



## The 10 S's of Training

The Five Basic S's (see [www.ltad.ca](http://www.ltad.ca) for more information).

**Stamina (Endurance)** - The window of optimal trainability for stamina occurs at the onset of the growth spurt. Aerobic capacity training is recommended before children reach their fastest rate of growth. Aerobic power should be introduced progressively after growth decelerates.

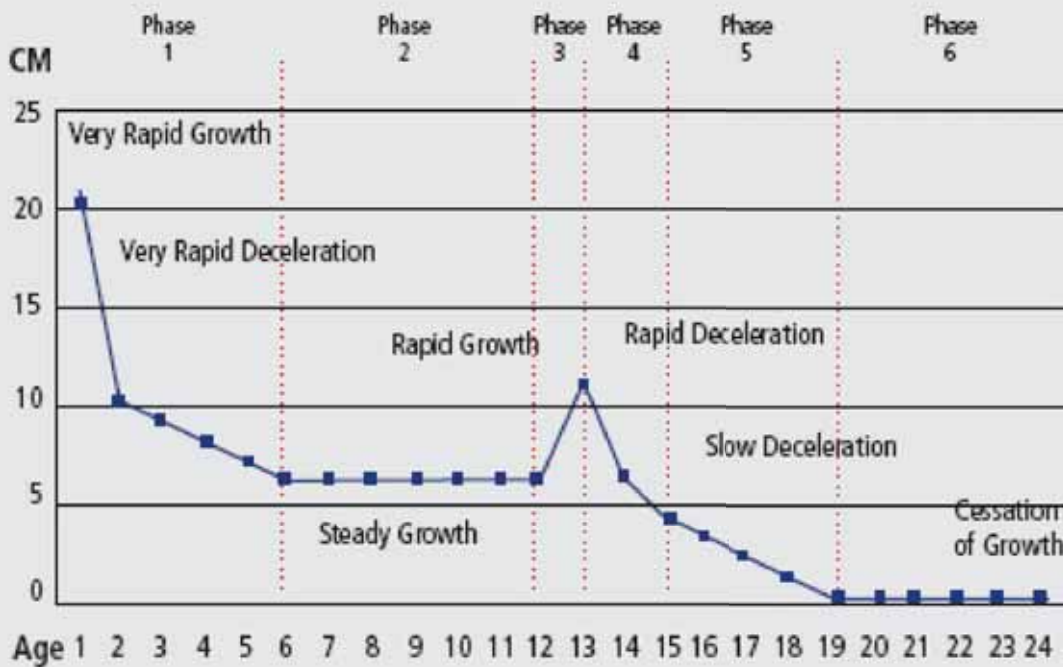
**Strength** - The window of optimal trainability for females is immediately after their fastest rate of growth and at the onset of menarche (first menstruation), while for males it is 12 to 18 months after their fastest rate of growth.

**Speed** - For males the first speed training window occurs between the ages of 7 and 9 years and the second window occurs between the ages of 13 and 16. For females the first speed window occurs between the ages of 6 and 8 years and the second window occurs between the ages of 11 and 13 years.

**Skill** - The window for optimal skill training begins at the age of 9 for males and the ages of 8 for females. This window ends at the onset of the growth spurt.

**Suppleness (Flexibility)** - The optimal window of trainability for suppleness in both females and males occurs between the ages of 6 and 10. Special attention should be paid to flexibility during the growth spurt.

**Figure 7**  
**Phases of Measurement**



## The Five Additional S's

### Structure

The structure/stature component links the six stages of growth to the windows of optimal trainability. Coaches and parents can use stature measurements (i.e. height) before, during and after maturation as a guide for tracking developmental age. Such tracking then allows coaches to address the critical or sensitive periods of physical development (endurance, strength, speed and flexibility) and skill development. Diagnostics for identifying strengths and weaknesses are critical for properly considering structure and stature in the design of training plans.

### (p)Sychology

Sport is a physical and mental challenge. The ability to maintain high levels of concentration while remaining relaxed and confident is a skill that transcends sport and enhances everyday life. To develop the mental focus for success at high levels, young athletes need mental training that complements their physical training, designed specifically for their gender and LTAD stage. Even at young ages, mental training is critical since dealing with success and failure impacts children's continuation in sport and physical activity.

### Sustenance

When the body performs physical activity, it must be replenished with a broad range of components. Sustenance prepares athletes for the volume and intensity required to optimize training and live life to the fullest. Sustenance includes nutrition, hydration, rest, sleep, and regeneration - all of which need to be applied differently to training and lifestyle plans depending on the LTAD stage. In managing sustenance and recovery, parents can assist coaches by identifying fatigue. Fatigue can come in many forms including metabolic, neurological, psychological, environmental and travel fatigue. While overtraining or over-competition can lead to burnout, improperly addressing sustenance can lead to the same results.

### Schooling

In designing training programs, school demands must also be considered. Programs should account for school academic loads, timing of exams and school-based physical activities. When possible, training camps and competition tours should complement, not conflict, with the timing of major academic events at school.

Overstress should be monitored carefully, including the everyday stresses related to schooling, exams, peer groups, family, boyfriend or girlfriend relationships, and increased training volumes and intensities. Coaches and parents should work together to establish a good balance between all factors.

### Socio-Cultural

Sports and physical activities often present children with social and cultural experiences that can enhance their holistic development. These experiences can broaden their socio-cultural perspective by providing increased awareness of:

- Ethnicity
- Geography
- Literature
- Diversity
- Architecture
- Music
- History
- Cuisine
- Visual art

Through periodization, annual planning, a child's activity or sport can offer much more than a simple commute between the activity venue and the home or hotel room.

### Goals of the ADM

- To provide a consistent, acceptable framework for coaches to use in developing players;
- To provide consistent leadership in the development of basketball in Canada;
- To provide age and stage appropriate competition to practice ratios that will allow our players to develop the skills fitting for their stage of development;
- To place the suitable emphasis on winning required for each stage of development;
- To ensure that the fundamental movement, mental, technical and tactical basketball skills are being introduced in a systematic and timely way;
- To ensure appropriate considerations are taken to designing programs that will be inclusive and allow everyone the potential for self-fulfillment;
- To recognize the importance of quality leadership at all level of programming.