



PROHEALTH ASIA
PHYSIOTHERAPY &
REHAB CENTRE

LONG TERM ATHLETE DEVELOPMENT

SHRIKANT IYENGAR
CLINICAL DIRECTOR

PROHEALTH ASIA PHYSIOTHERAPY AND
REHAB CENTER



LTAD

- Frame work for **Optimal training, competition and recovery schedule**.
- Based on the research of the Canadian Sport Centre LTAD expert group.
- Adopted by Athletics Canada as the framework for the proper management of youth and adolescent growth
- Through the improvement of **physical literacy** (fundamental skills such as **running, jumping, and throwing**),
- Children who do not develop their fundamental motor skills by age 12 are unlikely to reach their **genetic athletic potential**.



LTAD

- Research has shown that it takes between **8 and 12** years of training for a talented athlete to reach elite levels.
- “10 year or 10,000 hour rule” and equates to approximately 3 hours of practice each day for 10 years.
- US Olympic Committee (2001) surveyed US Olympic athletes from **1988 to 1996**
- **0 and 13 years** of practice or training just to make the Olympic team
- **13 and 15** years for those athletes who won a medal.



LTAD

- Establishing a core set of motor skills early in life enables children to gain a sense of achievement and establish a positive relationship with sport and physical activity.
- Proficiency in many types of physical activity may increase the chances of lifelong participation in physical activity, which could increase longevity and overall quality of life.



LTAD PATHWAY

Athletics Canada Long Term Athlete Development Pathway

- **Active Start**
- **FUNdamentals (Fundamentals 1)**
- **Learning To Train (Fundamentals 2)**
- **Training to Train (“Building the Engine”)**
- **Learning to Compete (“Challenge of Competition”)**
- **Training to Compete (“Heat of the Battle”)**
- **Learning to Win (“Consistent Performance”)**
- **Winning for a Living (“Performing when it Counts”)**
- **Retention/Active for Life (“Dealing with Adversity”)**



LTAD FRAMEWORK

- **The 9 Stages include:**
- **Active Start**
- **FUNdamental**
- **LearningtoTrain**
- **TrainingtoTrain**
- **LearningtoCompete**
- **Training to Compete**
- **Learning to Win**
- **Winning foraLiving**
- **Active for Life**





The 9 Stages

- **STAGE 1:
ACTIVE START STAGE**

- **Chronological age:**

- **Males 0-6, and**

- **Females 0-6**

- **Objectives:**

To make play and physical activity fun and exciting and an essential component of daily routine throughout life

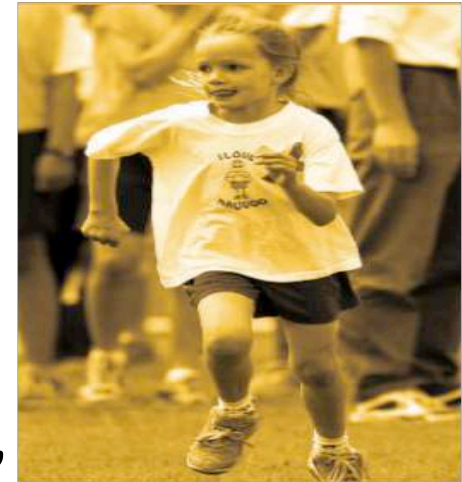
- **basic fundamental skills such as running, jumping, wheeling (for children in wheelchairs), twisting, kicking, throwing and catching**





Stage 2:

- **STAGE 2:
FUNDAMENTAL STAGE (FUNDAMENTALS 1)**
- **Chronological age:**
- **Males 6-9 and**
- **Females 6-8**
- **Objectives:**
- **To begin teaching agility, balance, coordination and speed (ABC's)**
- **To continue to instill the importance of daily play and physical activity.**





Stage: 3

- **STAGE 3:
LEARNING TO TRAIN STAGE (FUNDAMENTALS 2)**
- **Chronological age:**
- **Males 9-12, and**
- **Females 8-11**
- **Objectives:**
- **To continue to enhance ABC's to develop overall sports skills**
- **To begin to integrate physical, mental, cognitive and emotional components within a well-structured program**
- **To develop physical literacy**





Stage:4

- **STAGE 4:
TRAINING TO TRAIN STAGE (“BUILDING THE
ENGINE”)**
- **Chronological age:**
- **Males 12-16, and**
- **Females 11-15**
- **Objectives:**
- **To develop endurance, strength and speed**
- **To develop athletics-specific skills and fitness**





Stage:5

- **STAGE 5:
LEARNING TO COMPETE (“CHALLENGE OF COMPETITION”)**
- **Chronological age:**
- **Males 16-18 plus, and**
- **Females 15-17 plus**
- **Objectives:**
- **To develop event specific area physical preparation**
- **To introduce event specific protocols to identify**
- **strengths and weaknesses**
- **To implement event area specialization**
- **To integrate physical, mental, cognitive and**
- **emotional development**





Stage:6

- **STAGE 6:
TRAINING TO COMPETE (“HEAT OF THE BATTLE”)**
- **Chronological age:**
- **Males 18-21 +/-, and**
- **Females 17-21 +/-**
- **Objectives:**
- **To optimize event specific preparation for competition**
- **To refine event area specialization**
- **To continue with integration of physical, mental, cognitive and emotional development**
- **To conduct event-specific testing and monitoring**





Stage:7

- **STAGE 7:
LEARNING TO WIN (“CONSISTENT PERFORMANCE”)**
- **Chronological age:**
- **Males 20-23 +/-; and**
- **Females 20-23 +/-**
- **Objectives:**
- **To maximize event specific preparation for high performance results**
- **To introduce a formal Performance Enhancement Team**
- **To continue with integration of physical, mental, cognitive and emotional development**
- **To learn to compete when it counts.**





Stage:8

- **STAGE 8:
WINNING FOR A LIVING (“PERFORMING WHEN IT COUNTS”)**
- **Chronological age:**
- **Males 23+/-; and**
- **Females 23 +/-**
- **Objectives:**
- **To maximize event specific preparation for results at the Olympic and World level**
- **To maximize of training, competition and recovery activities in support of a professional athletics career**
- **To attain competitive repeatability, when it counts**
- **To work with a professional support team**
- **To plan for retirement from athletics competition**





Stage:9

- **STAGE 9:
ACTIVE FOR LIFE (“DEALING WITH
ADVERSITY”)**
- **Chronological age:**
- **Males any age**
- **Females any age**
- **Objectives:**
 - **To make preparations for their integration
into society**





SUMMARY

Coaches who incorporate Long Term Athlete Development (LTAD) principles and practices into their programming are more likely to produce athletes who reach their full athletic potential as well as experience success against competitors from around the globe.



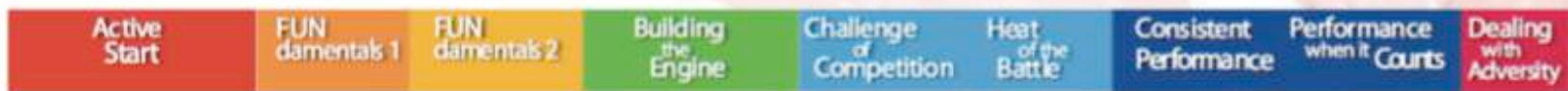
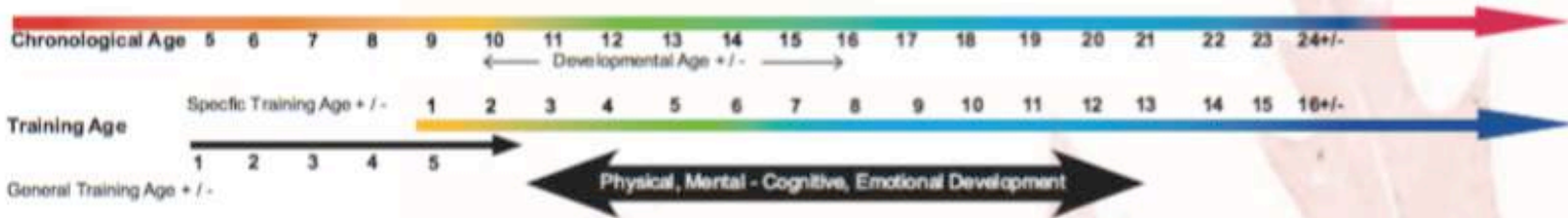
DEFINITION OF EARLY SPECILISATION

- Participation in intensive training and/or competition in organized sports greater than 8 months per year (essentially year round)
- Participation in 1 sport to the exclusion of participation in other sports
- Involving pre pubertal (seventh grade or roughly age 12 years) children.

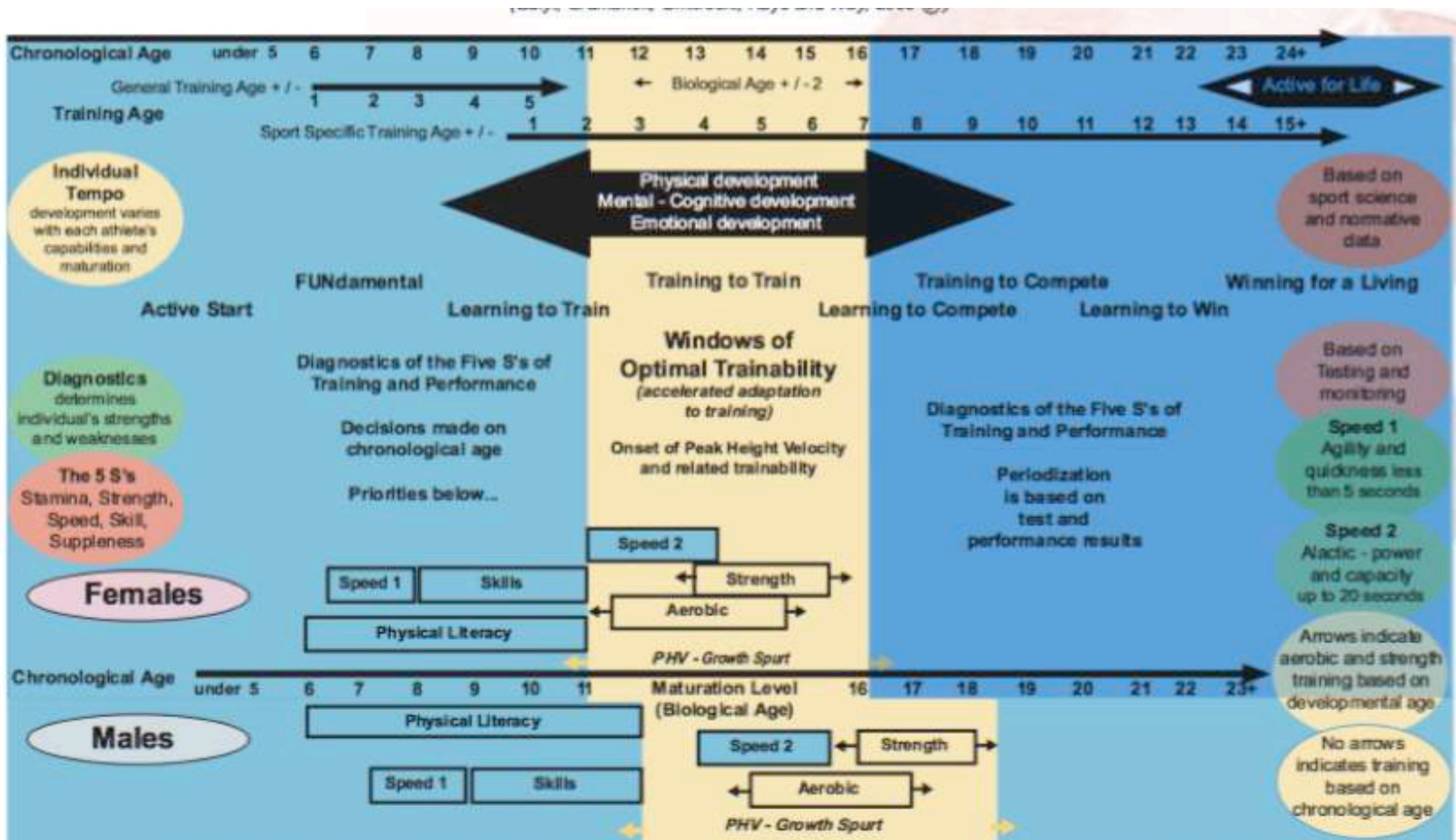


LTAD- PERIODIZATION

Athletics Canada - Long-Term Athlete Development - Periodization (Balyi, Gramatik, Gmitroski, Kaye and Way, 2006 ©)



LTAD- OPTIMAL TRAINABILITY



INJURY PREVENTION PYRAMID

