

# Training Matrix: Skills



	Forehand Length	Backhand Length	Serve	Boast	Drop	Lob	Volley	Movement	Anticipation	Deception
<b>Active Start</b> 0-6 Males & Females										
<b>FUNDamentals</b> 6-9 Males, 6-8 Females	●●●	●●●	●●●	●	●		●	●	●	
<b>Learning to Train</b> 9-12 Males, 8-11 Females Training age: 1-3 yrs	●●●	●●●	●●●	●●	●		●●	●	●	●
<b>Training to Train</b> 12-16 males, 11-15 females Training age: 4-6 yrs	●●●	●●●	●●	●●●	●●		●	●●	●●	●●
<b>Training to Compete</b> 16-23 +/- males, 15-21 +/- females Training age: 7-10 yrs	●●●	●●●	●	●	●●●	●●	●●●	●●●	●●	●●●
<b>Training to Win</b> 19 +/- males, 18 +/- females Training age: 10+ yrs	●●●	●●●	●	●	●●●	●	●●●	●●●	●	●●●
<b>Active for Life</b> any age males & females Training age: any age										

very high emphasis     
 high emphasis     
 some emphasis

# Training Matrix: *Physical Capacities 1*



- A wide variety of physical skills and capacities are required to play squash. In high performance competition, the development of these capacities becomes even more critical.
- The following table presents the target physical capacities to be developed or emphasized at each LTPD stage.
- NOTE: During the Active for Life stage, the training emphasis on physical capacities will vary according to the interests and goals of each player.

	Agility	Balance	Coordination & Rhythm	Spatial Awareness	Reaction Time/Speed	Suppleness/Flexibility	Speed	Anaerobic Capacity & Power	Aerobic Power	Aerobic Capacity/Endurance	Specific Muscular Power	Specific Muscular Endurance	Speed/Strength	Maximal Strength	Hypertrophy	General Strength Endurance	
<b>Active Start</b> 0-6 Males & Females	●●	●●	●●	●●	●●					●						●	
<b>FUNdamentals</b> 6-9 Males, 6-8 Females	●●●	●●●	●●●	●●●	●●●	●	●●		●	●●						●	
<b>Learning to Train</b> 9-12 Males, 8-11 Females Training age: 1-3 yrs	●●●	●●●	●●●	●●●	●●●	●●●	●●		●	●●●			●	●		●●	
<b>Training to Train</b> 12-16 males, 11-15 females Training age: 4-6 yrs	●●	●●	●●	●●	●●	●●●	●●●	●	●●●	●●●	●	●	●●	●●	●	●●●	
<b>Training to Compete</b> 16-23 +/- males, 15-21 +/- females Training age: 7-10 yrs	●●	●●	●●	●●	●●	●●●	●●●	●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●	●
<b>Training to Win</b> 19 +/- males, 18 +/- females Training age: 10+ yrs	●	●	●	●	●●	●●●	●●●	●●	●●●	●●●	●●●	●●●	●●	●	●	●	
<b>Active for Life</b> any age males & females Training age: any age	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

very high emphasis    
 high emphasis    
 some emphasis

# Training Matrix: *Physical Capacities 2*



- A wide variety of physical skills and capacities are required to play squash. In high performance competition, the development of these capacities becomes even more critical.
- The following table presents special considerations that should be respected in the physical maturation of athletes at each LTPD stage.
- NOTE: During the Active for Life stage, the training emphasis on physical capacities will vary according to the interests and goals of each player.

 <b>Active Start</b> 0-6 Males & Females	The child's initial high growth rate slows and body proportions align towards the end of this period. Rapid development of the nervous system and brain weight/size. Motor control and performance highly related to physical senses such as pressure sensitivity and touch. Hand-eye coordination and overall movement sequences visibly and steadily improve. General locomotion skills are clearly established (i.e., walking and running). The skeletal system (including the head/skull) is very fragile and high loading forces cannot be tolerated.
 <b>FUNdamentals</b> 6-9 Males, 6-8 Females	Physical growth is relatively constant but slower than Active Start phase. Nervous system development continues rapidly but slows towards end of stage. Coordination improves steadily. Although aerobic metabolism is primary, low endurance is prevalent in early part of stage but improves noticeably. Anaerobic capacity is very limited, and heart rates are significantly higher at all levels than in adults, including rest. Thermoregulatory control is poorly developed and children are not equipped to deal with hot or cold environments well. Skeletal system continues to be fragile with poor loading tolerance. Reaction time is slow, although coordinated movement speed improves. Strength and strength endurance capabilities increase due largely to nervous system development and coordination improvements. There is little potential for hypertrophy (muscle mass increase).
 <b>Learning to Train</b> 9-12 Males, 8-11 Females Training age: 1-3 yrs	Females will enter their major growth spurt period towards the end of this stage (plus the possibility of menarche - first menstruation), while the male growth spurt typically straddles this stage and the next. Overall development of the nervous system generally approaches the adult state. Although reaction time remains slow, improved motor control and hand-eye coordination permits better catching and throwing performance. Strength and strength endurance capabilities increase due to nervous system development and coordination improvements. There is little potential for hypertrophy (muscle mass increase). Performance gains are possible as a result of training, but growth is the largest contributor.
 <b>Training to Train</b> 12-16 males, 11-15 females Training age: 4-6 yrs	Maximal growth rate for both females and males occurs in this period. Females typically experience increased body fat levels in response to hormonal changes. Menarche likely occurs about 12 months after peak height velocity (PHV - greatest rate of change in height). PHV in females is usually between 11.5 - 12.5 years of age and in males around 14.5 years. During the growth spurt, a typical sequence of growth is feet and hands, then legs and arms. As with earlier stages, the skeletal system remains fragile, particularly the 'long' bones. Performance will likely be impacted by the affects of rapid growth on coordination, relative and absolute strength, and speed and endurance. However, the stage is sensitive to developing aerobic capabilities and suppleness (flexibility). Also, towards the end of the stage, strength and speed-endurance training can be emphasized.
 <b>Training to Compete</b> 16-23 +/- males, 15-21 +/- females Training age: 7-10 yrs	During this period height changes typically end (females 17-18 years and males 19-20 years). The presence of testosterone increase the potential for increases in muscle mass (particularly in males), as well as the positive response to speed and power training. All major physiological systems have been established during the early part of this period and therefore 'adult' and advanced forms of training may be undertaken at levels appropriate to the individual's training history and level of development. The skeletal system responds favourably to appropriate training loads and direction.
 <b>Training to Win</b> 19 +/- males, 18 +/- females Training age: 10+ yrs	The physical systems and structure of the athlete continue to mature. Training is likely to move to highly individualistic and high performance squash-specific preparation. In addition, multi-year and single-year planning will be required to ensure optimal time management of the training-competition-recovery schedule. Furthermore, it is expected that an underlying 'base' set of physical aptitudes will be maintained at all times.
 <b>Active for Life</b> any age males & females Training age: any age	Largely an issue of keeping 'fit for life,' but athletes may also have specific objectives at the individual level, whether competitive or recreational.

# Training Matrix: Preparation & Recovery



- Training and competition put stress on the physical structures of the bodies of athletes. To prevent athlete burn out and ensure healthy, sustainable development of all physical structures and capacities, careful attention must be given to correct preparation and recovery during training and competition cycles.
- The following table presents the types of preparation and recovery activities that should take place at each LTPD stage.

## Physical conditioning and match preparation:

## Suppleness (Flexibility):

## Nutrition, Hydration, and other Regeneration factors:



### Active Start 0-6 Males & Females

No squash-specific requirements. Parents and caregivers should provide children with opportunities to engage in a wide range of movements, physical tasks/challenges, and 'play' involving movement. Gymnastics is an ideal Active Start activity and Gymnastics Canada has specialized programming at this age. The 4 key environments for movement should be introduced during the Active Start stage (on the ground, in the water, on snow and ice, and in the air).

Physical activity will support the development of natural flexibility.

Parents and caregivers should provide sound nutritious foods and adequate water intake.



### FUNdamentals 6-9 Males, 6-8 Females

No squash-specific requirements. This is a critical stage for the development of Physical Literacy. As well, the foundations for many advanced skills are also being established. The physical training aspects of warm-up and cool-down and the need for recovery (i.e. sleep) should be incorporated into activities and education.

Suppleness training should be built into warm-up/cool-down and recovery initiatives, as well as through other activities (e.g., gymnastics, dance, swimming, martial arts, etc). Daily flexibility should be a goal.

Parents and caregivers should provide sound nutritious foods and adequate water intake. Age-appropriate nutrition education (practical and fun) should be encouraged. The physical training aspects of warm-up and cool-down and the need for recovery (i.e., sleep) should be incorporated into activities and education.



### Learning to Train 9-12 Males, 8-11 Females Training age: 1-3 yrs

Although the overall physical conditioning program and direction will not be squash-specific, 'match preparation' should see the young player put into practice the key aspects being taught/rehearsed/practiced in training (both on and off-court components). These aspects will include warm-ups, cool-downs and recovery elements before matches, between matches (tournaments) and after matches, as well as overall recovery initiatives.

Suppleness training should be built into warm-up/cool-down and recovery initiatives, as well as through other activities (e.g., gymnastics, dance, swimming, martial arts, etc). Daily flexibility should be a goal.

Sport and activity programs should be providing an age-appropriate and progressive nutrition education program based on the needs of the sport/activity and the growing adolescent. Warm-up, cool-down and recovery activities should be well-defined and integrated into the overall program.



### Training to Train 12-16 males, 11-15 females Training age: 4-6 yrs

Physical conditioning through this phase will gradually become more 'squash specific,' although there will be a large multi-activity/multi-sport components even at the older/higher levels. All match preparation activities will be highly specific and will reflect those strategies being practiced within the training environment. Be aware of early vs. late maturers.

Suppleness training assumes a prominent place as part of the overall program, with more advanced elements incorporated (PNS and partner work).

Progressive nutritional educational program continues with clear expectations on practical aspects and the implementation of recommendations into the young player's lifestyle. Warm-up, cool-down and recovery activities should be well-defined and integrated into the overall program.



### Training to Compete 16-23 +/- males, 15-21 +/- females Training age: 7-10 yrs

Physical conditioning becomes specific to high performance squash, but elements still persist concerning overall athletic development and the particular strengths and weaknesses of individual athletes. All match preparation activities will be highly specific and reflect those strategies being practiced within the training environment. A progressive athlete monitoring program is required throughout this phase. Be aware of early vs. late maturers.

Suppleness training is part of the regular training and recovery program.

Clear and implemented nutritional strategies are in place. Specific elements deal with training camps, travel, foreign countries and recovery. Warm-up, cool-down and recovery activities are well-defined and integrated into the overall program.



### Training to Win 19 +/- males, 18 +/- females Training age: 10+ yrs

All aspects of preparation and recovery are specific to the lifestyle of a high-performance athlete and the goals of each individual. The format of training, preparation, competition, and recovery leads to establishing targeted behaviours and programs designed, implemented and monitored to ensure optimal competitive performance.

Suppleness training is individualized based on the application of sport science and elite athlete monitoring.

Clear and implemented nutritional strategies are in place. Specific elements deal with training camps, travel, foreign countries and recovery. Warm-up, cool-down and recovery activities are well-defined and integrated into the overall program.



### Active for Life any age males & females Training age: any age

Largely general practices aimed at maintaining a healthy lifestyle, but with specific interventions as required depending upon level of play and other individual requirements.

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# Training Matrix: Psychological Skills



- Sport is as much a mental and emotional challenge as it is a physical challenge. The ability to maintain high levels of concentration while remaining relaxed with the confidence to succeed is essential to long-term performance in any sport.
- The following table presents the psychological target skills to be developed at each LTPD stage.

 <b>Active Start</b> 0-6 Males & Females	Introduce basic mental skills with fun, simple activities such as focusing (e.g., focus on objects and try to remember things about them) and relaxation (e.g., try to tense and relax specific parts of the body). Initiate imagery use with low organizational games involving the imagination (e.g., imaginary squash rallies on the squash court). Also, introduce modeling with games like follow the leader (e.g., swing mechanics and court movement).
 <b>FUNDamentals</b> 6-9 Males, 6-8 Females	Present athletes with the idea of the mind/body connection. Introduce the concept of mental skills and their importance in sport. Utilize simple, fun-filled activities that focus on controlling anxiety, increasing relaxation, and the ability to energize oneself. Use questioning strategies that encourage the use of imagery to help athletes develop an answer (e.g., what is likely to happen when you hit specific shots from specific parts of the court?). Parents and coaches should act as role models to support the learning and use of mental skills.
 <b>Learning to Train</b> 9-12 Males, 8-11 Females Training age: 1-3 yrs	Develop a thorough understanding of the importance of practicing and utilizing mental skills. Create an awareness of how mental states can affect squash performance. Present ideas of positive self-talk, cue words, and re-focusing thoughts to help build and maintain confidence. Introduce structured practice sessions for imagery use as well as other mental skills (e.g., anxiety/arousal control). Introduce basic goal setting by developing short-term goals for practices. Initially, focus goals on process rather than outcome (e.g., develop better length and tightness on drives). Parents and coaches should be supportive of the use of psychological skills for both competition and practice.
 <b>Training to Train</b> 12-16 males, 11-15 females Training age: 4-6 yrs	Encourage regular personal use of psychological skills. Have structured, planned psychological skills training sessions as part of athlete's schedule. In order to optimize quality of play during training sessions, squash players need to be aware of their best possible mental performance states. Athletes should be using positive imagery to help refine skills (e.g., imagine how a drop shot will look and feel when executed successfully) and for motivation (e.g., imagine making a comeback when behind in a game). Use both short-term and long-term goals extensively. Introduce outcome goals (e.g., placing top 3 at a competition). Initiate performance planning and development of pre-competition plans.
 <b>Training to Compete</b> 16-23 +/- males, 15-21 +/- females Training age: 7-10 yrs	Continue specific structured and planned mental skills practice sessions (e.g., goal setting and imagery). Players should be self-evaluating their psychological states and performance strategies. Enhance mental toughness by improving specific psychological skills (e.g., focusing, relaxing or arousing oneself) to help manage distractions, increase concentration, and enable athlete to be in their optimal mental performance state. Athletes should be using imagery at an advanced level and for all possible functions (e.g., skills, strategies, arousal, coping with challenges, winning). Continue use of goal setting and positive self-talk.
 <b>Training to Win</b> 19 +/- males, 18 +/- females Training age: 10+ yrs	Players should be aiming for complete mental toughness and full psychological awareness. Focus should be on performing under pressure, with an ability to demonstrate full self control over emotions and ability to deal with distractions or difficult/unforeseen situations (e.g., playing with minor injuries, breaking a racquet). Demonstrate ability to control self confidence and keep it at optimal level (i.e., confident but not over-confident). Continued use of both short and long-term goals that are specific and attainable. Minimize unforced errors. Use advanced imagery for all relevant functions. Total focus on squash performance and winning.
 <b>Active for Life</b> any age males & females Training age: any age	Encourage an awareness of the mind/body connection. Avoid negative self-talk. Encourage regular participation through goal setting. Develop focusing and relaxation techniques to help maintain concentration and control arousal levels during match play. Use imagery to reinforce physical skill acquisition, enhance strategic play, and to help motivate. Goal setting will be dependent on the individual squash player's level of competition. Those competing in masters level squash tournaments should follow the same steps as the younger competitive players.