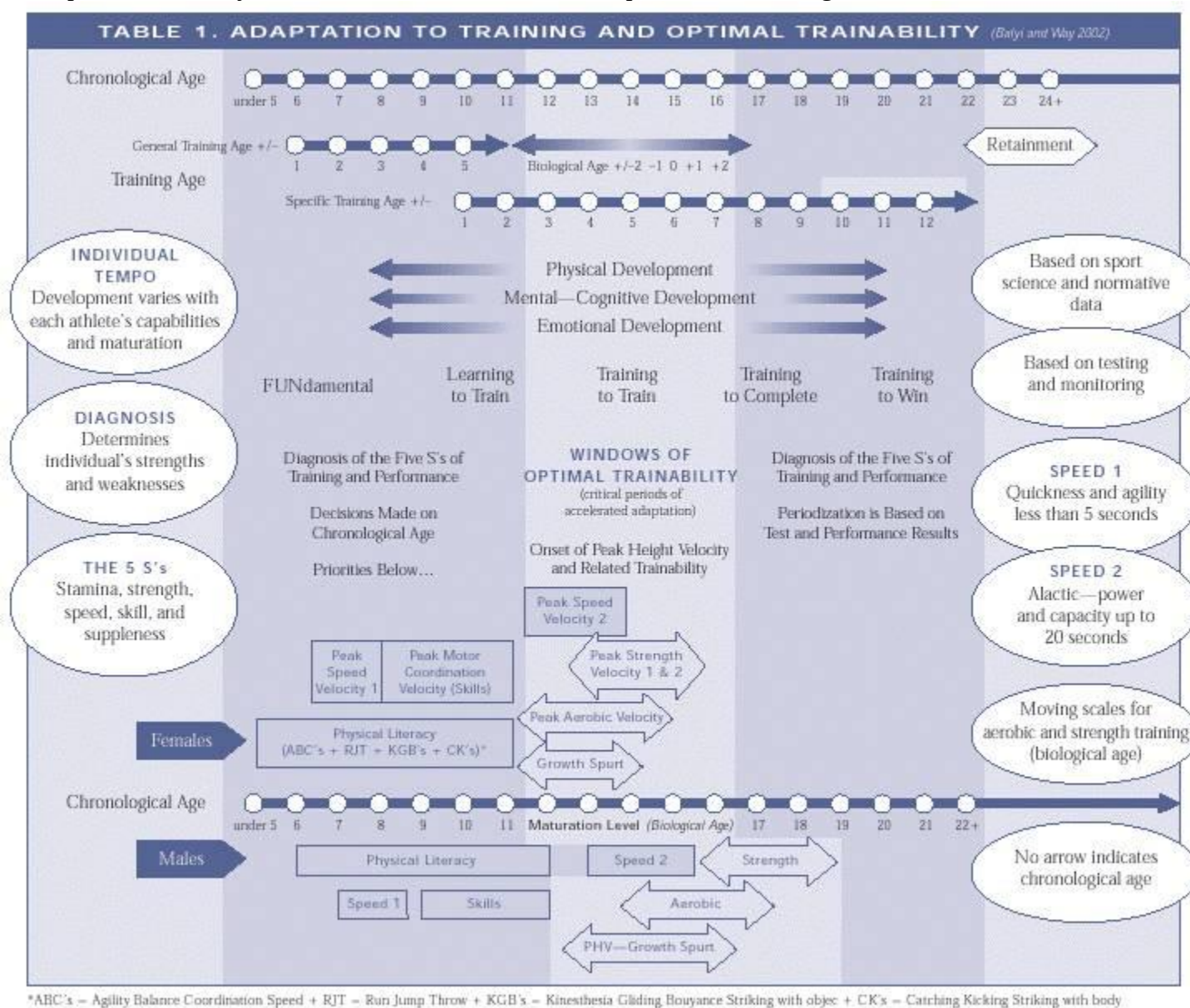
This window of development is possibly the most important. Athletes in this sensitive window of opportunity are prime for further development of the fundamental skills and essential sports skills. The motor cortex is like a sponge at this age and ready for accelerated adaptation.

THIRD WINDOW: Strength Development I and II

Girls: ages 11-15 Boys: 12-18 months after their peak height velocity or most rapid increase in height

There are two windows of opportunity to develop strength in the female athlete the first immediately follows the most rapid increase in height of the athlete and the second with the onset of the first menstrual cycle. For the male athlete the optimal window for strength

development occurs 1 year or 18 months after their most rapid increase in height.



FINAL THOUGHTS

Too many times parents, athletes, and some coaches expect the overnight success. Athlete development must consider the key windows of training and adaptation to provide the best chance for the athlete to reach their full potential. When we throw our athletes on the open flame on the grill, sure they will achieve in some ways but you will always be asking what could have been if I would have taken the time to develop properly. Purge the mind of the ideas that kids must train like the pros and realize that notion is only short changing the athlete.

There are great resources out there to take advantage of on this topic here are a few to get you started, and as always feel free to contact us if you would like more information about this topic.

RESOURCES:

IYCA – International Youth Coaching Association IYCA.org

Balyi I., Hamilton A. (2004) Long-Term Athlete Development: Trainability in Childhood and Adolescence. Windows of Opportunity. Optimal Trainability. Victoria: National Coaching Institute British Columbia & Advanced Training and Performance Ltd.

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CoachesInfoService.com