Long-Term Athlete Development


# Taekwondo for Life

National Coaching Certification Program


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# Taekwondo for Life

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"The health and well-being of the nation and the medals won at major Games are simple by-products of an effective sport system."
- Istvan Bayli

# Introduction

*Taekwondo For Life* is a framework to guide decisions for athlete and participant development throughout various stages of life. The framework has been adapted from the *Canadian Sport for Life* long term athlete development model (LTAD), which is a generic template that aims to improve Canadian's health, and participation and excellence in sport. This guide can be used as a reference for parents and administrators, however its main purpose is as a resource for instructors and coaches in Taekwondo Canada's National Coaching Certification Program (NCCP).

The guide provides readers with an overview of long term athlete development and presents a model that integrates both martial arts and Taekwondo sport into clear stages of development based on human growth and maturation. It outlines ten key factors to enable better progression in Taekwondo, and provides a list of things to do for each stage of development. The guide provides a series of recommendations for training and competition, and a rationale for positive changes in Taekwondo's competition structure. Also included in the guide are a number of text boxes (i) that highlight key issues in Taekwondo, as well as skill development matrix for all stages of development.

Taekwondo Canada sincerely hopes that this guide will provide the foundation upon which Taekwondo is developed in Canada. Coaches, instructors, and parents are encouraged to use this guide to develop strong programs that are successful in the retention of participants and promote Taekwondo as a sport for life.

# Message from the President

It is my pleasure as Taekwondo Canada President to introduce *Taekwondo for Life*.

This guide is a tremendous resource for everyone interested in advancing Taekwondo in Canada. It provides coaches, instructors, athletes, parents, students, and the public, with a profound and practical tool for making decisions at every level of participation and development.

Our community has made significant advances towards realizing our vision of becoming a world class organization that provides outstanding resources for our members. *Taekwondo for Life* is the result of the efforts and expertise of committed individuals, working as a team, who have openly shared their knowledge and experience for the advancement of Taekwondo in Canada.

This is an exciting time for Taekwondo Canada. In conjunction with the *Taekwondo for Life* guide, Taekwondo Canada also is making huge advances in the development of our National Coaching Certification Program. The Assistant Instructor Program will be fully launched in the Spring of 2008. This will be followed by the Instructor Program and then the Performance Coach Program by 2012.

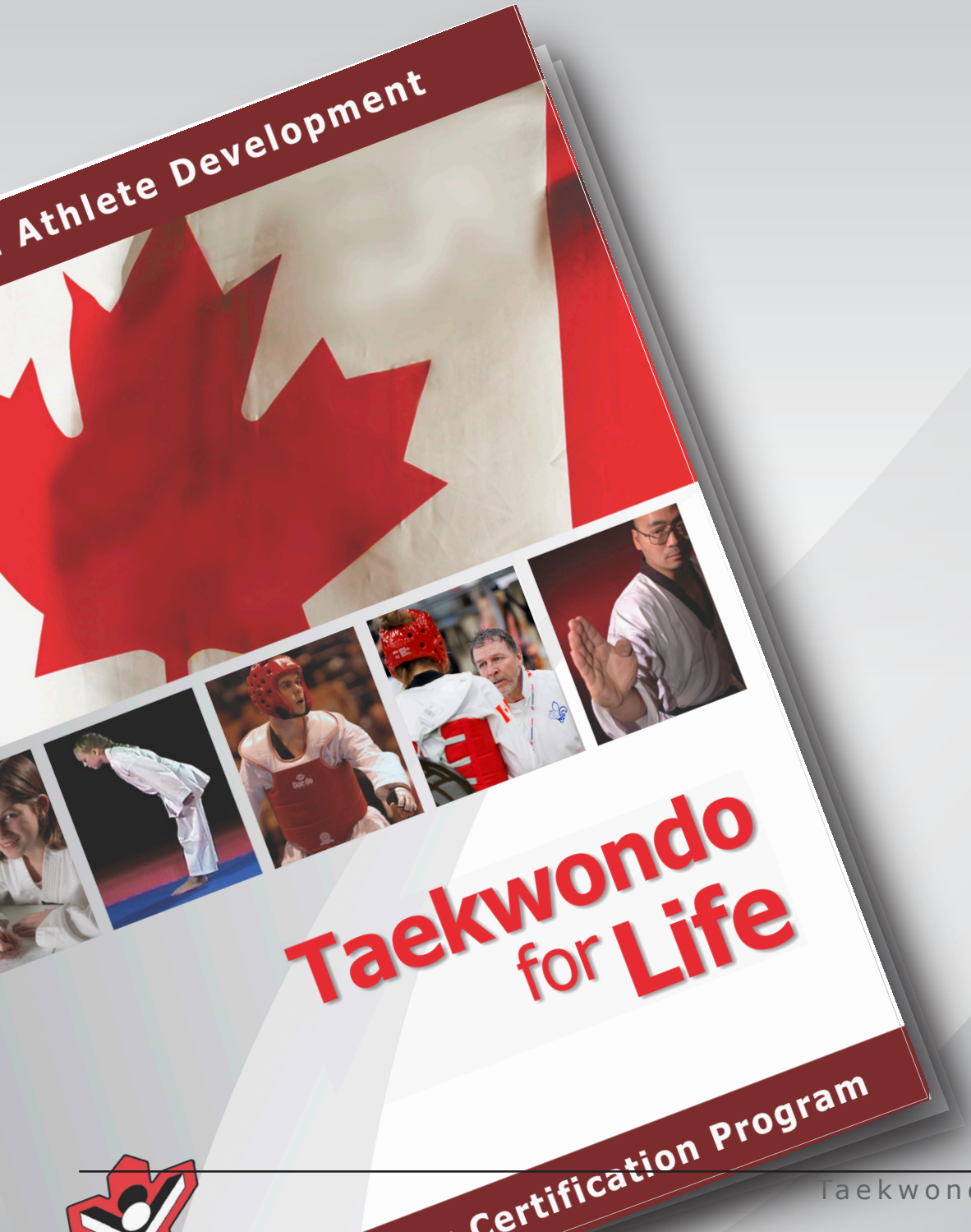
The *Taekwondo for Life* guide will be used as a foundation resource for these coaching programs as well as for competitive Taekwondo across Canada. Already, we have begun to make changes in our national competition formats that will have greater impact for the benefit of Taekwondo athletes.

On behalf of the entire Taekwondo community, I offer congratulations, acknowledgement and appreciation to everyone who has contributed to the creation of this important document. Special thanks to David Hill for his on-going support and guidance which was essential to bringing *Taekwondo for Life* to reality; also to Charles Cardinal for helping Taekwondo Canada adapt the LTAD structure to suit our specific goals, objectives and needs; and to Sport Canada for its encouragement, recognition and support of excellence.

All the best in Taekwondo,

*Grandmaster Kee Ha,*
*President,*
*Taekwondo Canada*

# LTAD Background



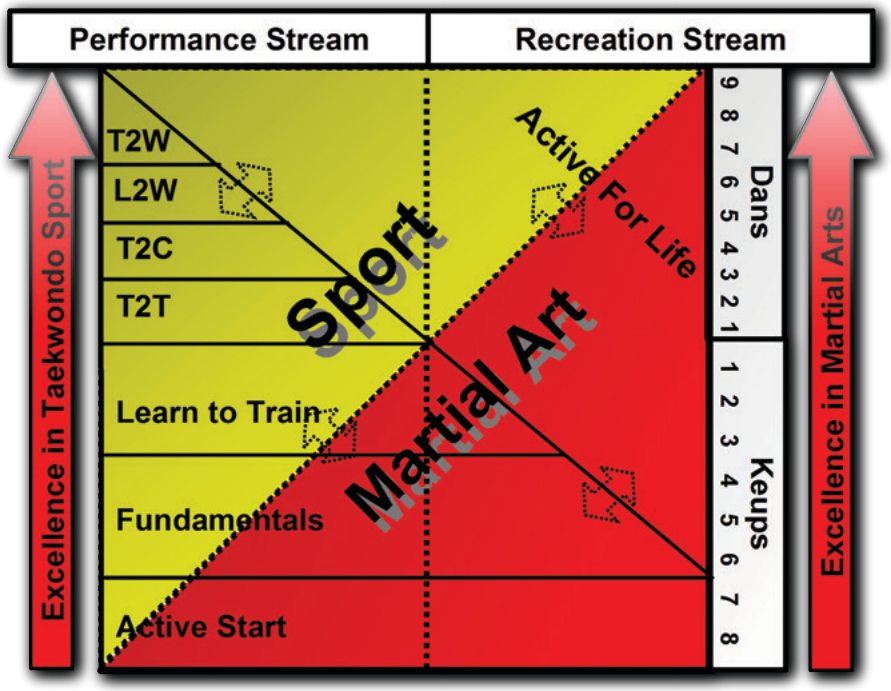
# Taekwondo LTAD Model Overview

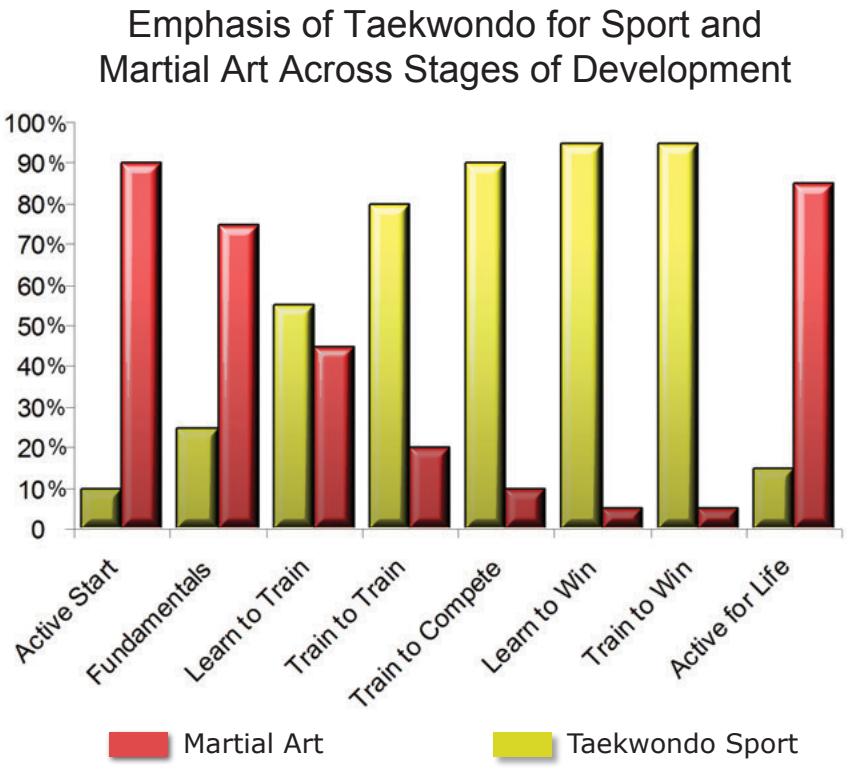
Sport in Canada is going through exciting changes. The Government of Canada is supporting national sport organizations in the creation of Long Term Athlete Development Models, commonly referred to as LTAD. *Canadian Sport For Life*, Canada's generic LTAD guide, proposes an athlete development pathway from playground to Olympic podium, but also recognizes sport as a critical component of Canadian's health and well being. The generic model below identifies seven stages of athlete development. The first 3 stages, *Active Start*, *FUNdamentals*, and *Learn to Train*, are aimed at developing a foundation for athletic abilities through Physical Literacy and Sport for all. The *Training to Train*, *Training to Compete* and *Training to Win* Stages focus on excellence in sport and a progression toward high performance and international podium finishes. The final stage is *Active for Life*, where sport participants can enter at any age, and focuses on life-long physical activity in a variety of sports.

Taekwondo Canada's LTAD framework proposes similar stages to the generic diagram but includes 8 stages of development. Taekwondo athletes progress through the same stages, but an additional stage, *Learning to Win* (in the high performance pathway) is aimed to transition athletes from international participation to podium finishes at the *Train to Win* stage.

Taekwondo's model is also distinguished by two distinct streams of participation; a *performance stream* aimed at achieving excellence in Taekwondo; and a *recreation stream* aimed at building participation and wellbeing through Taekwondo. Within each stream a participant may choose to engage in Taekwondo as a martial art or combative Taekwondo, which is referred to as "Taekwondo sport".

The entry point for most participants in Taekwondo is through martial arts, where participants can strive for higher belt levels from *Active Start* to *Learning to Train* and the *Active for Life* stages of development. For those who choose to pursue Taekwondo for sport, they will continue from the *Training to Train* into the *Training to Win* stage of development. These stages of development require greater commitment to Taekwondo sport where the pinnacle of achievement is the Olympic Games. The bar graph below provides an overview of the emphasis of martial art and Taekwondo sport across the stages of development.




The *Active for Life* stage of development provides an opportunity for participants to engage in Taekwondo sport on a recreational basis, or to pursue higher skill level in Martial Arts. The Taekwondo LTAD model is inclusive and provides opportunities for all participants whether able bodied or a person with a disability. The model recognizes and promotes the pursuit of excellence in both Sport and Martial Arts.

# Outline of LTAD

## *Main Objectives by Stage*

## Active Start *ages 3-5*

### Objectives:

- Emphasize fun activities in a structured environment.
- Allow opportunities for play and creativity.
- Initiate fundamental movements (ABCs = Agility, Balance, and Coordination) to enhance body awareness.
- Teach simple stance, punches, kicks and blocks.
- Provide positive role modeling for expected behaviour.
- Introduce simple dojang rules and Taekwondo etiquette.
- Introduce foundation motor skills (balance, agility and coordination).
- Develop positive interaction with others by implementing activities that require cooperation and sharing.
- Use simple games to introduce basic concepts of self defence.
- Provide model or demonstration of basic movements.

## FUNdamentals *males 6-9, females 6-8*

### Objectives:

- Emphasize fun activity in a safe and non-threatening environment.
- Develop fundamental movements that teach overall body and limb control.
- Encourage creative play that develops basic stances, punches and kicks.
- Develop dojang rules and Taekwondo etiquette.
- Emphasize foundation motor skills (ABCs) through structured play.
- Take advantage of increased trainability to enhance speed/quickness of movements less than 5 seconds in duration, and develop flexibility.
- Develop self-esteem through positive reinforcement and rewarding good behaviour.
- Introduce combative activities through simple games.
- Initiate simple attack and defence strategies.
- Introduce concepts of self defence.

# Learn to Train *males 10-12, females 9-11*

## Objectives:

- Emphasize safety, self control and respect.
- Consolidate and refine basic Taekwondo skills.
- Encourage learning the game and 'dreaming to learn'.
- Develop practical tactical knowledge that builds basic strategies for attack and defence.
- Introduce decision making during combative situations.
- Take advantage of increased trainability for the development of sport-specific skills.
- Develop motor skills (agility, balance, coordination, rhythm, time/space orientation, speed, dexterity "hand-eye coordination", etc).
- Introduce conditioning using medicine balls, Swiss balls and own body weight.
- Introduce fundamental mental skills that emphasize concentration, emotional control and, confidence.
- Provide a ratio of 70% training to 30% competition.

# Train to Train *males 12-16, females 11-15*

## Objectives:

- Begin to specialize in combative Taekwondo (sport). Martial arts become less of an emphasis in the development of fighting skills needed at the competitive level.
- Modify programming depending on early, average and late maturers, and recognize differences in the training of male and female athletes.
- Monitor growth rate to predict onset of peak height velocity in order to identify optimal windows of trainability.
- Emphasize self confidence and respect.
- Consolidate basic skills and introduce advanced skills and techniques.
- Encourage playing the game and dreaming to train.
- Develop tactical strategies that enhance game management and begin to introduce individual style.
- Introduce resistance training that emphasizes proper lifting techniques.
- Encourage ownership over tactical decision making and critical reflection on the effectiveness of decisions.
- Introduce fitness testing to monitor basic technical and physical factors.
- Recognize peer influences and need for increased autonomy.
- Provide a ratio of 60% training to 40% competition.

# Train to Compete *males 16-18+, females 15-17+*

## Objectives:

- Focus on the training process rather than the outcome of the competition.
- Emphasize hard work, self-discipline, and commitment.
- Provide a well-structured strength and conditioning program that is continually monitored and adjusted.
- Ensure athletes follow a reactive periodized annual training plan.
- Monitor basic key performance indicators in annual plan (attendance, training volume, competitive events).
- Emphasize success rate of technical skills during combative engagement.
- Ensure fitness testing is done on a regular basis throughout the annual plan.
- Develop tactical planning to promote athlete readiness during competition.
- Ensure high-intensity practice to simulate competition demands.
- Emphasize tactical decision making to solve problems in new situations or contexts.
- Maximize opportunities to effectively implement appropriate mental strategies to ensure competition readiness.
- Provide support for academic demands and to assist athlete to balance lifestyle choices.
- Develop strategies that promote recovery and regeneration.

# Learn to Win *males 18-21+, females 17-19+*

## Objectives:

- Develop and reinforce belief in ability to perform in competition or against opponents.
- Develop specific attack and defense strategies that are consistent with athlete's fighting style.
- Introduce specialized practitioners in strength and conditioning, psychology, rehabilitation, physiology, nutrition, and health.
- Monitor a variety of key performance indicators that predict future performance. These may include physiological measures, analysis of fighting trends, and strategic participation in competitive events.
- Provide a highly individualized strength and conditioning program that is continually monitored and adjusted.
- Emphasize success rate or efficiency in point scoring during combative situations.
- Ensure fitness testing is done on a regular basis throughout the annual plan.
- Use video to analyze strength and weakness of athletes and opponents.
- Develop competition plans that promote athlete readiness in competition.
- Ensure high-intensity practice to simulate competition demands and require tactical decision making.
- Implement a variety of mental strategies to ensure ideal performance state.
- Monitor and promote strategies that enhance recovery and regeneration.
- Ensure optimal academic support and recognize major transition from high school to university or work environments.

# Train to Win *males 21+, females 19+*

## Objectives:

- Develop ability to perform on demand regardless of external factors or other elements that may affect performance.
- Specialize in specific attack and defense strategies that are consistent with athlete's fighting style.
- Access consultation from specialized practitioners in strength and conditioning, psychology, rehabilitation, physiology, nutrition and health.
- Demand hard work, self-discipline and commitment.
- Provide highly individualized annual training plans that identify performance factors that are horizontally and vertically integrated.
- Monitor key performance indicators that can be used to adjust training plan in relation to competition demands.
- Implement a battery of laboratory fitness tests that specifically identify key training factors in order to adjust training demands.
- Use video to analyze opponent strength and weakness in order to develop detailed competitive plan.
- Ensure high-intensity practice using a variety of training partners that reinforce competitive demands.
- Maximize opportunities to effectively implement appropriate mental strategies to ensure ideal performance state.
- Monitor and promote strategies that enhance recovery and regeneration.
- Ensure athlete is provided opportunities to realize career transition and develop plans for post-competitive integration into workplace or school.

# Active for Life *all ages*

## Objectives:

- Acquire, consolidate, and refine Taekwondo skills to ensure safety.
- Encourage autonomy over learning and provide opportunities to learn new skills independently and in group settings.
- Relate teaching of new skills to previous life or sport experiences.
- Provide a variety of Taekwondo activities and choices including, poomsae, combatives, breaking, self defense, and meditation.
- Ensure flexible programming allows participants greater accessibility to Taekwondo practice.
- Encourage participation in a variety of other sports, particularly non-weight bearing sports like cycling and swimming during later adulthood.
- Reinforce Taekwondo etiquette and rules.
- Involve participants in problem solving activities that enable decision making.
- Provide opportunities to demonstrate competency and pursue excellence in martial arts.
- Encourage volunteering in tasks or activities within Taekwondo school and sport in general.
- Monitor health on a regular basis, and ensure medical consent prior to engaging in activities.
- Provide opportunities for social interaction outside Taekwondo environment.

# Why LTAD?

LTAD is a vehicle for change and provides a framework that identifies an optimal pathway for excellence in Taekwondo. It is recognized that this pathway must include the engagement in Taekwondo martial arts and Taekwondo sport, and provide opportunities for participants to explore both disciplines. Taekwondo Canada's LTAD provides a series of recommendations for each stage of development. LTAD is necessary to provide a consistent approach for the instruction and coaching of Taekwondo participants in Canada. Without a consistent approach for athlete development, participants within Taekwondo often suffer the short comings and consequences identified below:

## Short Comings

- Adult training and competition programs are imposed on developing athletes.
- Training methods and competition programs designed for male athletes are imposed on female athletes.
- Chronological rather than developmental age is used in training and competition planning.
- Coaches and instructors largely neglect the critical periods of accelerated adaptation to training.
- Masters and grandmasters encourage ongoing testing which is costly and inconsistent from one Taekwondo school to another.
- Inconsistent standards for belt testing expose inadequate skill levels during combative matches.
- Athletes are encouraged to engage in competitive events before they are ready.

## Consequences

- Failure to consistently reach optimal performance levels in international and Olympic competition.
- Lack of proper fitness to excel in Taekwondo sport or promote progression in Martial Arts.
- Inconsistent or poor basic skill development that needs to be retrained in later stages of development.
- Bad habits developed from over emphasis on competition success without proper technical ability.
- Combative athletes sustain major injuries including head trauma due to lack of adequate experience or skill level.
- Participants leave Taekwondo because they do not have fun or feel failure in competition.
- Female athletes drop out or are under represented due to inappropriate programs.

*...Continued*

## Short Comings

- Children compete in single elimination events that limit combative experiences.
- Selection to National Junior Team is based on performance in single elimination National Championships and may not recognize the best athletes.
- Junior athletes engage in WTF rules without preliminary experience in head striking.
- Developmental training needs of athletes with a disability are not well understood.
- Yearly calendar is based on International events which adversely effects scheduling of national, provincial and regional competitions.

## Consequences

- Families cannot afford cost of belt testing or engagement in national level competitions.
- Parents are not willing to spend time and money on competitions where their children are eliminated early.
- No systematic development of the next generation of successful international athletes.
- Athletes are pulled in different directions by school, career, Taekwondo and other sport commitments.
- Athletes practice weight cutting strategies in order to compete in more advantageous weight classes for competitive success.

The success of any long-term athlete development framework is the obligation of all stakeholders in the sport, which includes parents, coaches, athletes, referees and administrators. The implementation of Taekwondo's LTAD model takes into consideration the regional differences in demographics and participation in the sport. Key stakeholders at the local and provincial levels should implement the recommendations in this document and become students of their sport in order to make informed decisions regarding athlete development. In time LTAD will facilitate a healthy Taekwondo sport system that fosters both excellence in martial art and combative sport.

# Injury Rates in Taekwondo

Research into injury rates in Taekwondo has indicated the incidence of head and injuries to other body regions (Pieter, W. 2005). Kazemi (2004), in a study of Canadian Senior championships, found that the majority of Taekwondo injuries occur in the lower extremities but did report a 6.9 rate of concussion in 1000 athlete exposures for males. The result of this study indicated lower injury rates compared to other countries and other forms of martial arts.

Beis, Pieter and Abatzides (2007) examined Greek male and female Taekwondo athletes competing in age groups 11-13 (boys and girls), 14-17 (juniors) and over 18 (senior). The study examined time-loss injuries where the athlete was no longer able to compete in a 24 hour period after sustaining the injury. The results did not find statistically significant differences for injury rates by body region, but did indicate a higher incidence of concussion in junior players compared to boys and girls (11-13). Further analysis of the type of technique used by Taekwondo players was not statistically significant in causing time-loss injuries. However, there was a trend for higher injury risk when using "swing" kicks (round house or spinning hook kicks). Another study by Koh and Cassidy (2004) identified a concussion rate of 50.17 per 1000 athlete exposures by examining the incidence of concussion based on video analysis of head blows which may not have been observed in previous studies. Together, these studies indicate that there are inherent risks in Taekwondo that include head injuries and that ongoing education may help coaches recognize signs of concussion, mitigate further risk, and emphasize proper skill execution.

# History of Taekwondo

Taekwondo is recognized as one of the oldest martial art of self-defense in the world. It is recognized in the Kogooryo dynasty founded in 37 B.C. in the northern region of the Korean peninsula. This 2000 year old martial art developed in Korea is distinctly separated from kung fu (the Chinese art of self-defense) and from the Japanese karate.

After World War II, the masters of the eight main schools of Korean martial arts met to form an association uniting them in order to promote Korean martial arts. On April 11, 1955, after the disruption of the Korean War, the name *Taekwondo* was chosen to identify the martial art of self-defense. In November 1972, the Kukkiwon (World Taekwondo Centre) was founded. On May 28, 1973, the World Taekwondo Federation (WTF) was officially born at an inaugural gathering at the Kukkiwon in the presence of 35 representatives from all over the world. On June 3, 1973, the Kukkiwon became the general headquarters of the World Taekwondo Federation.

The World Taekwondo Federation became affiliated in October 1975 to the General Association of International Sports Federations during its Annual General Meeting held in Montreal. At the 83rd General Assembly of the IOC in 1980 the World Taekwondo Federation was recognized as the official international body of Taekwondo. In 1978, the WTF Taekwondo Association of Canada officially became a member of the World Taekwondo Federation. Currently there are 188 member countries in the World Taekwondo Federation. Taekwondo was accepted as a demonstration sport at the 1988 Seoul Olympics and at the 1992 Barcelona Olympic Games. On September 3, 1994, upon recommendation from the Planning Commission, the IOC adopted Taekwondo as an official Olympic sport for the 2000 Games in Sydney, Australia.

In November 1996, Sport Canada recognized the WTF Taekwondo Association of Canada as the national Taekwondo sports organization in Canada. The WTF Taekwondo Association of Canada is the only official organization governing Taekwondo in Canada, recognized by both the IOC and Sport Canada.

TAEKWONDO CANADA

Canada's Taekwondo athletes have continued to achieve on the world stage in recent years by consistently medaling at international events. Dominique Bosshart made history by becoming Canada's first Taekwondo Olympian when she captured the Bronze Medal in the 2000 Sydney Olympics. In 2007, Karine Sergerie became the first Canadian player to win a Taekwondo World Championship. She then placed first at the 15th Pan American Games, and later won silver at the 2008 Beijing Olympics where Ivett Gonda and Sebastién Michaud also competed.

**Canada's Taekwondo athletes have continued to achieve on the world stage in recent years by consistently medaling at international events.**

# Black Belt Testing

A common standard for black belt testing aims to ensure, where possible, that athletes engaging in combative events have a similar requisite of skills. While National Championship rules require competitors to be registered in the Taekwondo Canada Kukkiwon database, there is evidence of significant disparity between the grading of black belts from one school to another. One of the consequences is that younger fighters may lack skills and therefore increase the risk of injury in combative events. A common standard for black belt (first dan) is established by the Kukkiwon (World Taekwondo Headquarters) and it is therefore the obligation of grandmasters to uphold this standard.

One option for ensuring a common standard is providing ongoing education. Testing summits could occur on an annual basis across all regions in Canada and aimed at updating 5th dans on current Kukkiwon standards, long-term athlete development, combative sport structure and other requirements for black belt testing. It is hoped that through ongoing education, a common standard for black belt testing will begin to emerge.

# 10 Key Factors of LTAD

## ONE The 10-Year Rule

*It takes a minimum of 10 years and 10,000 hours of training for a talented athlete to reach elite levels in sport*

Scientific research has concluded that it takes a minimum of 10 years and 10,000 hours of training for a talented athlete to reach elite levels. For athlete and coach, this translates into slightly more than 3 hours of training or competition daily for 10 years. This factor is supported by *The Path to Excellence*, which provides a comprehensive view of the development of U.S. Olympians who competed between 1984 and 1998. The results reveal that;

- U.S. Olympians begin their sport participation at the average age of 12.0 for males and 11.5 for females.
- Most Olympians reported a 12- to 13-year period of talent development from their sport introduction to making an Olympic team.
- Olympic medalists were younger — 1.3 to 3.6 years — during the first 5 stages of development than non-medalists, suggesting that medalists were receiving motor skill development and training at an earlier age. However, caution must be taken not to fall into the trap of early specialization in late specialization sports.

# TWO FUNdamentals

Individuals who do not develop a foundation of fundamental skills will have difficulty learning new sport skills later in life, which may limit access to activity, reduce self confidence to engage in physical activity, and increase weight and obesity. Just as one would not expect someone who has limited literacy skills to read on a recreational basis, we would not expect those who lack foundation physical skills to engage in sport on a recreational basis. The term "physical literacy" was identified to highlight the importance of learning the fundamental movement and motor skills that are used in human locomotion (traveling), object control, and body awareness (balance and coordination). These fundamental skills underlie all sport skills. Taekwondo provides an excellent opportunity to develop key fundamental movement skills but should be done in conjunction with a number of other sport skills. It is recommended that children participate in a variety of sports at a young age, particularly swimming, gymnastics, and athletics. Other team sports that involve throwing, catching, and object control are also excellent for developing critical fundamental skills.

It is also important that children with a disability have the opportunity to develop fundamental movement and sport skills. Failure to do so severely limits their lifelong opportunities for recreational and athletic success. Despite this great need, children with a disability face difficulty gaining the fundamentals because;

- overly protective parents, teachers, and coaches shield them from the bumps and bruises of childhood play
- adapted physical education is not well developed in all school systems
- some coaches do not welcome children with a disability to their activities because of a lack of knowledge about how to integrate them
- it takes creativity to integrate a child with a disability into group activities where fundamental skills are practiced and physical literacy developed

# THREE Specialization

Sports can be classified as either early or late specialization. Early specialization sports involve complex skills that are best learned before maturation. Taekwondo would be considered a late specialization sport, however there are a variety of Taekwondo skills that can be prioritized at earlier ages. Because Taekwondo is both a martial art and a combative sport, practices for young children should emphasize martial arts skills that contribute to the development of physical literacy. If physical literacy is acquired before maturation, athletes can engage in combative Taekwondo when they are between the ages of 11 and 14 and still have the potential to achieve success. In the 2004 Athens Olympics the average age of female and male medalists was 23 and 25 years respectively. Given the 10 year rule, the commitment to full time engagement in the sport would not begin until 13 years for females and 15 years for males, and after the onset of puberty. It should be noted that Canadian athletes achieving medal potential may be older on average than their international competitors. Further, trends in most sports realize a greater longevity for older athletes and opportunities for later maturers to excel.

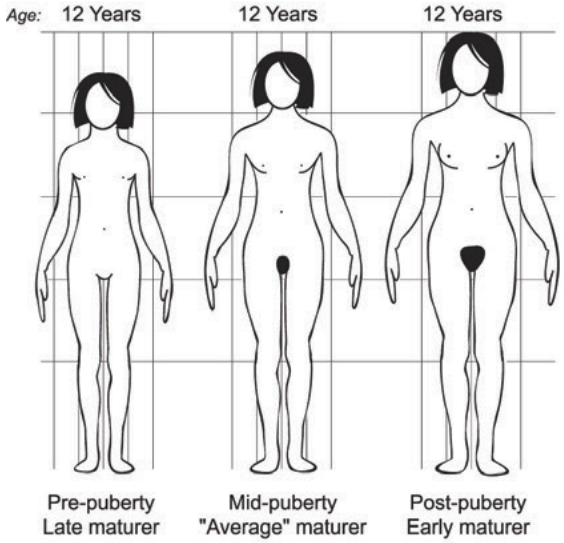
Specializing in combative Taekwondo before the age of 10 may have the following consequences:

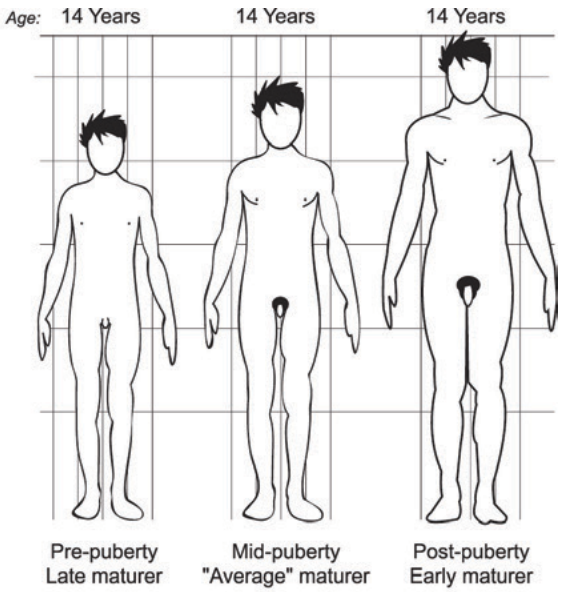
- one-sided, sport-specific preparation
- lack of fundamental movement skills
- overuse injuries
- early burnout
- early retirement from training and competition

# FOUR Developmental Age

Development refers to the interrelationship between growth and maturation in relation to the passage of time. Growth refers to observable step-by-step changes in body size such as height, weight, and fat percentage. Maturation refers to qualitative system changes, both structural and functional, in the body's progress toward maturity such as the change of cartilage to bone in the skeleton. The concept of development also includes the social, emotional, intellectual, and motor realms of the child.

*Structure / Stature* is one of ten S's that underlie optimal long term athlete development and provide essential clues that help to reveal developmental age. Developmental age is an important factor to consider in long term athlete development as it can identify early, average, or late maturers. Identification of one's maturity is critical when designing appropriate training programs and should be considered as a key factor in determining ongoing progress in Taekwondo. Often early maturers are noticed or identified as having the greatest potential in the sport as they possess greater physical abilities compared to late maturers. However, the early onset of puberty may limit the optimal timeframe to develop a variety of critical Taekwondo skills. While the early maturer excels through physical prowess, he or she may suffer technical deficits that need remedial programming during later stages of development. On the other hand, late maturers may have a longer timeframe for skill development and better opportunity to enhance technical ability. The later development of physical abilities in late maturers cultivates the foundation of technical abilities that have been learned and may lead to more effective progression through later stages of development.



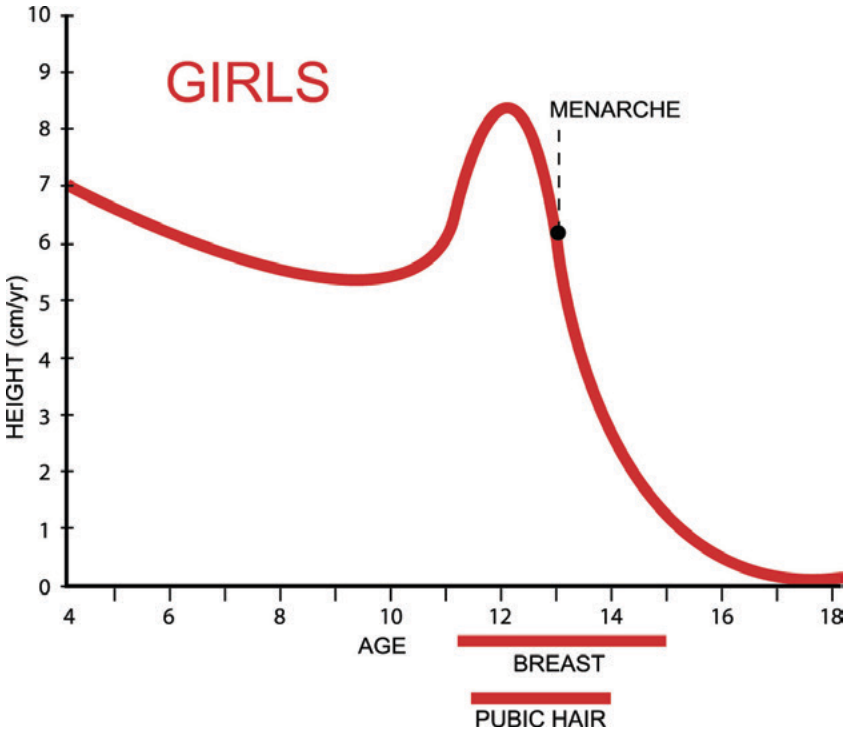



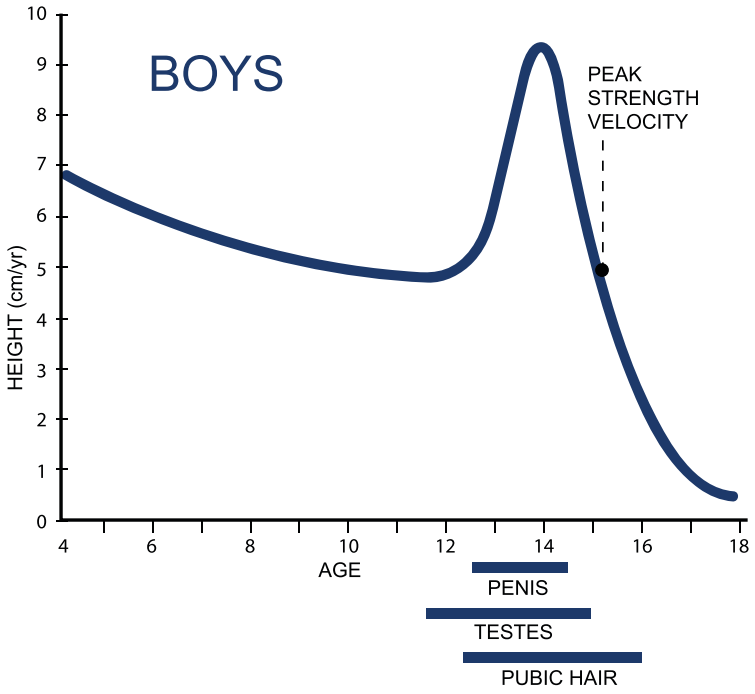
In Taekwondo weight classifications in relation to an individual's height may assist in distinguishing developmental age where early maturers are represented in heavier weight categories and late maturers in lighter weight categories. While it may be desirable for coaches and instructors to select talent from the heavier weight classes, there is equal if not greater potential for athletes in lighter weight categories to excel in the Taekwondo. Therefore, it is important to factor developmental age into talent identification.

A significant marker of developmental age is the onset of puberty. This can be predicted by measuring *Peak Height Velocity* (PHV). PHV is calculated by dividing a series of growth measures by a unit of time that has elapsed between measurements. These measures may include both standing and sitting height, weight and age.

## PHV in Girls

On average PHV in girls occurs at about 12 years of age. Usually the first physical sign of adolescence is breast budding, which occurs slightly after the onset of the growth spurt. Shortly thereafter, pubic hair begins to grow. Menarche, or the onset of menstruation, comes rather late in the growth spurt, occurring after PHV is achieved. The sequence of developmental events may normally occur 2 or even more years earlier or later than average.






## PHV in Boys

PHV in boys is more intense than in girls and on average occurs about 2 years later. Growth of the testes, pubic hair, and penis are related to the maturation process. *Peak Strength Velocity* (PSV) comes a year or so after PHV. Thus, there is pronounced late gain in strength characteristics of the male athlete. As with girls, the developmental sequence for male athletes may occur 2 or more years earlier or later than average. Early maturing boys may have as much as a 4-year physiological advantage over their late-maturing peers. Eventually, the late maturers will catch up when they experience their growth spurt.

## Measuring PHV

In order to estimate PHV, the University of Saskatchewan has developed a PHV calculator which requires the athlete's birthdate, height, sitting height, and weight. The calculator provides protocols for measuring and can be used to predict adult height. See the following webpage:

http://athena.usask.ca/growthutility/phv_ui.cfm?type=1

# FIVE Trainability

Trainability refers to adaptation to stimuli given one's genetic endowment at a given stage of development. All physiological systems are always trainable, however there is some evidence to suggest that there are sensitive periods in an individual's development when certain types of training have a more optimal effect. The timeline to take advantage of these sensitive periods is dependent on both chronological and developmental ages. It is important to consider the interrelationship of all developmental factors when determining an individual's responsiveness to a given training priority.

*Canada Sport for Life* identifies ten S's of trainability. One of these S's (*Structure/Stature*) has already identified under the key factor, developmental age. This section of the LTAD guide will examine the 5 S's that relate to physical training, while the remaining 4 S's (*Sychology, Sustenance, Schooling* and *Socio-cultural*) will be woven throughout other sections of the document.

# Five basic S's of Physical Training and Performance

## Stamina (Endurance)

Stamina (endurance) is the ability to sustain a dynamic effort over an extended period of time, lasting several minutes or even hours. Intense efforts lasting between 2 and 10 minutes require a subset of this athletic ability referred to as maximum aerobic power.

An optimal period of trainability for the development of stamina occurs at the onset of Peak Height Velocity and is determined by developmental age. It is recommended that aerobic capacity training occurs before athletes reach PHV, and that aerobic power be introduced progressively after growth rate decelerates.

# Strength

Strength refers to the amount of force that a muscle or muscle group can generate during a contraction. The term strength is used to describe a broad categorization based on the speed and rate of muscular contractions. These include: speed strength, strength endurance, and maximal strength. Strength can also be described as being 1) *relative*, which is the amount of force generated per unit of body weight; or 2) *absolute*, which is the maximal amount of mass that can be moved. Taekwondo sport requires greater emphasis on relative strength and the ability to sustain repeated high speed contractions (speed / endurance-strength). The optimal period of trainability of strength is dependent on developmental age and for girls is immediately after PHV or at the onset of the menstruation; in boys an optimal period for strength development is 12 to 18 months after PHV. Speed strength and endurance strength can be developed prior to puberty using lighter loads where body weight exercises are prioritized.

# Speed

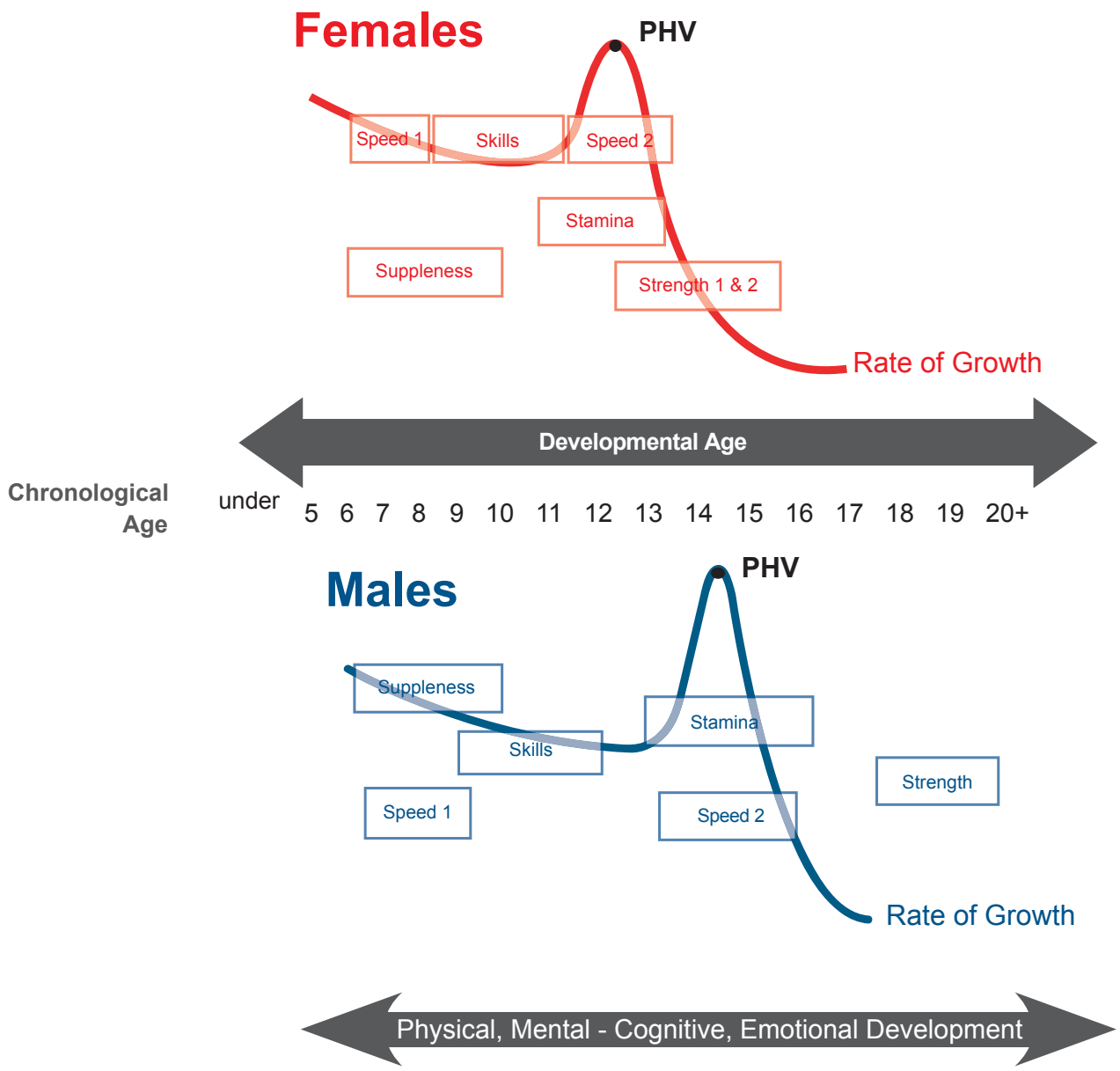
Speed is the highest rate at which a movement or a series of movements can be executed or the ability to cover a given distance in the shortest possible time during an all-out effort of very short duration. Speed is a critical ability in Taekwondo sport and can be developed through sport-specific straining. There are two periods for optimal development of speed based on chronological age. The first period of optimal speed training occurs between the ages of 7 and 9 years and 6 and 8 years for boys and girls respectively. This period may provide better opportunity to develop speed agility, the ability to move quickly and precisely (less than 5-6 seconds) in response to a given stimulus. The second period for speed adaptation occurs between the ages of 13 and 16 and 11 to 13 for males and females respectively. This period may enhance the ability to develop maximal speed which requires maximal effort for a very short duration (extended 20 seconds) and may be multi-directional in nature.

# Skill

A skill is the ability to demonstrate technical form under realistic demands and is characterized by a high certainty in bringing about an expected result. Taekwondo requires the practice of skill for form and precision in martial arts and for speed and timing in Taekwondo sport. A sensitive period for sport-specific skill development is based on chronological age and takes place between the ages of 9 and 12 for boys and 8 and 11 for girls. This assumes that a foundation of fundamental movement skills have been developed prior to these ages, which will help to increase the trainability of new sport skills.

# Suppleness (Flexibility)

Flexibility is the magnitude of range of motion around a specific joint without sustaining injury. Flexibility is a huge performance factor in Taekwondo and underlies the ability to execute many of the different Taekwondo skills. Flexibility is always trainable and while there may be an optimal period to develop flexibility (between the ages of 6 to 10 for boys and girls), special attention should be given to flexibility during periods of rapid growth because of the stress on the joints. Taekwondo offers athletes an excellent opportunity to develop and maintain flexibility from childhood to adulthood if practiced consistently.




## All Systems Are Always Trainable!

This figure illustrates the *Windows of Optimal Trainability* for females and males. Two periods — stamina and strength — are based on the moving scales of the onset of the growth spurt and PHV. The other 3 periods — speed, skill, and suppleness — are based on chronological age.

# SIX Holistic Development

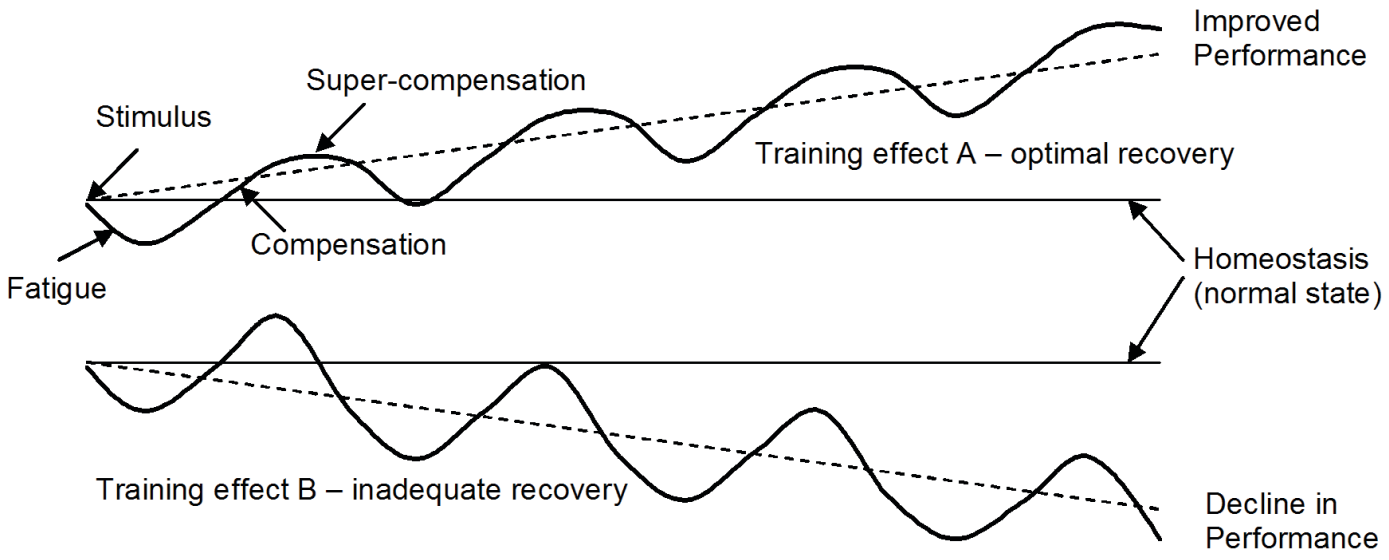
Sport by its very nature tends to emphasize technical, tactical, and physical elements that underlie performance. Cognitive, mental (Sychology), and emotional (affective) elements are critical for athlete performance and must be prioritized in long-term athlete development. Beyond these elements coaches and instructors should also consider equipment and environmental factors that impact performance and safety. When analyzing athlete performance, coaches and instructors often consider only physical or technical elements while largely ignoring other factors that could have an impact on performance. The following table provides a referent of key elements that should be identified when developing programs or teaching athletes.

| Key element | Description | Examples |
|---|---|---|
| Equipment | Sport-specific gear, uniform, and training aids | • Dobuk<br>• Protective equipment<br>• Pads and targets |
| Environment | The sport-specific surroundings, conditions, and influences during practice and competition | • Human factors<br>• Temperature and humidity<br>• Lighting<br>• Competition area |
| Affective (Emotional) | Perceptions of the participant's own abilities, feelings or interrelationships with others | • Belief in oneself<br>• Fear<br>• Confidence |
| Cognitive / Mental | Factors that relate to the performer's thoughts or thought processes that are used to execute a given task or action | • Re-focusing<br>• Distraction control<br>• Problem solving<br>• Ideal performance state |
| Physical | Physiological systems that are used to execute a sport specific task and monitor performance | • Heart rate<br>• Strength<br>• Flexibility<br>• Speed |
| Tactical | Decision making that is needed in order to effectively achieve a task or performance outcome | • Positioning<br>• Timing<br>• Selection of skill |
| Technical | Precision of biomechanical factors that contribute to the achievement of a task goal | • Preliminary movements (Stance)<br>• Backswing or recovery movements<br>• Force producing move-ments<br>• Critical instant<br>• Follow-through |

The elements identified above will vary depending on the stage of long-term athlete development and may impact performance to a greater or lesser degree. For example the maturity of an individual will have an effect on his/her cognitive, social, and emotional capabilities which may vary by as much as 2 to 4 years during adolescence. A foundation of ethical behaviour, fair play, respect, and perseverance are qualities that should be fostered within all stages of long-term athlete development. Examples of "Things to do" is provided within this document for each stage of athlete development and should be considered when teaching and designing Taekwondo programs.

## SEVEN Periodization

Simply put, periodization is time management. As a planning technique, it provides the framework for prioritizing the training of different athletic abilities in the right sequential order to improve performance. Periodization seeks to integrate the training of athletic abilities over a period of time and within a given week or individual training session. Horizontal integration refers to the prioritization of training modalities over a period of time that may span years, months, or weeks. Periodization applies horizontal integration by identifying athletic abilities that can be more optimally trained at certain times during athlete development (long term) or within an annual planning cycle. The prioritization for the development of athletic abilities through horizontal integration suggests that not all abilities can be optimally trained at the same time. Rather it is the training sequence of athletic abilities that ensures optimal changes in performance. Further, periodization requires a planned approach to allow for appropriate recovery. Without adequate recovery the human body is unable to adapt to training stimuli and may degrade over time (over training). Optimal horizontal integration with adequate recovery ensures ongoing progression of athletic abilities that will improve athlete performance.




The figure above illustrates the super-compensation cycle to training stimulus over a period of time. The top line demonstrates the effect of training with optimal recovery to ensure adaptation and overcome the natural fatigue brought on by the training stimuli. The bottom line demonstrates training effect where there is not enough recovery to adapt to the training stimulus which results in a decrease in performance (over training). Bompa, 1999.

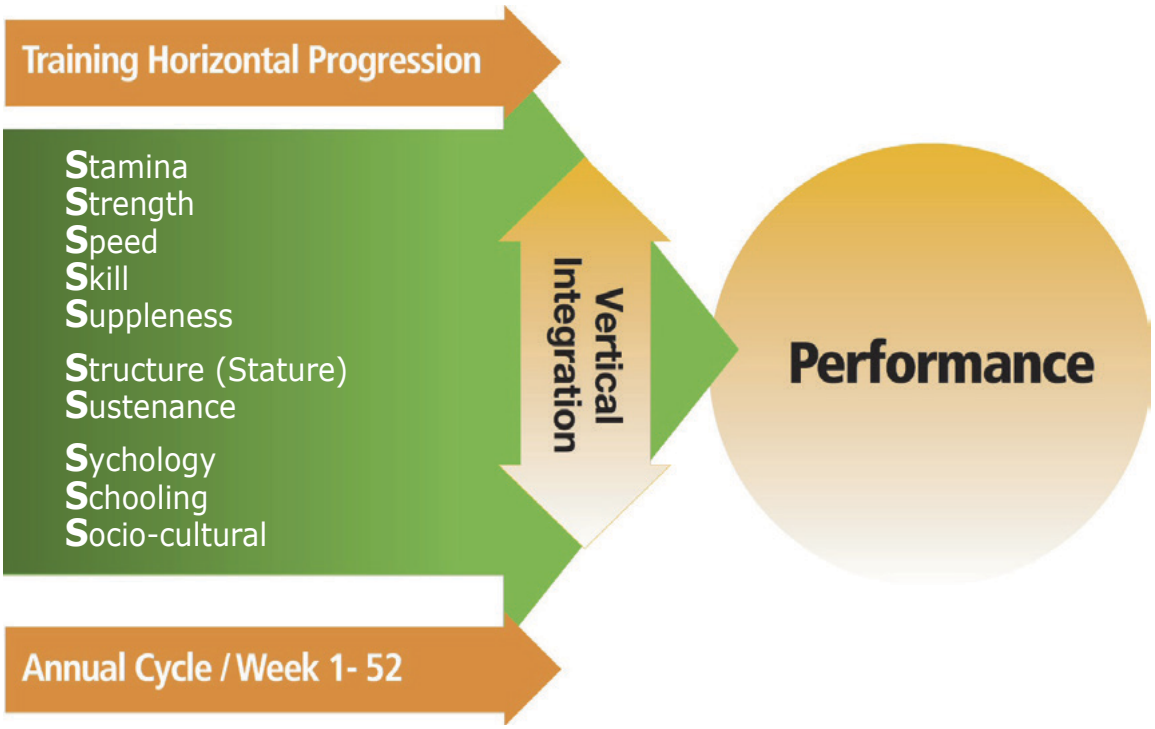
Vertical integration examines the interrelationships of athletic abilities within a periodized training plan. While certain athletic abilities can be prioritized horizontally, there will likely be interaction between different abilities that may adversely affect the on-going development of certain abilities. For example, there is evidence that suggests that aerobic training interferes with the optimal development of strength and that sufficient rest is required between training sessions or sequences in strength training prior to aerobic training (Sporer, 2000). Vertical integration seeks to provide optimal interaction of athletic abilities that are developed through training or modified prior to competition.

Periodization, far from being a single fixed process or methodology, is in fact a highly flexible tool. When used appropriately, in conjunction with sound methodology and ongoing monitoring and evaluation, it is an essential component in optimal sports programming and athlete development at all levels. LTAD addresses this requirement by developing periodization models for all stages, taking into consideration the growth, maturation, and trainability principles that are unique to the primary development stages — the first two decades of life — yet seamlessly integrate with the subsequent stages of athletic performance and life. This document provides templates that illustrate

example training plans for the *Train to Train* to *Train to Win* stages of development.

LTAD typically requires a 5 – 10 year procedure to optimize physical, technical, tactical (including decision making) and mental preparation, as well as the supporting ancillary capacities. Within LTAD planning must examine both long term (quadrennial) and short term (annual) planning. Quadrennial plans refer to the 4-year Olympic and Paralympic cycle for elite athletes, while annual plans identify periods of optimal athletic preparation, competition, and the transition on a yearly basis.

Current examples of periodization models identified in the sport performance literature are designed for the sub-elite and elite senior/mature performers. There is very little information on periodization for children or adolescents or for athletes with disability.




The above figure illustrates the 'art and science' required by the coach when planning the horizontal and vertical integration of the 10 Expanded S's of training and performance. The horizontal arrows represent the progress of an athlete that is quantifiable and based on scientific guidelines; the vertical integration is based on the interrelationship of each aspect of training and performance, which is often based on the 'art' of coaching.

# EIGHT Competition Structure Aligned to LTAD

Competition structures and formats are frequently set by administrators and are based on good intentions but often hinder athlete development. Optimal competition structure at all stages is critical to athlete development. The structure of competition in Taekwondo has implications for selection, talent identification, safety, cost, periodized programming, and athlete health. As part of the process in developing a LTAD framework, Taekwondo Canada reviewed its competition structure and provided recommendations that should be considered both nationally and locally. The review of competition examined a number of issues that are prevalent in Taekwondo and include, but are not limited to;

***The system of competition makes or breaks the athletes!***

- implementing minimum standards for Black Belt testing
- aligning age categories to stages of development
- introduction of modified rules for head striking at younger ages
- investigating weight cutting practices at junior levels
- modifying match duration, rounds, and rest period relative to age and ability
- identifying a common competition calendar at each stage of development
- implementing minimum two combative matches per tournament
- supporting a variety of competition formats and draws

The recommendations that are provided in this document will have a significant impact on athlete development and create a sustainable system that will benefit all Taekwondo stakeholders in Canada.

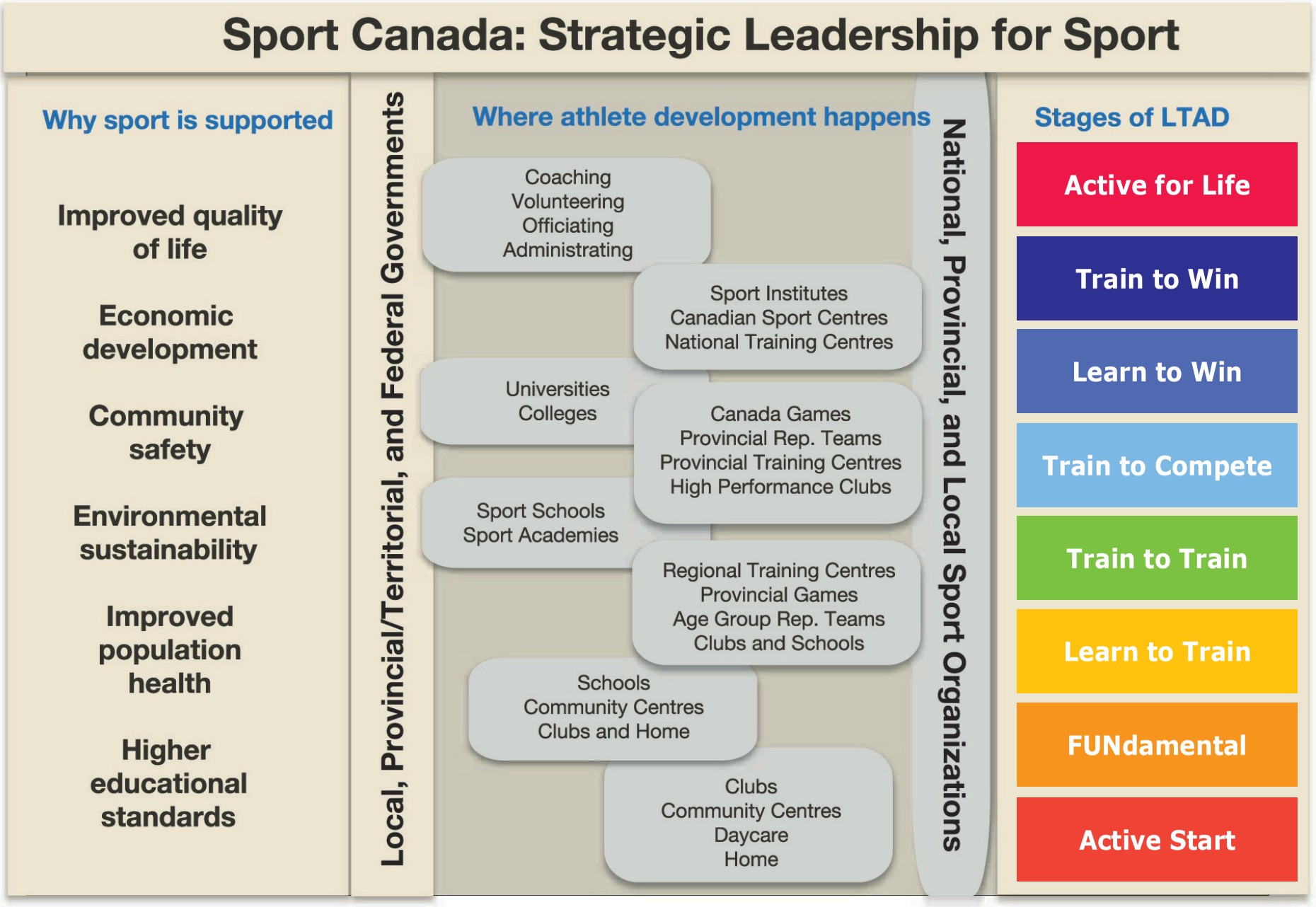
# NINE System Alignment and Integration

*The health and well-being of the nation and the medals won at major games are simple by-products of an effective sport system!*

Stakeholders in Taekwondo include athletes, masters, grandmasters, coaches, parents, administrators, coloured belt participants, spectators, and supporting national, provincial and multi-sport organizations. With so many partners across so vast a country, each with different demographic composition, system integration and alignment is a major challenge. As a priority, Sport Canada, in a document entitled *Canadian Sport Policy - Federal-Provincial/Territorial priorities for Collaborative action 2007-2012*, has endorsed the creation of sport-specific LTAD Models to provide a framework that enables sport system alignment and integration. Taekwondo Canada's initiative to develop LTAD in conjunction with the National Coaching Certification Program (NCCP) has demonstrated a commitment towards an integrated approach to athlete development and the life-long pursuit of Taekwondo.

This LTAD document provides critical recommendations for the development of Taekwondo participants, but is also only one part of a much greater strategic vision for sport in Canada. While the creation of LTAD models is significant, it is only one small step that must be carried forward by every person involved in Taekwondo in Canada. Only through a ground-swell of grass-roots support will true system alignment and integration be achieved. The health and well-being of the nation and the medals won at major games are simple by-products of an effective sport system! An effective sport system integration must align athlete development through local schools and clubs, and provincial and national organizations based on this LTAD document. LTAD is athlete centred, coach driven, administration enabled, and community supported.

The figure on the opposite page illustrates the relationship between national and local agencies and programs. To build on the Canadian Sport Policy, LTAD must be supported and promoted by all levels of government including Canadian Heritage (Sport Canada) and the provincial/territorial ministries responsible for sport and recreation, provincial/territorial health ministries and Health Canada, provincial/territorial education ministries, other relevant federal and provincial/territorial departments and ministries, and municipal governments.


Sport Canada: Strategic Leadership for Sport
Why sport is supported
Improved quality of life
Economic development
Community safety
Environmental sustainability
Improved population health
Higher educational standards
Local, Provincial/Territorial, and Federal Governments
Where athlete development happens
Coaching
Volunteering
Officiating
Administrating
Sport Institutes
Canadian Sport Centres
National Training Centres
Universities
Colleges
Canada Games
Provincial Rep. Teams
Provincial Training Centres
High Performance Clubs
Sport Schools
Sport Academies
Regional Training Centres
Provincial Games
Age Group Rep. Teams
Clubs and Schools
Schools
Community Centres
Clubs and Home
Clubs
Community Centres
Daycare
Home
National, Provincial, and Local Sport Organizations
Stages of LTAD
Active for Life
Train to Win
Learn to Win
Train to Compete
Train to Train
Learn to Train
FUNdamental
Active Start

# TEN Continuous Improvement

Long-term athlete development models are a dynamic framework that are based on key principles and need continuous improvement. Continuous improvement ensures that;

- LTAD responds and reacts to new scientific and sport-specific innovations and observations and is subject to continuous research in all its aspects
- LTAD, as a continuously evolving vehicle for change, reflects all emerging facets of physical education, sport, and recreation to ensure systematic and logical delivery of programs to all ages
- LTAD promotes ongoing education and sensitization of federal, provincial/territorial, and municipal governments, the mass media, sport and recreation administrators, coaches, sport scientists, parents, and educators about the interlocking relationship between physical education, school sport, community recreation, life-long physical activity, and high performance sport

The philosophic basis of Taekwondo promotes continuous improvement through the harmonization of all principles of the cosmos and the norms of human life. The Taegeuk symbol represents this philosophy and relates to a particular item of the Korean tradition and is easily recognizable with its two parts symbolizing yin (negative) and yang (positive) rotating throughout time. It is therefore the symbol that signifies energy and source of life and is a significant Socio-Cultural aspect of Taekwondo's LTAD.


adidas

# Stages of Development

# 1 & 2

# Active Start & FUNdamentals

## "Start Dreaming" & "Dream to Have Fun"

*Males ages 3-5 & 6-9*
*Females 3-5 & 6-8*

## Overview

*Active Start* and *FUNdamental* stages of long term athlete development provides a basis for learning fundamental movements that underpin physical literacy. Taekwondo gives young children the opportunity to engage in a variety of fundamental movements emphasizing body and limb control, and should be only one part of several other foundation activities in which children are involved. The *Active Start* stage provides an initiation to fundamental movements by exploring Taekwondo skills that are predominantly focused on martial arts (90%). The *FUNdamental* stage continues to develop movement skills, and introduces motor skills involved in balance, agility and coordination. At the *FUNdamental* stage children may be introduced to combative sport through games, however the main focus is still on martial arts (75%).

## Outcomes

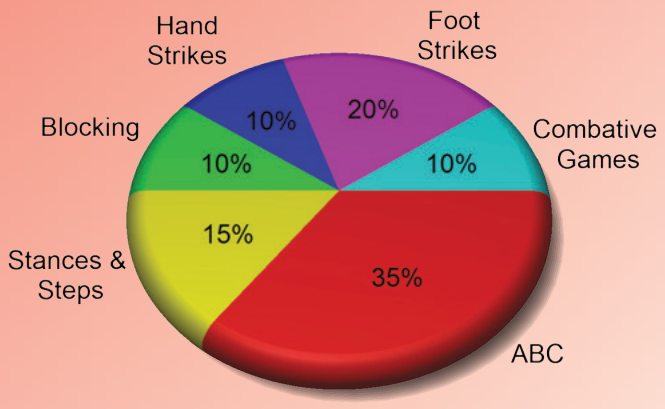
By the end of the *FUNdamentals* stage the athlete / participant should be able to:

- Understand proper Taekwondo etiquette and simple dojang (classroom) rules.
- Perform fundamental movement skills related to Taekwondo (See Skills table).
- Demonstrate simple fighting skills and tactical concepts like space and distance.
- Show willingness to engage in a variety of sport activities and have confidence to try new skills.

## Recommended Competition Structure

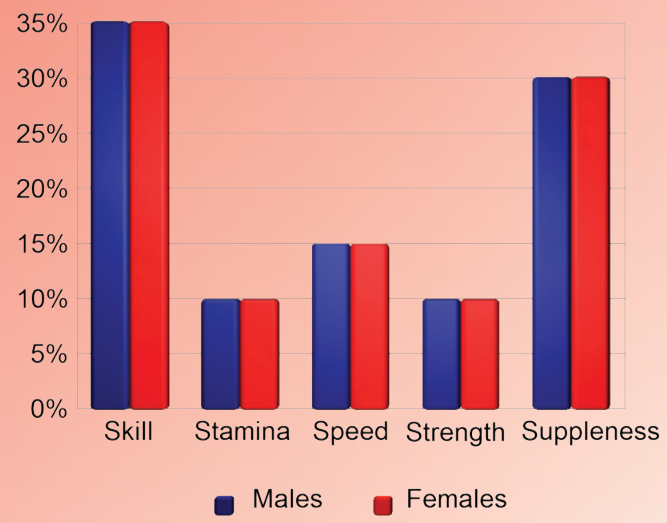
- All competitions should be in the recreational stream only.
- Group competitors based on maximum age of 10 years, prior competitive experience, and belt pre-requisites.
- Use double elimination or round robin tournament formats that guarantee a minimum 2 matches per event.
- Consider modified weight classifications to increase access and inclusion. Ensure maximum of 5 kg variation in junior weight classes when organizing tournaments.
- Use modified rules that exclude head striking and advanced techniques.
- Ensure that match durations or rounds are appropriate for the development of the athlete. Maximum round durations should not exceed 60 seconds, with a minimum rest period of 60 seconds between rounds. Coloured belt competitors should not exceed 2 rounds per match.
- Ensure mandatory use of instep footpads and quality protective equipment.

## Skill Emphasis




*This pie-chart illustrates the proportion of skills that should be emphasized during the FUNdamentals stage of development. It is important that instructors consider the skill emphasis when designing lesson for their students.*

## Five S's




*This graph identifies the recommended proportion of the 5 S's at the FUNdamentals stage of development. Instructors should consider these guidelines in planning and designing lessons.*

## Things To Do

**When teaching or coaching...**

- Ensure that practices or lessons include a variety of fundamental movement skills (Agility, Balance and Coordination - ABCs) and motor experiences that are implemented in enjoyable activities.
- Introduce combative skills through games and the use of modified equipment.
- Use very simple, specific and short explanations and feedback when teaching.
- Demonstrate skills and provide manual assistance where appropriate to adjust body parts.
- Praise children regularly for their efforts by providing complements and acknowledging good habits.
- Allow the student the opportunity to play and be creative.
- Encourage plenty of breaks during practice for rest, re-hydration and play.
- Practice skills for both sides of the body, and emphasize kinesthetic awareness (eg. knowing the position of body parts in space).
- Limit activities that require repeated impacts (kicks or strikes) or repetitions to avoid overuse injuries.
- Discourage breaking materials at the *Active Start* and *FUNdamental* stages.
- Maximize opportunities to develop quickness of movement. A window of

optimal trainability for speed occurs between the ages of 7-9 and 6-8 years for boys and girls respectively. During these periods activities that emphasize quick movements of short duration that allow full recovery are advantageous.

**When designing programs...**

- Develop good eating habits by encouraging a well balanced diet.
- Encourage good sleep habits with over eight hours of sleep per night and at least 3 hours of sleep prior to midnight.
- Encourage 1 to 2 practices per week for participants in the *Active Start* stage, and no more than 3 practices per week for those in the *FUNdamentals* stage.
- Ensure practice length ranges between 30 – 45 minutes at *Active Start*, and between 45 – 60 minutes in duration at the *FUNdamentals* stage.
- Limit number of structured combative matches to between 6-10 per year at *FUNdamentals*, and no matches at *Active Start*. These combative events should emphasize learning basic sport skills and self defense strategies. Winning is not a priority.
- Understand the importance of school and the child's transition into formalized education. Encourage peer bonds that may help to create greater awareness of Taekwondo in the community.
- Monitor growth (body length) and weight on a yearly basis.

# SKILLS

*Taekwondo skills introduced & acquired at the Active Start & FUNdamental stages*

## Martial Art Skills

| Category | Skill Name | Korean Name | Poomsae |
|---|---|---|---|
| Blocks | Low Block | Arae Makki | Taegeuk 1 |
| Blocks | High (face) Bock | Olgul Makki | Taegeuk 1 |
| Blocks | Inner Wrist Body Block | Momtong Makki | Taegeuk 2 |
| Blocks | Outside In Body Block | Momtong Bakkat Makki | Taegeuk 2 |
| Blocks | Single Knife Hand Outside Body Block | Han Sonnal Momtong Makki | Taegeuk 3 |
| Blocks | Double Knife Hand Outside Body Block | DuSonnal Momtong Makki | Taegeuk 4 |
| Blocks | Single Knife Hand Face Block | Sonnal Olgul Makki | Taegeuk 4 |
| Blocks | Open Hand Downward Block | Mulo Makki | Taegeuk 4 |
| Blocks | Single Hand Blade Side Block | Han Sonnal Yok Makki | Taegeuk 5 |
| Foot Strikes | Front Snap Kick (middle) <ball of foot> | Ap Chagi <apchuk> | Taegeuk 1 |
| Foot Strikes | Side Kick | Yop Chagi | Taegeuk 4 |
| Hitting | Closed Hand Body Punch | Momtong (bandae) Jireugi | Taegeuk 1 |
| Hitting | Right Punch Body Punch | Momtong (baro) Jireugi | Taegeuk 1 |
| Hitting | High Punch | Olgul Jireugi | Taegeuk 2 |
| Hitting | Hand Knife | Sonnal Chigee | Taegeuk 3 |
| Hitting | Spear Hand | Sonkyuk Jireugi | Taegeuk 4 |

| Category | Skill Name | Korean Name | Poomsae |
|---|---|---|---|
| Hitting | Backfist Strike to Nose | Deung Joomok Ap Chigee | Taegeuk 4 |
| Hitting | Body Side Punch | Momtong Yop Jireugi | Taegeuk 4 |
| Hitting | Swallow Poom Neck Strike | Jebi Poom Mok Chigee | Taegeuk 4 |
| Hitting | Hammer Strike | Mea Joomok Chigee | Taegeuk 5 |
| Hitting | Elbow (target hitting) | Palkup Pyojeok Chigee | Taegeuk 5 |
| Hitting | Outside In Elbow Strike | Palkup Dollyo Chigee | Taegeuk 5 |
| Stances and Steps | Attention Stance | Charyot Seogi | Basic |
| Stances and Steps | Bowing | Kyongrye | Basic |
| Stances and Steps | Horse Riding Stance | Juchoom Seogi | Basic |
| Stances and Steps | Basic Ready Stance | Kibon Junbi Seogi | Basic |
| Stances and Steps | Left Hand Stance | Wen Seogi | Taegeuk 1 |
| Stances and Steps | Right Hand Stance | Oreun Seogi | Taegeuk 1 |
| Stances and Steps | Walking Stance | Ap Seogi | Taegeuk 1 |
| Stances and Steps | Long / Front Stance | Apkubi Seogi | Taegeuk 1 |
| Stances and Steps | At Ease Stance | Pyonhi Seogi | Taegeuk 1 |
| Stances and Steps | Close Stance | Moa Seogi | Taegeuk 1 |
| Stances and Steps | Parallel Stance | Naranhi Seogi | Taegeuk 1 |
| Stances and Steps | Back Stance | Dwi Seogi | Taegeuk 3 |
| Stances and Steps | Backward Cross Stance | Dwikkoa Seogi | Taegeuk 5 |

# Sport Skills

| Category | Skill Name | Korean Name |
|---|---|---|
| Fms | Travelling Skill | Hopping, Jogging, Jumping, Rolling, Running, Skipping, Walking |
| Fms | Control Skills | Striking (hands and feet), Kicking |
| Fms | Body Orientation Skills | Centering, Falling, Dodging, Spinning, Stretching, Twisting And Turning |
| Foot Strikes | Side Kick | Yop Chagi |
| Foot Strikes | Round House Kick (low) | Dollyo Chagi |
| Foot Strikes | Drop Kick | Naeryo Chagi |
| Foot Strikes | Back Kick | Dwi Chagi |
| Hitting | Rear Hand Punch / Block Lead Arm | Dwit Joomok Jireugi |
| Hitting | Punch With Front Hand (jab Punch) | Apjoomok Jiruegi |
| Hitting | Lead Hand Punch / Block Rear Arm | Apjoomok Jireugi |
| Hitting | Closed Hand Body Punch (reverse punch) | Momtong Bandae Jireugi |
| Stances And Steps | Switching Step | Bal Bakgua |
| Stances And Steps | Sliding Step | Mikeurum Bal |
| Stances And Steps | Forward Step | Hagolum Apuro |
| Stances And Steps | Combination Step | Modum |
| Stances And Steps | Changing Step | Momtong Bakgua |
| Stances And Steps | Back Step | Hagolum Dwiro |
| Stances And Steps | 45 Normal Fighting Position | Kyorugi Seogi |
| Tactics | Timing / Coordination | |
| Tactics | Target Location and Accuracy | |
| Tactics | Decision Making | |
| Tactics | Basic Foot Work | |

# 3 Learn to Train

## "Dream to Learn"

*Males ages 10-12*
*Females 9-11*

## Overview

The *Learning to Train* stage is the major skill building stage in long-term athlete development. This stage provides a window of accelerated adaptation for motor skills and coordination, and skill learning should be emphasized. At this stage the participant should begin engaging in Taekwondo as one of three primary sports, but still participate in several other sports for recreational purposes. It is recommended that programming for this stage provides a balance between combative Taekwondo (55%), and Taekwondo as a martial art (45%).

## Outcomes

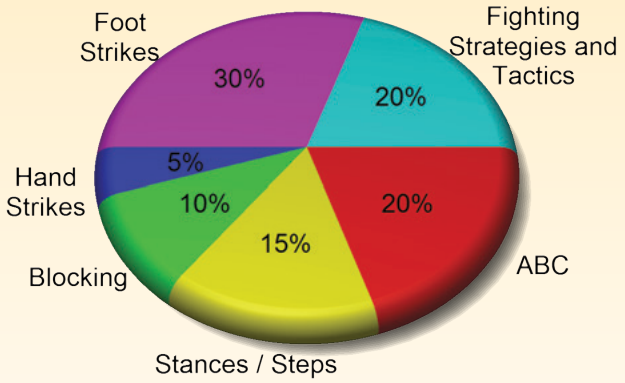
By the end of this stage the athlete / participant should be able to:

- Demonstrate sportsmanship and respect in all aspects of Taekwondo.
- Understand that competition is part of a learning process and not an end in itself.
- Demonstrate a solid foundation of basic Taekwondo skills, and obtain black belt level.
- Decide to engage in combative Taekwondo at a competitive level, or continue to pursue Taekwondo as a martial art.

## Recommended Competition Structure

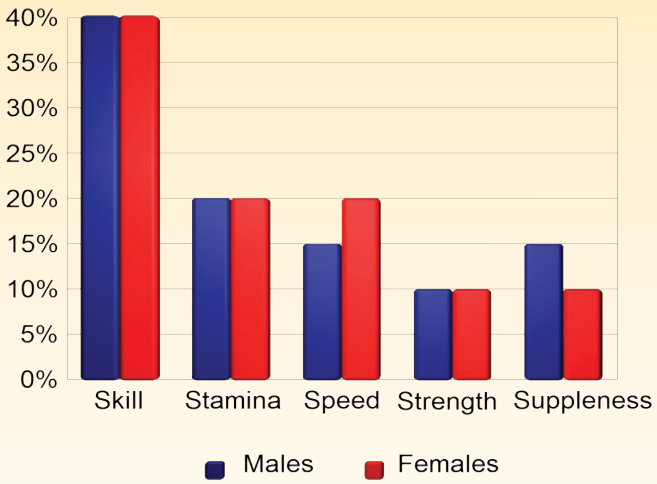
- Begin to distinguish between performance and recreational streams for competition.
- Group competitors based on minimum age band of 2 years, appropriate weight classification, prior competitive experience, and belt prerequisites.
- Use double elimination or round robin tournament formats that guarantee a minimum 2 matches per event.
- Use modified rules that limit the impact of head striking. Head striking should be introduced for black belts in competitions starting at age 13.
- Ensure that match durations or rounds are appropriate for the development of the athlete. Maximum round durations should not exceed 60 seconds with a minimum 60-second rest between rounds. Colour-belt competitors should not exceed 2 rounds per match.
- Ensure mandatory use of instep footpads and quality protective equipment.
- Ensure maximum of 5 kg variation in junior weight classes when organizing tournaments.

## Skill Emphasis




*This pie-chart illustrates the proportion of skills that should be emphasized during the Learn to Train stage of development. It is important that instructors consider the skill emphasis when designing lesson for their students.*

## Five S's




*This graph identifies the recommended proportion of the 5 S's at the Learn to Train stage of development. Instructors should consider these guidelines in planning and designing lessons.*

## Things To Do

**When teaching or coaching...**

- Consolidate and refine basic Taekwondo skills while further developing all fundamental movement skills. A window of optimal trainability for sport-specific skills occurs between the ages of 9–12 and 8–11 years for boys and girls respectively.
- Develop Taekwondo sport skills for sparring, fighting and self defense that emphasize correct timing and distance.
- Increase emphasis on foot striking skills and fighting techniques and tactics, and ensure equal opportunity to practice skills on both sides of the body.
- Emphasize defensive skills of blocking, evading and simple counterattacks.
- At the end of this stage take advantage of the window of trainability for speed in girls by implementing practices that emphasize multi-directional movement and quickness that is less than 5 seconds in duration.
- Develop strength during practice by doing exercises that use the athletes' own body weight as well as introducing sport-specific training equipment (medicine balls, Swiss balls etc.).
- Further develop stamina through games and relays.
- Use simple, specific and short explanations and maximize activity time during practice.

- Provide specific and positive feedback and use questioning to develop critical reflection and understanding. Acknowledge students for skills that are performed correctly.
- Encourage positive interaction between athletes by acknowledging and demonstrating exemplary etiquette. During this stage peer influence is important and impacts athlete choices and decisions.
- Allow opportunities for students to show independence, and begin to empower them to make decisions.
- Continue to model skills using yourself or other students. Introduce video to develop confidence in seeing themselves perform skills.
- Encourage plenty of breaks during practice for rest, re-hydration and socialization.

**When designing programs...**

- Monitor eating habits and encourage a well-balanced diet. Weight loss for competitive purposes should be discouraged and may be dangerous to the athletes' health.
- Encourage regular sleeping habits averaging eight hours of sleep per night and at least 2 hours of sleep prior to midnight.
- Ensure that the athlete is involved in at least 3 other complementary sports.
- Introduce a single periodized seasonal plan with Preparatory, Competition and Transition phases.
- Encourage athletes to engage in Taekwondo 2–3 times per week, with duration of practice between 60–75 minutes.
- Provide opportunities to engage in 8 to 15 combative matches per year. Too much competition at this stage may compromise an athlete's ability to achieve full potential.
- Recognize major transitions to new school environments where student is given greater responsibility and accountability over subject areas. Encourage good homework habits to develop academic skills.
- Monitor standing and sitting height and weight three times a year to help predict the onset of puberty.
- Introduce breaking of materials as part of martial arts using foot skills only, and ensuring appropriate materials (no bricks or concrete). Breaking is part of Taekwondo martial art and can be used for motivating the student. This said, breaking is not critical for the development of combative skills.
- Ensure that program design takes into account emerging difference between males and females. Typically females will precede males in development.

# SKILLS

*Taekwondo skills introduced & acquired at the Learn to Train stage*

## Martial Art Skills

| Category | Skill Name | Korean Name | Poomsae |
|---|---|---|---|
| Blocks | One Knife Hand Twisting Block | Bitureo Hansonnal Makki | Taegeuk 6 |
| Blocks | Single Hand Blade Twist Block | Hansonnal Olgul Bitureo Makki | Taegeuk 6 |
| Blocks | Two Hand Cleaving Low Block | Arae Hecho Makki | Taegeuk 6 |
| Blocks | Palm Hand Body Block | Batangson Momtong Makki | Taegeuk 6 |
| Blocks | Palm Hand Inner Body Block | Batang Momtong An Makki | Taegeuk 6 |
| Blocks | Hand Blade Low Block | Sonnal Arae Makki | Taegeuk 7 |
| Blocks | Palm Hand Assist Body Inner Block | Batangson Kodureo Momtong An Makki | Taegeuk 7 |
| Blocks | Low & Middle Blocks same time (Scissor Block) | Kawi Makki | Taegeuk 7 |
| Blocks | Two Hand Cleaving Outside Body Block | Momtong Hecho Makki | Taegeuk 7 |
| Blocks | Cross Low Block | Otkorea Arae Makki | Taegeuk 7 |
| Blocks | Hand Blades Side Block | Hansonnal YopMakki | Taegeuk 7 |
| Blocks | Assist Outside Body Block | Kodureo Bakkat Makki | Taegeuk 8 |
| Blocks | Single Mountain block | We Santeul Makki | Taeguek 8 |
| Foot Strikes | Front Snap Kick (high) <ball of foot> | Olgul Ap Chagi <apchuk> | Taegeuk 7 |
| Foot Strikes | Jump Kick | Twio Chagi (Ap Chagi) | Taegeuk 8 |
| Foot Strikes | Round House Kick to face | Olgul Dollyo Chagi | Taegeuk 6 |
| Foot Strikes | Knee Strikes | Mureeup Chigi | Taegeuk 7 |
| Foot Strikes | Outer Crescent Kick (out to in) | Pyojeok Chagi | Taegeuk 7 |
| Foot Strikes | Consecutive Two Front Kicks (on jump) from Left Foot | Wenbal Dubal Dangsang Chagi | Taeguek 8 |
| Foot Strikes | Low Side Kick | Kodeup Yop Chagi | Koryo |
| Hitting | Side Body Punch | Momtong Yop Jireugi | Taeguek 7 |
| Hitting | Back Fist Face Strike | Deung Joomeok Olgul Ap Chigi | Taegeuk 7 |
| Hitting | Covered Fist | Bo Joomeok | Taegeuk 7 |
| Hitting | Upside Down Two Fist Punch | Du Joomeok Jecho Jireugi | Taegeuk 7 |
| Hitting | Backfist Outer Strike | Deung Joomeok Bakkat Chigi | Taegeuk 7 |
| Hitting | Pull & Jaw Strike | Dangyo Teok Jireugi | Taeguek 8 |
| Hitting | Hand Blade Outer Strikes | Sonnal Bakka Chigi | Koryo |
| Hitting | Arc Hand Strike | Agwison Khaljaebi | Koryo |
| Hitting | Knee Breaking | Mureup Kkeokki | Koryo |
| Hitting | Fist Target Strikes | Joomeok Pyojeok Jireugi | Koryo |
| Hitting | Fingertip Low Reverse Poking | Pyonson Kkeut Jecho Jireugi | Koryo |
| Hitting | Elbow Side Strikes | Palkup Yop Chigi | Koryo |
| Hitting | Hammer Fist Low Target Strike | Me Joomeok Arae Pyojeok Chigi | Koryo |
| Grabs | Ankle Grab | Balmok Jabki | Koryo |
| Grabs | Head Grab | Mori Jabki | Taegeuk 7 |
| Stances and Steps | Tiger Stance | Beom Seogi | Taegeuk 7 |
| Stances and Steps | Front Cross Stance | Kp Kkoa Seogi | Taegeuk 8 |
| Stances and Steps | Pushing Hand Ready Stance | Tong Milgi Junbi Seogi | Koryo |

# Sport Skills

| Category | Skill Name | Korean Name |
|---|---|---|
| Attack And Defense Techniques | Tornado Kick / 360° Turn Round House | Dolgae Chagi (360° round kick) |
| Attack And Defense Techniques | Step Spinning Hook Kick | Idan Wheachook Chagi |
| Attack And Defense Techniques | Spinning Back Hook Kick (also see dwit hooryo chagi) | Wheachook Chagi |
| Attack And Defense Techniques | Forward Step (sliding) Round Kick (Angle: 90°) | Hangeleum Naga (idan) Dollyo Chagi (body) |
| Attack And Defense Techniques | Forward Step (sliding) Round Kick (Angle: 45°) | Hangeleum Naga (idan) Bitchagi |
| Attack And Defense Techniques | Forward Step (sliding) Pushing Kick | Hangeleum Naga (idan) Miro Chagi |
| Attack And Defense Techniques | Forward Step (sliding) Drop Kick | Hangeleum Naga (idan) Nearyo Chagi |
| Attack And Defense Techniques | Forward Step (sliding) Back Kick | Hangeleum Naga (idan) Dwit Chagi (body) |
| Attack And Defense Techniques | Double Roundhouse | Nerea Chagi |
| Attack And Defense Techniques | Double Round House Kick (middle-high) | Narea Chagi (momtong - olgul) |
| Attack And Defense Techniques | Double Round House Kick (middle-middle) | Narea Chagi (momtong - momtong) |
| Attack And Defense Techniques | Cut Kick | Gauro Chagi |
| Attack And Defense Techniques | Counter Round Kick (angle: 45°) | Bitchagi (bart-auh chagi) |
| Attack And Defense Techniques | Counter Round Kick | Dollyo Chgiro (bart aux chagi) |
| Attack And Defense Techniques | Counter Lead Leg Hook Kick | Bart-aux Ap Bal Hoorigi |
| Attack And Defense Techniques | Counter Back Kick (middle) | Bart-aux Dwi Chagi |
| Attack And Defense Techniques | Counter Back Kick (jumping) | Twio Dwi Bart-aux Chagi |
| Defence Techniques And Tactics | Control of the Ring – Management of the Ring | |
| Defence Techniques And Tactics | Avoiding Blow by Evasive Moves | |
| Foot Strikes | Spinning Hook Kick | Dwi Hoorigi |
| Foot Strikes | Sideways Hook Kick | Hooryo Chagi (yop) |
| Foot Strikes | Side Kick (high) | Olgul Yop Chagi |
| Foot Strikes | Round House Kick (high) | Olgul Dollyo Chagi |
| Foot Strikes | Pushing Kick (back Leg) | Mireo Chagi |
| Foot Strikes | Push Kick (high) | Olgul Miro Chagi |
| Foot Strikes | Outer Crescent Kick (outside In) | Bakkat Chagi |
| Foot Strikes | Jump Kick | Twio Chagi |
| Foot Strikes | Inner Crescent Kick (inside Out) | Bandal Chagi |
| Foot Strikes | Hook Kick (inside / outside) | Apbal Hoorigi |
| Foot Strikes | Hook Kick | Hoorigi |
| Foot Strikes | Front Snap Kick (high) <instep> | Olgul Ap Chagi <ap baldeung> |
| Foot Strikes | Back Kick (high) | Olgul Dwi Chagi |
| Stances And Steps | Immobilizing / Controlling Opponent | |
| Stances And Steps | Feinting / Fakes | |
| Tactics | Using Pressure By Squeezing Opponent Comfort Zone, Pushing them Back | |
| Tactics | Feinting Move Strategies - Back And Forth | |
| Tactics | Distance Evaluation (scoring box) | |
| Tactics | Advanced Foot Work | |
| Tactics | Action - Reactions / Anticipation | |

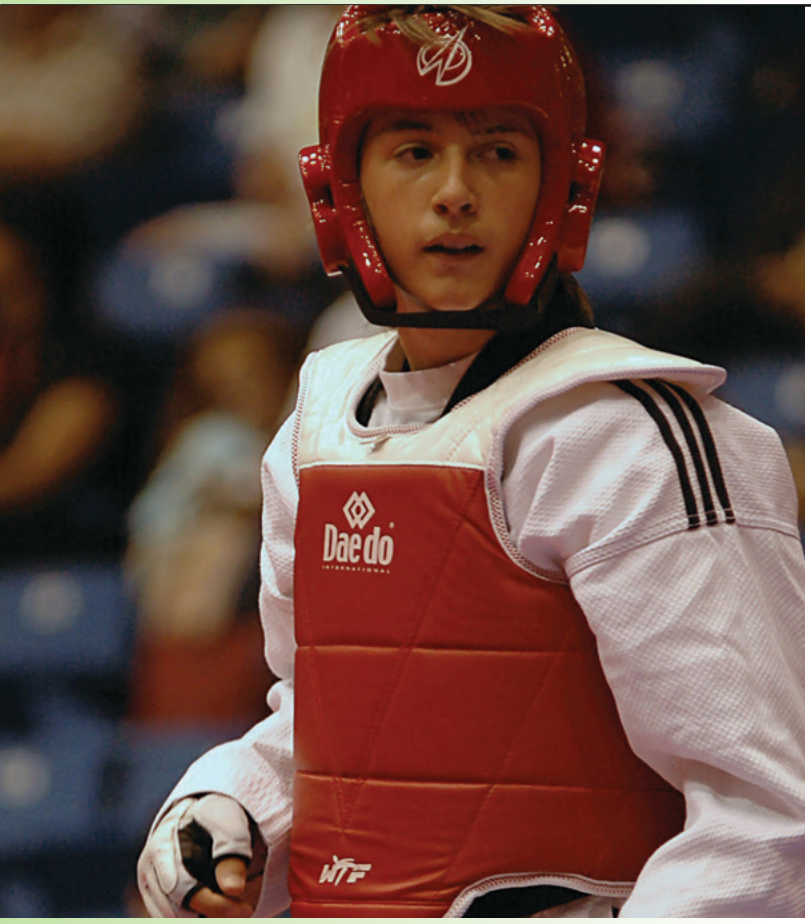
# Introduction to Head Striking

In 2004 the United State Congress intervened when the US Taekwondo Union lowered the age which permitted head striking for 12 – 13 year olds. Of issue was the change in modified rules which permitted "light head contact" to WTF Taekwondo rules. Using light head contact rules competitors are rewarded one point for a strike to the head, but are penalized one point if the contact results in a minor injury (eg. bleeding) and disqualification if the opponent is no longer able to continue in the match. The US Taekwondo Union had to justify their decision to change the rules by indicating: a rationale for the age range, data used to substantiate the decision, a process for informing athlete risk, a process for tracking injuries, and other preventative measures aimed at reducing risk. Current USA Taekwondo rules permit head contact from age 12, but with the modified rules as described above. The importance of this case is that it does set precedence for the inclusion of modified rules to introduce head striking at younger ages. Stakeholders in Taekwondo in Canada are morally obligated to consider how head kicking is introduced in the sport. There is a need to realign age groups, modify rules to minimize points awarded for head contact, ensure mandatory use of protective equipment, and provide appropriate coach, athlete and referee education.

# 4 Train to Train

## "Dream to Train"

*Males ages 12-16*
*Females 11-15*




## Overview

The *Train to Train* stage provides opportunities to enhance physical factors depending on growth and maturation, and to consolidate sport-specific skill. Windows of optimal trainability begin to emerge for aerobic conditioning and strength development which are dependent on biological indicators, while a second window for speed development is based on chronological age. For males and females aerobic conditioning may be more adaptable with the onset of puberty (Peak Height Velocity – PHV) and will vary for early, average and late maturers. In females there are two biological markers that may provide greater adaptations for strength development. These are immediately after PHV (initiation of secondary sex characteristics) and following the onset of menarche. In males, strength may be most adaptable 12 to 18 months after PHV and with increases in the male sex hormone testosterone. This stage also coincides with the start of the high-performance pathway and specialization towards combative Taekwondo (sport). It is recommended that programming consist of 80% combative Taekwondo and 20% martial arts.

## Outcomes

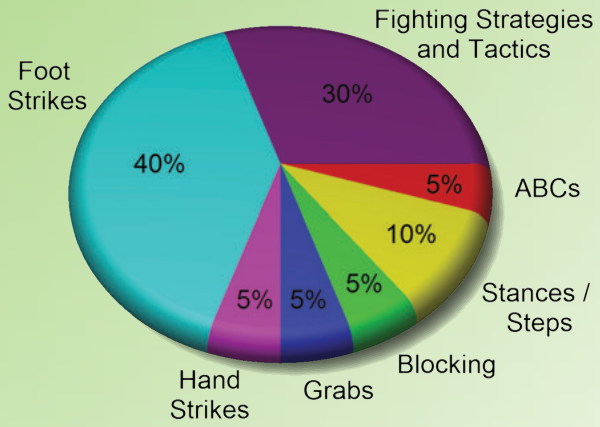
By the end of this stage the athlete / participant should be able to:

- Demonstrate consistent dojang etiquette and commitment to Taekwondo practice.
- Demonstrate consistency in the selection and execution of spinning kicks in combative situations.
- Consistently compete within top 20% at provincial-level competitions.
- Accumulated 20–30 career competitive matches.

## Recommended Competition Structure

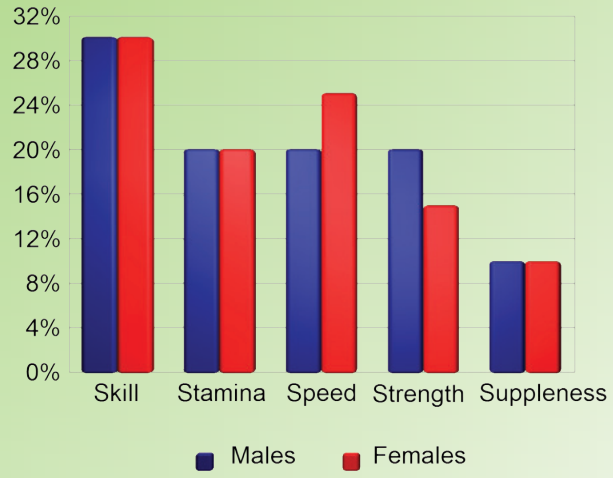
- Emphasize competitive experience in the performance stream with black belt pre-requisite.
- Group competitors based on a minimum age band of 2 years, appropriate weight classification, prior competitive experience, and belt prerequisites.
- Use double elimination or round robin tournament formats that guarantee a minimum of 2 matches per event.
- Introduce head striking at age 13 and apply modified rules that allow only 1 point for successful head strike.
- Ensure that match durations or rounds are appropriate for the development of the athlete. Maximum round durations should not exceed 90 seconds with a minimum 60 seconds rest between rounds. Colour-belt competition should not exceed 2 rounds per match.
- Ensure mandatory use of instep footpads and quality protective equipment.
- Ensure maximum of 5 kg variation in junior weight classes when organizing tournaments.

## Skill Emphasis




*This pie-chart illustrates the proportion of skills that should be emphasized during the Train to Train stage of development. It is important that instructors consider the skill emphasis when designing lesson for their students.*

## Five S's




*This graph identifies the recommended proportion of the 5 S's at the Train to Train stage of development. Instructors should consider these guidelines in planning and designing lessons.*

## Things To Do

**When teaching or coaching...**

- Consolidate and refine basic Taekwondo skills while introducing and acquiring the use of spinning kicks.
- Continue to reinforce fundamental movement skills in warm-ups.
- Encourage ongoing development in martial arts for enjoyment, discipline and focus.
- Emphasize foot striking skills, and fighting techniques and tactics. Ensure equal opportunity to practice skills on both sides of the body.
- Emphasize defensive skills of face blocking and evading, and introduce more advanced counterattacks.
- Take advantage of the window of trainability for speed in both girls and boys by implementing activities that require maximal effort up to 20 seconds in duration.
- Introduce competitive plans and potential strategies that may be used against different opponents.
- Develop and enhance personal fighting style.
- Provide opportunities for students to be role models for others by giving them leadership roles during and outside of practice.
- Introduce awareness of drug-free sport environment by modeling integrity in your coaching behaviours.

- Continue to use modeling of skills using yourself or other students. Use video to develop confidence in seeing themselves perform skills.
- Encourage plenty of breaks during practice for rest, re-hydration and socialization.
- Introduce mental skill strategies to encourage concentration, emotional control and team building. Integrate these strategies into practices and games.
- Enable athletes to solve simple problems and work with others to identify strategies and tactics in combative or self-defence situations.
- Begin to monitor heart rates during training to ensure adequate intensity and recovery.

**When designing programs...**

- Introduce a general strength program that emphasizes correct lifting technique.
- Develop stamina by encouraging non-Taekwondo practices aimed at continuous or interval activities.
- Monitor pre-, during and post-competition eating habits. Weight loss for competitive purposes should be discouraged and may be dangerous to athletes' health.
- Encourage regular sleeping habits averaging eight hours of sleep per night and at least 2 hours of sleep prior to midnight.
- Ensure that the athlete is involved in at least two other complementary sports.
- Introduce a periodized reactive annual plan that is single or double periodized and introduce tapering and peaking for competition.
- Encourage athletes to engage in Taekwondo 3–4 times per week, with duration of practice between 75–100 minutes.
- Provide opportunities to engage in 10 to 20 matches per year. Matches should vary in relative importance to provide opportunities for learning and experience.
- Recognize major transitions to new school environments and encourage academic support where necessary to enhance holistic development.
- Monitor standing and sitting height, and weight four times a year to help monitor peak height velocity.
- Develop skills for breaking of materials to enhance motivation. Ensure that materials are appropriate and safe (no bricks or concrete). No hand or head breaking activities. Breaking is not critical for the development of combative skills.
- Ensure that program design takes into account emerging difference between males and females. Typically females will precede males in development.
- Introduce monitoring of physical conditioning through use of field tests at least 4 times per year.

# SKILLS

*Taekwondo skills introduced & acquired at the Train to Train stage*

## Sport Skills

| Category | Skill Name | Korean Name |
|---|---|---|
| Attack And Defense Techniques | Rear Leg Counter Round House Kick (middle / high) | Dwi Bal Momtong Dollyo Chagi |
| Attack And Defense Techniques | Lead Leg Counter Round House Kick (middle / high) | Ap Bal Momtong Dollyo Chagi |
| Attack And Defense Techniques | Counter Tornado Kick | Bart-aux Dolgae Chagi |
| Attack And Defense Techniques | Counter Spinning Hook Kick | Bart-aux Dwi Hoorigi |
| Attack And Defense Techniques | Counter Double Round House Kick (middle middle) | Bart-aux Narea Chagi |
| Attack And Defense Techniques | Counter Double Round House Kick (middle high) | Bart-aux Momtong Olgul Narea Chagi |
| Defence Techniques And Tactics | Specialized Clinching and Grabbing | |
| Tactics | Variations in the Use of Speed & Power | |
| Tactics | Variation In Perception / Counter Reaction | |
| Tactics | Game Plan (use of tactics & strategies) | |
| Defence Techniques And Tactics | Cutting the Distance to Opponent | |
| Defence Techniques And Tactics | Clinching | |

# Weight Categories

Taekwondo has 10 junior division weight categories ranging from fin to heavy weight, with "light weight" being the median weight class. Assuming a "normal distribution" of bodyweights for a population, it is expected that there would be greater participation in the middle weight classes (feather, light and welter) than in the very light (fin and fly) and very heavy (light heavy / heavy) weight classes. However, in Canada there is greater participation of junior competitors in the heavier weight classes. Population data for 15-year-old Caucasian Americans reveal a median weight of 61 kg for males and 56 kg for females—weights that are two classes above the median "light weight" class. Furthermore, Caucasian Americans with lightest weights (below the 5$^{th}$ percentile) would be categorized as "fly weight", and statistically very few North Americans would be light enough to compete in the fin weight classes. The average North American male in Junior Division/Poom A may begin in "light middle weight" at the age of 15, and become "light heavy weight" by age 17 based on typical growth alone. This data has implications for the design of competition structures where weight categories may be adjusted to enable greater participation. Also, there is clear evidence that suggests normal growth will naturally result in participants engaging in heavier weight categories as they develop, and that weight control strategies at junior ages should be limited.

# 5 Train to Compete

## "Dream to Compete"

*Males ages 16-18+*
*Females 15-17+*


## Overview

The *Train to Compete* stage provides opportunities to optimize fitness and strength, refine skills and tactics, and begin to emphasize consistent performance in competition. At this stage the athlete has gone through puberty and is transitioning from adolescents to adulthood. Athlete training should be guided by a reactive periodized annual training plan. During this stage the participant should begin specializing in Taekwondo as a primary sport, but still participate in several other sports for recreational purposes. It is recommended that programming for this stage focuses on combative Taekwondo (90%), with a small emphasis on Taekwondo as a martial art (10%) for warm-up, cool-down and self study.

## Outcomes

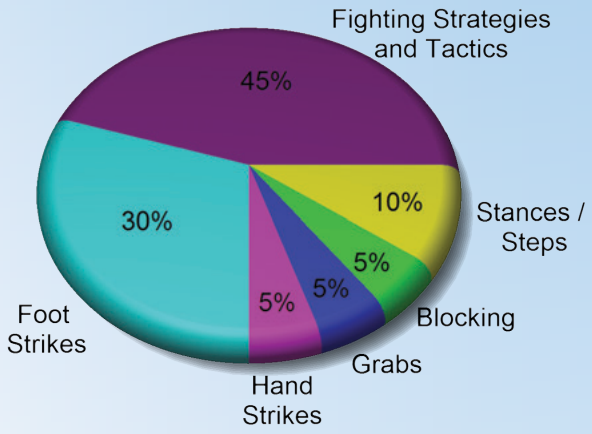
By the end of this stage the athlete / participant should be able to:

- Demonstrate consistent training habits and a disciplined approach to practice.
- Demonstrate refinement in the selection and execution of all attack and defense techniques. Consistently compete within top 20% at national-level competitions.
- Compete in at least one international-level event.
- Score above the 80th percentile on standardized physical conditioning tests.

## Recommended Competition Structure

- Emphasize competition in performance stream but allow opportunities for late maturers to gain competitive experience in recreation stream.
- Introduce ranking system to monitor competition results as a pre-requisite for national championships and selection to international competition.
- Encourage tournament formats that provide a minimum of 2 matches per event at the junior levels.
- Use WTF rules to govern matches while implementing appropriate match durations and number of rounds for optimal athlete development. Round durations should vary between 90–120 seconds with a minimum 60 seconds rest between rounds. Colour-belt competition should not exceed 2 rounds per match.
- Ensure mandatory use of quality protective equipment.
- Ensure maximum of 6 kg variation in junior weight classes when organizing tournaments.

## Skill Emphasis




*This pie-chart illustrates the proportion of skills that should be emphasized during the Train to Compete stage of development. It is important that instructors consider the skill emphasis when designing lesson for their students.*

## Five S's


*This graph identifies the recommended proportion of the 5 S's at the Train to Compete stage of development. Instructors should consider these guidelines in planning and designing lessons.*

## Things To Do

**When teaching or coaching...**

- Encourage athletes to take ownership over training by allowing opportunities to solve technical-tactical problems and make decisions.
- Develop and refine athletes' personal fighting style.
- Train athletes to recognize visual cues during combative activity to assist in better decision making.
- Refine competitive plans and strategies that are used against different opponents.
- Use video to model and analyze athlete performance in both unopposed and combative situations.
- Work with athletes to help analyze opponent strengths and weaknesses.
- Encourage athletes to act as role models for younger athletes in the school.
- Ensure a drug-free sport environment by modeling ethical behaviour.
- Encourage athlete autonomy so they feel confident being coached by others.
- Educate athlete on pre- and post-activity eating to enhance performance in practice and competition.
- Develop mental skill strategies to encourage motivation, focus and ideal performance state. Integrate these strategies into practices and games.
- Monitor heart rates during training to ensure adequate intensity and recovery.
- Encourage athletes to maintain logbook which includes daily information.
- Implement high-intensity interval activities to simulate competition demands and build anaerobic conditioning.
- Include sessions dealing with officiating, strategies, and tactics.
- Encourage assistant coaching/instructor roles to develop leadership qualities within the school.

**When designing programs...**

- Provide functional assessment to diagnose weaknesses, motor impingement and imbalances between body parts.
- Implement individualized strength program aimed at addressing weaknesses, imbalances or overall strength.
- Identify an annual training plan that includes periodized phases and prioritizes athletic abilities. Plans may be single, double or triple periodization.
- Conduct an audit of Taekwondo training based on various causes that may impact performance that include equipment, environment, affective, cognitive, physical, tactical and technical factors.
- Adjust training loads to taper for competition by identifying and monitoring both the volume and intensity of training.
- Identify performance enhancement programs that provide individualized strength and conditioning, mental training, and recovery and regeneration plans.
- Monitor physical conditioning through use of field tests at least 6 times per year.
- Identify a series of individual performance indicators that predict long-term progression in Taekwondo. These may include optimal number of competition minutes or matches, level of competition, physical testing, and basic anthropometric measures.
- Emphasize physical conditioning programs that include strength training, core stability training, interval training, flexibility training and plyometrics.
- Introduce recovery and regeneration modalities that include physiotherapy, massage, nutrition, hydrotherapy and engagement in other sports on a recreational basis.
- Monitor eating habits and encouraging a well-balanced diet. Diet changes prior to competition should be monitored, with only minor weight reductions. Fluctuations in weight loss of over 3 kg may be dangerous to athletes' health.
- Encourage regular sleeping habits averaging eight hours of sleep per night. Target 10:30 P.M. sleep time (at least 1.5 hours of sleep prior to midnight). Encourage naps during the day.
- Encourage athletes to engage in Taekwondo practice 4–6 times per week, with duration of practice between 90–120 minutes.
- Support engagement in structured strength and conditioning practices 2–3 times per week, with a duration of practice less than 90 minutes.
- Provide opportunities to engage in 15 to 25 fights per year.
- Recognize academic needs where school programs are student directed and provide balance between sport and academic success. Introduce academic support where necessary.
- Ensure that program design takes into account emerging difference between males and females.

# Weight Cutting


Weight cutting is prevalent in Taekwondo. These assumptions are supported in research by Kazemi, Shearer and Choung (2005), which reported 54% of Canadian male and female competitors dieted prior to a national level tournament. In situations where young athletes are under the guidance of others, there are ethical considerations that need to be recognized and acknowledged, and in some circumstances the health and well being of the athlete may have legal implications. One issue at stake is the implementation of weight cutting practices that contravenes natural growth and development. It is unlikely that a growing athlete will be able to maintain participation in one weight class throughout his or her junior competitive career. Systematic monitoring of athlete height and weight by coaches and parents will help to provide a basis for informed decision making that may predict optimal weight classification.

# 6 & 7

# Learn to Win & Train to Win

## "Dream to Win & Realize Dreams"

*Males ages 18-21+ & > 21*
*Females 17-19+ & > 19*

## Overview

The *Learn to Win* stage provides opportunities for the athlete to gain international experience against senior level competitors, where as the *Train to Win* stage enables the athlete to focus on consistent performances in international competitions. As the average age of the world best for males and females is 25 and 22 years respectively, it is important that programming differentiates between males and female athletes. Females will enter the *Learn to Win* and *Train to Win* stages at younger ages, and will have a different life pressures than males. During these two stages of development it is necessary to build an integrated support team that includes practitioners with expertise in strength and conditioning, psychology, rehabilitation, physiology, and health. The analysis of performance becomes critical in examining strengths and weaknesses in opponents as well as in athletes' performance. The athletes must focus on refining all aspects of combative Taekwondo on a full time basis (95%), with small emphasis on martial arts (5%) for holistic development.

## Outcomes

By the end of the *Learn to Win* stage the athlete should be able to:

- Engage in Taekwondo training on a full time basis.
- Demonstrate at least a 50% scoring rate when attacking or counter attacking an opponent.
- Consistently compete within top 20% at international level competitions.
- Score above the 90th percentile on standardized physical conditioning tests.

By the end of the *Train to Win* stage the athlete should be able to:

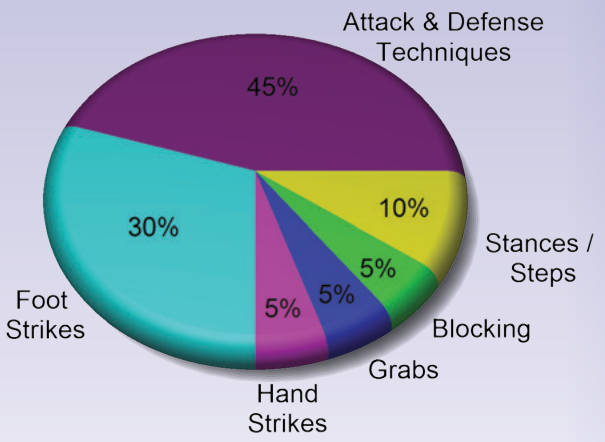
- Achieve podium performance at world championship or Olympic games.
- Identify a strategy to transition from competitive sport into meaningful life pursuits.

## Recommended Competition Structure

- All competition in performance steam using WTF Taekwondo rules.
- Ensure ranking system is used to monitor and track performance nationally.
- Ensure competitions are strategically selected to promote optimal tapering and maximize opportunities against new opponents.

# Learn To Win

## Skill Emphasis



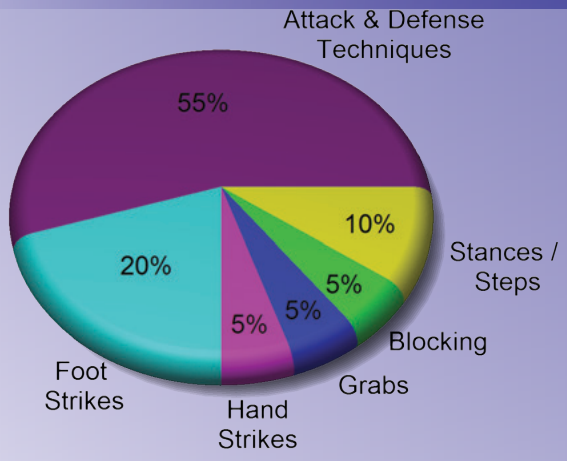

*This pie-chart illustrates the proportion of skills that should be emphasized during the Learn to Win stage of development. It is important that instructors consider the skill emphasis when designing lesson for their students.*

## Five S's


*This graph identifies the recommended proportion of the 5 S's at the Learn to Win stage of development. Instructors should consider these guidelines in planning and designing lessons.*

# Train To Win

## Skill Emphasis

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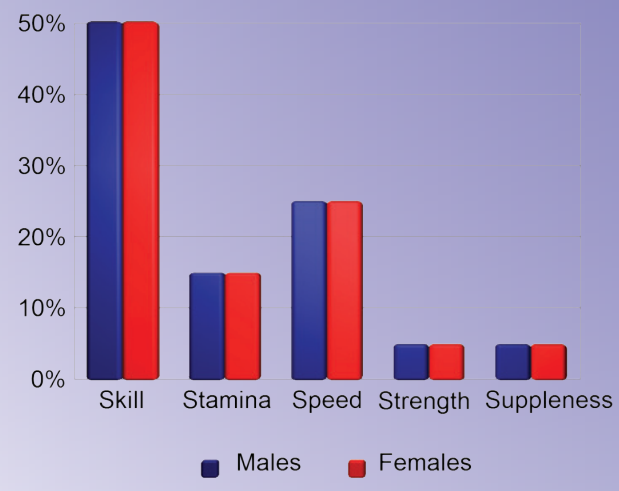
## Five S's




*This graph identifies the recommended proportion of the 5 S's at the Train to Win stage of development. Instructors should consider these guidelines in planning and designing lessons.*

## Things To Do

**When teaching or coaching...**

- Encourage athlete to find solutions to various technical-tactical challenges in new and unique situations.
- Athlete must have ownership over training but recognize the need to follow detailed training plans.
- Refine athlete's personal fighting style to ensure that a variety of tactics can be used against diverse opponents.
- Train athletes to focus on critical visual cues during combative activity to assist in better decision making.
- Analyze opponents using video to develop competitive plans and strategies.
- Use video to analyze athlete performance and monitor effectiveness of strategic interventions in both unopposed and combative situations.
- Ensure athletes act as role models for younger athletes in the school.
- Ensure a drug-free sport environment by modeling ethical behaviour.
- Encourage athlete autonomy so that he or she feels confident being coached by others.
- Develop mental skill strategies to encourage motivation, focus and ideal performance state. Integrate these strategies into practices and games.
- Monitor heart rates during training to ensure adequate intensity and recovery.
- Encourage athletes to maintain a logbook which includes detailed information (example: rest, heart rates, diet, and practice).
- Implement high intensity interval activities to simulate competition demands and build anaerobic conditioning.
- Include sessions dealing with officiating, strategies, and tactics.
- Encourage assistant instructional roles to develop leadership qualities within the school.

**When designing programs...**

- Provide repeated functional assessments to diagnose weaknesses, motor impingement and imbalances between body parts, and determine effectiveness of training plan.
- Implement individualized strength programs aimed at addressing weaknesses, imbalances or overall strength.
- Identify mesocyle plans that align with multiple periodization and adjust training loads and intensities to ensure optimal readiness for competition.
- Monitor athletes on a continuous basis in order to make adjustments in microcyle plans and prioritize the causes that impact competitive performance.
- Minimize adverse effects of aerobic training on strength by ensuring that 1) aerobic training is done at least 8 hours prior to strength training, 2) preceding aerobic training is low in both

volume and intensity, and different muscle groups are targeted in post aerobic training.

- Ensure athletes engage their integrated support team that provides individualized strength and conditioning, mental training and recovery and regeneration plans.
- Monitor physical conditioning through lab and field tests at least 6 times per year (minimum 2 lab tests per year at *Training to Win* stage).
- Track individual performance indicators that predict long-term progression in Taekwondo. These may include optimal number of competition minutes or matches, level of competition, physical testing, and basic anthropometric measures.
- Emphasize physical conditioning programs that include strength training, core stability training, interval training, flexibility training and plyometrics.
- Ensure ongoing recovery and regeneration modalities that include physiotherapy, massage, nutrition, hydrotherapy and engagement in other sports on a recreational basis.
- Educate athletes on pre and post activity eating to enhance performance in practice and competition.
- Monitor competitive weight on a regular basis to minimize large fluctuations in weight loss or gain.
- Encourage regular sleeping habits averaging eight hours of sleep per night. Target 10:30 P.M. sleep time (at least 1.5 hours of sleep prior to midnight). Encourage naps during the day.
- Encourage athletes to engage in Taekwondo practice 6 - 8 times per week at *Learn to Win* and 8 – 10 times per week at *Train to Win*, with practice durations between 100 - 150 minutes.
- Support engagement in structured strength and conditioning practices 3 - 4 times per week, with a duration of practice less than 90 minutes.
- Provide opportunities to engage in 20 to 30 fights per year at learn to win and 26 – 36 fights per year at train to win.
- Provide full academic support for school based athletes and occupational support for non student athletes. Occupational support should enable athlete to train optimally in Taekwondo.
- Engage athletes in career transition training and support.

# 8 Active for Life

## "Dream for Life"

*All ages*

## Overview

The *Active for Life* stage fosters life long involvement in Taekwondo where participants can enter at any age. This stage should provide students a variety of Taekwondo experiences which may prioritize martial arts, self defense, demonstrations and combative Taekwondo. Adult participants will often have a specific reason for engaging in Taekwondo and will have a number of experiences that will assist in learning. Instructors must probe a variety of different learning styles when working with adults. The *Active for Life* stage emphasizes engagement in martial arts where individuals can pursue excellence by demonstrating the attainment of dan levels. *Active for Life* should provide opportunities for athletes to enter and exit the high performance pathway. Depending on athletic experience, some athletes may be identified to enter the high performance stream and continue pursuing excellence in Taekwondo sport. On the other hand, the *Active for Life* stage should provide an environment for athletes to who no longer wish to engage in Taekwondo sport on a competitive basis.

## Outcomes

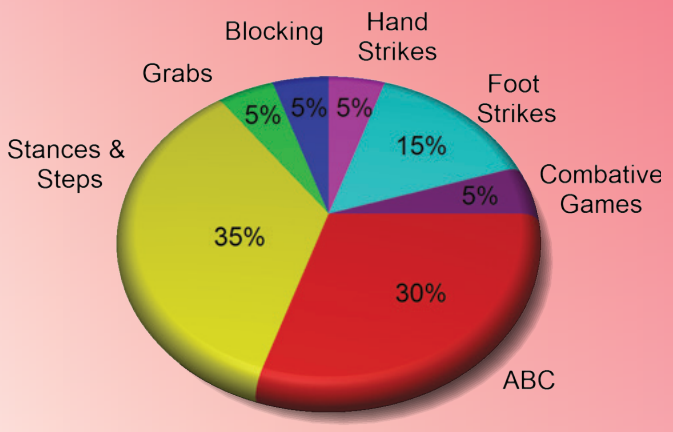
While the *Active for Life* stage has no defined end point, the following goals may be realized by participants:

- Ongoing commitment to the practice of Taekwondo.
- Help to build the Taekwondo community by recruiting, officiating, volunteering, instructing / coaching and supporting Taekwondo sport.
- Maintain fitness and a healthy outlook on life.

## Recommended Competition Structure

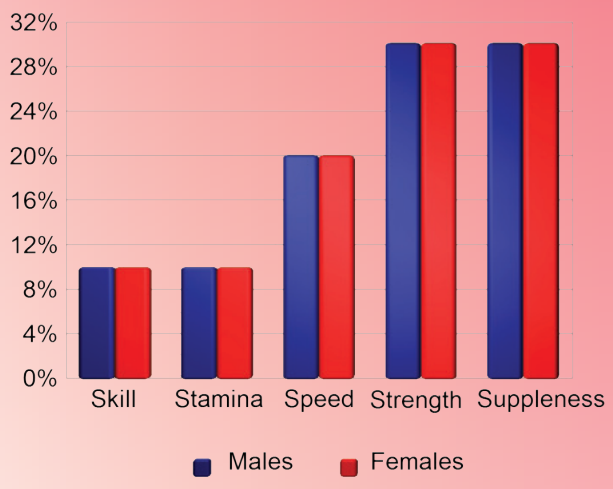
- Provide accessibility to appropriate levels of competition in performance or recreation stream based on experience and ability.
- Provide open events in recreation stream that limit the use of head striking, or provide modified rules that limit head striking.
- Ensure that competitive events guarantee a minimum of 2 matches.
- Ensure maximum of 5 kg variation in junior weight classes when organizing tournaments.

## Skill Emphasis




*This pie-chart illustrates the proportion of skills that should be emphasized during the Active for Life stage of development. It is important that instructors consider the skill emphasis when designing lesson for their students.*

## Five S's




*This graph identifies the recommended proportion of the 5 S's at the Active for Life stage of development. Instructors should consider these guidelines in planning and designing lessons.*

# Things To Do

**When teaching or coaching...**

- Encourage participants to take ownership over learning by providing choices in learning.
- Maximize opportunity to use a variety of learning styles (auditory, visual and kinaesthetic).
- Ensure that activities are modified to the ability and age of each participant. Consider the whole life span.
- Encourage participants to volunteer as officials or coaches.
- Ensure sessions provide a variety of different activities and experiences that may include martial arts, physical conditioning, fighting, self defense, meditation, and demonstrations.
- Provide opportunities for self study, and independence to problem solve.
- Encourage participants to set goals to help them monitor self-improvements.
- Ensure equal opportunity to practice skills on both sides of the body.
- Relate corrections to other sports or life experiences.
- Encourage frequent breaks during practice for rest, re-hydration and socialization.
- Monitor intensity of activity and ensure appropriate recovery to account for age and physical conditioning.
- Encourage participants to be role models for others.
- Reinforce discipline, commitment, ethical behaviour, and Taekwondo etiquette.

**When designing programs...**

- Encourage participants to engage in a variety of other sports and activities.
- Provide programming that enables accessibility and a variety of participation options including co-ed, mixed ability or same abilities, and ages.
- Ensure a variety of programming that includes classes in self defense, martial arts, fighting, and physical conditioning.
- Encourage a healthy lifestyle that includes a well balanced diet, appropriate body mass index, and body awareness.
- Encourage athletes to engage in Taekwondo 1 - 3 times per week, with durations of practice between 60 – 90 minutes.
- Ensure participants who engage in competitive events select weight categories that demonstrate consistency in body weight.
- Support athletes who retire from high performance competition and provide opportunities to re-engage in Taekwondo on a recreational basis.
- Provide full academic support for school based participants.

# SKILLS

*Taekwondo skills introduced & acquired at the Active for Life stage*

## Martial Art Skills

| Category | Skill Name | Korean Name | Poomsae |
|---|---|---|---|
| Blocks | Diamond Block | KeumgangMakki | Keumgang |
| Blocks | Mountain Block | Santeul Makki | Keumgang |
| Blocks | Assist Wrist Face Side Block | Koduro Olgul Yop Makki | Pyongwon |
| Blocks | Bull Block | Hwangso Makki | Shipjin |
| Blocks | Palm Hand Assist Body Outer Block | Sonbadak Kodureo Momtong Bakkat Makki | Shipjin |
| Blocks | Lift Up | Kkeulo Olligi | Shipjin |
| Blocks | Rock Pushing | Bawi Milgi | Shipjin |
| Blocks | Wing Spreading | Nalgae Pygoi | Chonkwon |
| Blocks | Swinging Block | Hwidulo Makki | Chonkwon |
| Blocks | Mountain Pushing | Taesan Milgi | Chonkown |
| Blocks | Inner Wrist Assist Outer Body Block | Anpalmok Kodureo Momtong Bakkat Makki | Chonkown |
| Blocks | Left Wrist Clear Away | Palmok Jecho Naegi | Chonkwon |
| Blocks | Backside Hand Blade Push Block | Sonnal Deung Momtong Hecheo Makki | Hansoo |
| Blocks | Target Low Block | Pyojeok Arae Makki | Hansoo |
| Blocks | Hand Blade Diamond Block | Sonnal Keumkang Makki | Hansoo |
| Blocks | | Dusonpyo Biteulozapa Danggigi | Ilyeo |
| Blocks | Crossing Face Block | Otkore Olgul Makki | Ilyeo |
| Foot Strikes | Inner Kick | An Chagi | Self Defense |
| Foot Strikes | Scissors Kick | Kawi Chagi | Self Defense |
| Foot Strikes | Back Kick | Dwi Chagi | Pyongwon |
| Foot Strikes | 360° Jump Slap Kick | Pyojeok Chagi | Chonkwon |
| Grabs | Arc Hank Wrist Grab | Agwison Palmok Jabki | Self Defense |
| Grabs | Wrist Grap | Sonmok Jabki | Self Defense |
| Grabs | Neck Grab | Mok Jabki | Self Defense |
| Grabs | Shoulder Grab | Okae Jabki | Self Defense |
| Grabs | Rock Pushing | Bawimilgi | Sipjin |
| Grabs | Grab Wrist Twisting And Pulling | Palmok Bitureo Jabki | Chonkwon |
| Grabs | Mountain Pushing | Taesanmilgi | Chonkwon |
| Hitting | Downward Punch | Naeryo Jireugi | Self Defense |
| Hitting | Edge Hand Punch | Akeumson Jireugi | Self Defense |
| Hitting | Scissors Fingertip Thrust | Kawisonkkuk Tzireugi | Self Defense |
| Hitting | Bear Hand Strike | Komson Chigi | Self Defense |
| Hitting | One Fingertip Thrust | Hansonkkuk Tzireugi | Self Defense |
| Hitting | Pincers Hand Strike | Jipkeson Chigi | Self Defense |
| Hitting | Bent Wrist Strike | Kup Hin Son Mok Chigi | Self Defense |
| Hitting | Two Joint Fingertip Thrust | Moun Dusonkkuk Tzireugi | Self Defense |
| Hitting | Ridge Hand Strike | Sonnal Deung Chigi | Self Defense |

| Category | Skill Name | Korean Name | Poomsae |
|---|---|---|---|
| Hitting | Double Hand Knife Strike | Yang Sonnal Mock Chigi | Self Defense |
| Hitting | Palm Hand Jaw Hitting | Batangson Teok Chigi | Keumgang |
| Hitting | Bigger Hinge (Hook Punch) | Kheun Dolzteogi (Dollyo Jireugi) | Keumgang |
| Hitting | Flat Hand Fingertips Thrust | Pyonsonkkuk Tzireugi | Taebaek |
| Hitting | Back Of Fist Pull Jaw Hitting | Deungjumeok Dangkyo Teok Chigi | Pyongwon |
| Hitting | Elbow Side (Yoke) Hitting | Meongye Chigi | Pyongwon |
| Hitting | High Elbow Hitting | Palkup Ollyo Chigi | Pyongwon |
| Hitting | Two Fist Forward Punching | Chetdari Jireugi | Sipjin |
| Hitting | Diamond Front Punch | Keumgang Ap Jireugi | Jitae |
| Hitting | Hammer Fist Target Hitting | Mejumeok Pyojeok Chigi | Jitae |
| Hitting | Two Knuckle Double Hand Spring Punch | Sosum Jireugi | Chonkwon |
| Hitting | Two Hammer Fist Side Hitting | Dumejumeok Yopkuri Chigi | Hansu |
| Hitting | Hand Blade Trunk Side Hitting | Sonnal Yop Chigi | Hansu |
| Hitting | Two Fist Upward Pushing Away Thrust | Dujumeok Jecho Jireugi | Hansu |
| Hitting | Palm Hand Jaw Strike | Batnason Teok Chigi | Keumkang |
| Hitting | Bigger Hinge | Kheun Doltzeogi | Keumkang |
| Hitting | Elbow Upward Strike | Palkup Ollyo Chigi | Pyongwon |
| Hitting | Yoke Hitting | Meongye Chigi | Pyongwon |
| Hitting | Fork Shape Punching | Chetdari Jereugi | Shipjin |
| Hitting | Diamond Front Punch | Keumkang Ap Jireugi | Jitae |
| Hitting | Hammer Fist Target Strikes | Mejoomeok Pyojeok Chigi | Jitae |
| Hitting | Diamond Side Punch | Keumkang Yop Jireugi | Chonkwon |
| Hitting | Chestnut Fist | Bamjoomeok | Chonkwon |
| Hitting | Smaller Hinge | Jaeguen Doltzeohi | Hansoo |
| Hitting | Hand Blade Side Body Punch | Sonnal Momtong Yop Chigi | Hansoo |
| Hitting | Two Hammerfist Flank Strike | Doo Mejoomeok Yopguri Chigi | Hansoo |
| Stances and Steps | Forward Cross Stance | Apkkoa Seogi | Pyongwon |
| Stances and Steps | Overlapped Hand Ready Stance | Kyopson Jumbi Seogi | Pyongwon |
| Stances and Steps | Wing Spreading Stance | Nalgaepyogi | Chonkwon |
| Stances and Steps | Fists On The Waist Stance | Dujumeok Heori Seogi | Ilyeo |
| Stances and Steps | Crane Stance | Hakdari Seogi | Keumkang |
| Stances and Steps | Overlapped Hand Ready Stance | Kyopson Junbi Seogi | Pyongwon |
| Stances and Steps | Assisting Stance | Kydari Seogi | Hansoo |

## Sport Skills

Adults may consider engaging in appropriate sport skills identified in the *FUNdamentals*, *Learn to Train* and *Train to Train* stages of development.

# Coach Development

*"In order to serve the best interests of athletes, it is essential that coaches are aware of all aspects and applications of sport science. Continuous coach development transforms the coach, the athlete, and the game."*

- Grandmaster Kee Ha

The *National Coaching Certification Program* (NCCP) is a coach training and certification program for over 65 different sports and is offered in both official languages across Canada. NCCP workshops are designed to meet the needs of all types of coaches, from the first-time coach to the head coach of a national team.

*NCCP Logo*

The NCCP is an athlete / participant centred program where coaches are trained and certified in a stream and context that is aligned to the athlete's stage of development. Taekwondo Canada's NCCP will develop coaching programs in the Instruction and Competition streams. The instruction stream includes coaches who work with athletes to predominantly develop Taekwondo martial art skills, where as the competition stream provides coach education to prepare athletes for combative Taekwondo. An *Assistant Instructor* typically works with participants at the *Active Start*, *FUNdamental*, and novice performers in the *Active for Life* stages of development and is aligned to the NCCP Instruction Beginner context. A Taekwondo Instructor is aligned to the NCCP Competition Introduction context and predominantly works with athletes and participants in the *Learn to Train*, *Train to Train*, and *Active for Life* stages of development. Finally, a *Taekwondo Performance Coach* focuses on the development of athletes who compete in Taekwondo sport at the *Training to Compete* to *Training to Win* stages of development. A final program will be aimed at coaches of Olympic level athletes in the *High Performance Coaching* context.

# Long-Term Athlete Development

Active Start | FUNdamentals | Learn to Train | Train to Train | Train to Compete | Learn to Win | Train to Win | Active for Life

Chronological Age — Developmental Age + / -

Under 6 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24+ | Active for Life

Training Age — Specific Training Age + / -

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16+

**Instruction**

- Assistant Instructor *(Inst-Beg)*
- Asst Ins *(Inst-Beg)*

**Competition**

- Instructor *(Comp-Int)*
- Performance Coach *(Comp-Dev)*
- HP *(C-HP)*

There's More to Coaching
L'entraînement, c'est plus qu'on l'pense

Programme national de certification des entraîneurs — National Coaching Certification Program

Coaching Association of Canada — Association canadienne des entraîneurs

# Coaching Athletes with a Disability

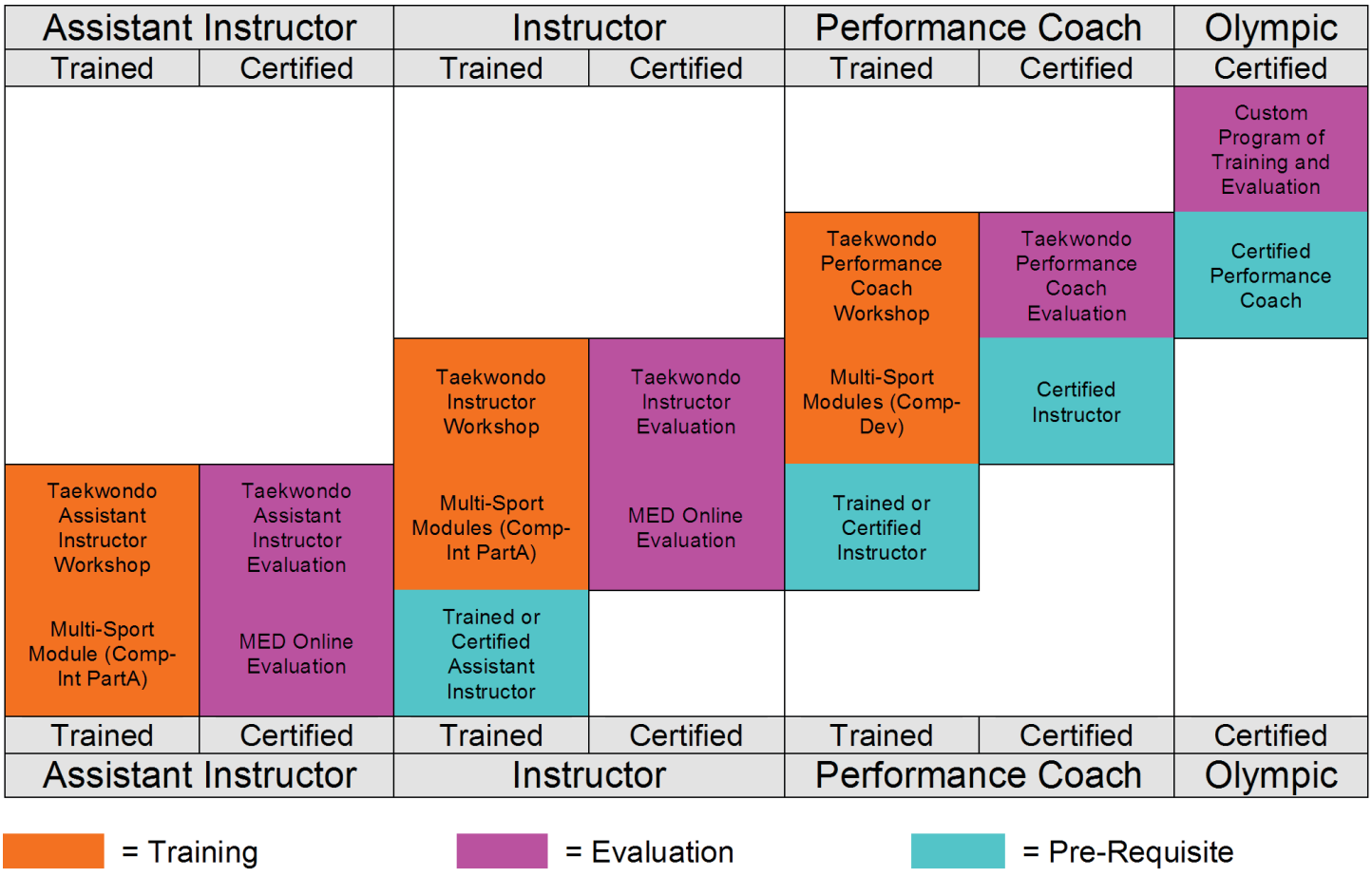
As with any athlete, the best way for persons with a disability to develop sport skills is under the direction of a qualified coach. Coaching athletes or participants with a disability is fundamentally no different from coaching able-bodied people. According to Colin Higgs,

> "The core element in coaching is to determine where people are, assess where they need to get to, and find a path down that road,"

"The basic issues are much the same with persons with a disability." Initially, however, it is not unusual for coaches who have never worked with persons with a disability to worry about whether they can provide the right type of support, be it at the grassroots or at more advanced competitive levels. There may be situations where coaches may not yet be totally confident with their own knowledge or abilities; there may also be questions about safety and about how to communicate properly with a person with a disability. When working with athletes with disabilities for the first time, coaches must be aware of the need to adapt technical aspects to maximize the athletes' abilities. In order to do this, coaches should explore their own prejudices, assumptions and reactions, and understand that these are normal. Then it is important to move into what coaches do best, bringing out athletes' full potential.

The Appendix includes a series of tables that provides additional information on coaching athletes with a disability. Coaches may also refer to the reference, *Coaching Athletes with a Disability*, 2005 available from the Coaching Association of Canada (www.coach.ca).

Coaches in the NCCP can be trained or certified in the context that they work. *Trained* status is achieved once all of the training requirements are complete. *Certification* is granted upon successful completion of an evaluation in a given context, which requires the submission of a portfolio and a formal observation of coaching practice. In order to enter a given context the coach must meet certain pre-requisites that support prior learning or evaluation. This may require a series of multi-sport learning experiences plus Taekwondo specific workshops. The diagram below illustrates the pre-requisites at each stage of development.




Taekwondo Canada will provide legislation for minimum coaching requirements at competitive events. These requirements will be phased in over a period of time to allow coaches the opportunity to gain appropriate accreditation.

# Coaching Female Athletes

Recent research (CLFRI, 2005) suggests that 49% of Canadians are moderately active, with more women being inactive (52%) compared to men (48%). The gap between women and men is greater when it comes to sport participation where 36% of adult males reported engaging in sport on a regular basis in comparison to 21% of women (Ifedi, 2008). While the gap between male and female participation in sport is narrowing, there is a trend that Canadians—both male and female—are not as active in sport participation when compared to the 1990's (Ifedi, 2008). Some barriers to ongoing female participation in sport are:

- Stereotyping female athletes as masculine or lesbian
- Self belief among females that they lack necessary sport skills
- Portrayal of women's sexuality versus dynamic participation in sport by popular media
- Conflict with other activities and perceived traditional female roles in society

Coaches of female athletes should become familiar with strategies that can be used to foster ongoing participation of women in sport and reduce many of these barriers to participation. Some strategies include;

- Creating sport environments where women can feel affiliation, success and skill development
- Creating an atmosphere for optimal performance which enables female athletes to be involved in decision making processes
- Building self confidence, self esteem and body image by understanding female growth and maturation and emphasizing the process of long-term development
- Encouraging positive social interaction and team dynamics by fostering open and honest communication among athletes and coaches

Further, coaches must recognize differences in growth and maturation between males and females in order to provide optimal programming at different stages of development. For more information on coaching females go to the *Canadian Association for the Advancement of Women and Sport and Physical Activity* website at www.caaws.ca.

# Competition Structure

# Competition Structure

A primary purpose for the development of LTAD is to provide recommendations that will assist in creating a better sport system. The competition structure in most sports is problematic, having evolved out of tradition and good intentions of administrators. This has created issues where the competition structure is poorly aligned to the stages of athlete development. In Taekwondo there are several factors in the competition structure that could have serious consequences on athlete development. These factors include:

- Ambiguous standards for black belt testing where athletes engaging in combative events may not have a similar requisite of skills
- Poorly aligned age grouping that does not account for significant changes in athlete growth and maturation
- No strategy to introduce head contact in a controlled manner that allows athletes to gain experience
- Adult competition formats that are superimposed on young athletes
- Talent Identification that is based on poorly conceived competition formats
- No standard yearly calendar making long term planning and periodization difficult

Based on these observations, the LTAD steering committee created nine recommendations related to the competition structure. These recommendations are identified below with a specific rationale for choosing the recommendations.

1. **Develop common national standard for Black Belt.**
   Rationale: Many Taekwondo schools in Canada have their own standards for testing. In order to align a consistent development pathway it is necessary to identify critical skills at each stage of development. A common black belt standard would ensure that all Taekwondo athletes can demonstrate similar set of basic Taekwondo skills.

2. **Develop a common national competition calendar that outlines months for Regional, Provincial and National competitions.**
   Rationale: The competition structure should enhance athlete development and provide a common progression to qualify for

national championships. A common calendar structure will help all Taekwondo organizations plan consistent dates for competitions every year.

3. **Create 4 divisions for junior competitions (A = 15-17; B = 13-14; C = 11-12; D = 10 and under).**
   Rationale: Four divisions create better progression for athletes to engage in competition that is framed by different rules and provides better alignment to growth and development principles. Division (or *Poom*) A would see the minimum age raised to 15 from the current age of 14. This prevents an athlete with 4 more years of experience from fighting an athlete with no experience in this division. Because Taekwondo is a weight classification sport, physical disparity among competitors may be minimized. This said, a 17 year old athlete may possess far superior athletic abilities based on growth and maturation compared to a younger athlete at the same weight classification. Additionally, rules that permit head strikes at Division A create a very dangerous situation for young athletes because most first-time athletes (14 year olds) in Division A have little or no fighting experience using head strikes. By creating 4 divisions there is an opportunity to introduce head striking rules at Division B, where athletes can start to use necessary skills or tactics in competition before entering division A.

4. **Permit head striking rules at Division B (ages 13-14).**
   Rationale: In order to compete internationally it is important to develop the necessary skills and tactics that involve head striking. Simply stated, a Taekwondo athlete should not be allowed to compete in national or international competition without sufficient experience competing with head striking rules. Introducing head striking at Division B allows the athlete to gain up to 2 more years of experience using head striking skills and tactics before competing at Division A. While distinguishing physical maturity by weight class does not guarantee a leveling in physical abilities, it does provide some equity when applied across smaller bands of chronological age. Therefore, Division B may provide better opportunities to introduce head striking rules, rather than introducing these rules in the present structure where there is a far greater disparity in growth and maturation.

5. **Adjust duration and rest periods of matches to better align with LTAD and provide a progression based on growth and maturation.**
   Rationale: Durations that are too long for the stage of development result in greater fatigue and may increase the prevalence of injury and risk to the athlete. Adjusting the number of rounds, duration, and rest between rounds to the stage of LTAD will assist in minimizing the affects of fatigue and provide more effective competition formats.

6. **Limit national championships to only competition in Pooms A, B and C. No Poom D allowed at National Championships.**
   Rationale: Poom D is part of the *FUNdamentals* stage. At this stage, competition is used as a tool to learn combative skills in a fun and safe environment. Winning is not an emphasis. The magnitude of National Championships at this age group is beyond the scope recommended for athlete development.

7. **Ensure double elimination or round robin tournament format for all junior competitions (regional / provincial / national).**
   Rationale: Single elimination competition promotes de-selection of athletes and may result in greater sport drop-out. Furthermore, a participant and their family may expend great resources to attend a competitive event where there is a possibility that the athlete is eliminated after only seconds of combative engagement. This may be due to pure chance, where athletes are drawn against more experience fighters. A double elimination or round robin format provides greater opportunity to gain combative experience in tournament format.

8. **Align competition structures and formats that are implemented consistently in all regions of Canada.**
   Rationale: Alignment of LTAD pathways is only effective if all provinces and regions agree to adopt competition structures and formats. Provinces and regions that do not align their competition structures and formats will ultimately diminish their athletes' ability to progress through the LTAD pathways and may limit their progress to higher level events. In other sports, some provinces have chosen

to use competition structures that are contrary to the national recommendation which has resulted in their athletes not being selected to higher levels simply because they lack the necessary skills and abilities.

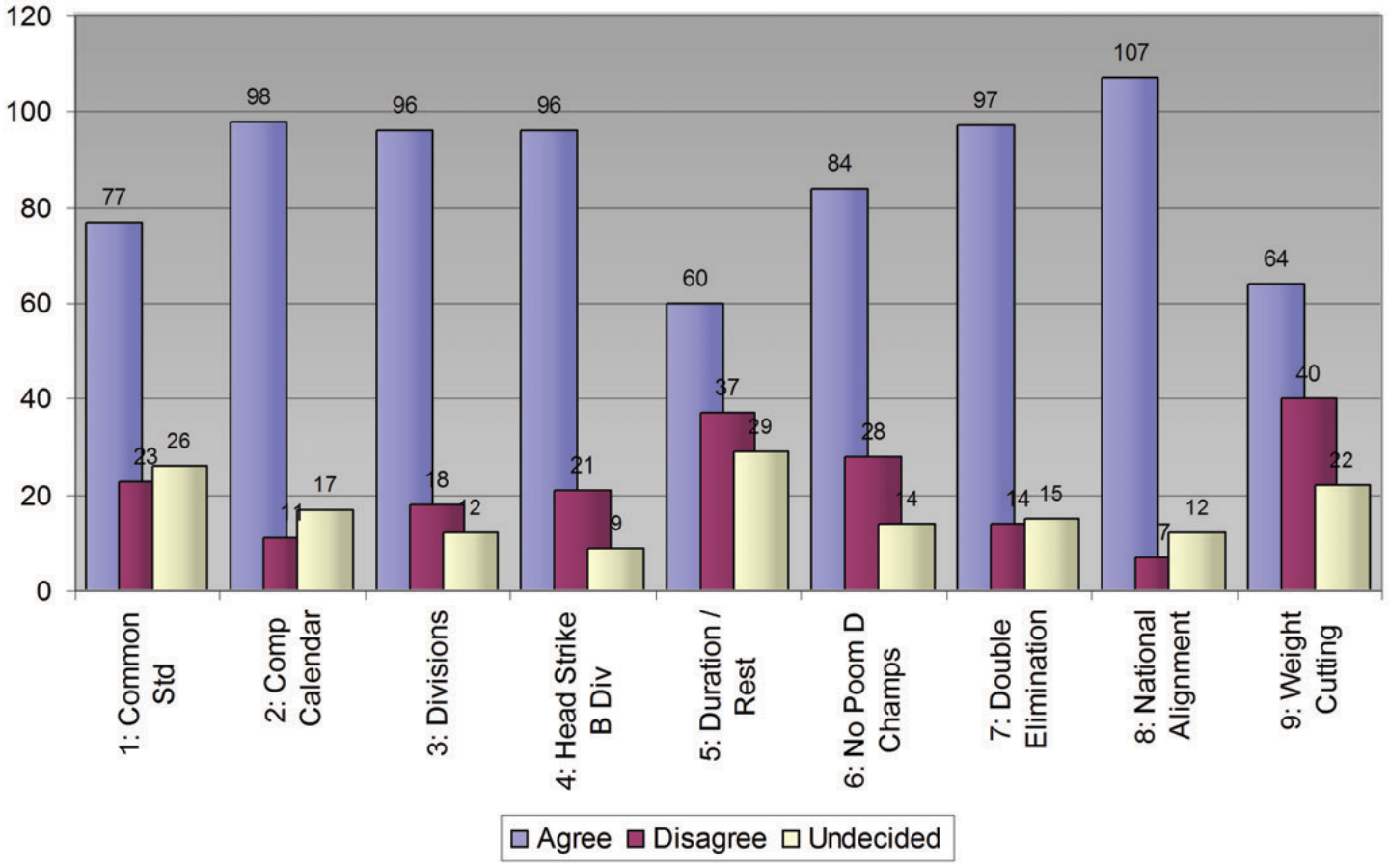
9. **Implement post competition weigh-in for provincial and national level competitions.**
Rationale: Cutting weight is a major health risk for athletes and education alone does not ensure that coaches will discourage weight cutting. Large fluctuations in weight can have very dangerous effects on the athletes' health, particularly at younger ages. Post competition weigh-in could provide necessary information on the prevalence of weight cutting in the sport and discourage coaches using this tactic. This recommendation could be phased in over time. In the initial phase, post competition weight in could be used to obtain data to determine the prevalence of weight cutting in the sport. The second phase would require the adoption of penalties for weight fluctuations that exceed a certain percent from pre-competition weight. Penalties may result in disqualification.

## Talent Identification and Selection

Talent identification seeks to build a pool of athletic potential in which to select the best athletes for a given competition. Selecting athletes based on competition alone may not be as valid as including other indicators in the identification process. For example, number of prior matches in a particular weight class and / or fitness testing. The use of single elimination formats at provincial and national championships may be most problematic for selecting the best fighters. Based on this format a very good fighter may be eliminated in the first round based on luck of the draw, whereas a mediocre fighter could advance to final with an equally lucky draw. In this circumstance the element of chance more than likely plays into the selection process for higher levels of competition, rather than consistent performance. Ultimately these selection practices exclude talent where athletes with the best potential may not be recognized. Coaches must consider talent identification criterion that goes beyond winning at championships (provincial, regional or national) as a lone predictor of success.

# Competition Review

In September 2007, all Taekwondo Canada members were invited to complete an online survey to provide feedback on the nine recommendations. One hundred and twenty six people from across Canada engaged in the survey. All provinces with the exception of PEI and the Territories were represented. The age of respondents had broad representation with nearly one-half aged 25 to 44 years, one-third older than 45 years, and the rest under the age of 24. Finally, the respondents' primary involvement in Taekwondo included athletes (39%), parents (21%) , instructors / coaches (34%), and administrators / others (6%). The graph below illustrates the responses to each of the nine recommendations identifying the number of respondents who agreed, disagreed or were undecided.




The majority of respondents agreed with the recommendations, and many provided additional comments that added to the review. The comments identified areas of concern and highlighted the disparity in Taekwondo across all geographic regions. Each province has its own circumstances which make standardizing competition structures difficult. For example, the population base and level of Taekwondo can be vastly different from one province to another.

The review of the survey highlights the need for leadership in Taekwondo Canada to consider recommendations that include: legitimizing a process for the attainment of black belt in Canada; adjusting the age groups for competition; and establishing a modified competition structure for the introduction of head striking at younger ages, as a minimum. Other recommendations should be adopted at local club and provincial levels to allow for regional differences in demographics and Taekwondo participation. Local and provincial organizations should examine recommendations that include: match duration; competition formats and structures; and adopting consistent national standards that are deemed appropriate for the sport.

Based on the competition review the following strategies emerged:

1. Create four age divisions for juniors to provide better alignment to stages of long term athlete development and introduce head striking at age 13 years.
2. Mandate competition formats that ensure at least 2 matches per competitive event or tournament.
3. Introduce head striking at age 13 with modified rules that allow only one point for a strike to the head.
4. Recommend a maximum 5 kg variation in weight classes to maintain safety and assist smaller provinces organizing tournaments.
5. Reduce match duration and number of rounds for younger age groups to better align with growth and maturation.
6. Position Junior National Championships as a showcase for the best performers at Pooms A and B by developing entry standards, quota system for participation, and a maximum number of participants in weight classes.
7. Identify a common calendar structure that positions major competitions at certain times of the year regardless of the date chosen for international competitions.
8. Create a selection criteria for Junior National teams which includes training camps prior to international competition to assess athletes readiness to compete.
9. Monitor post-competition weights at the junior levels to determine the prevalence of weight cutting (cycling) and as a deterrent to excessively unhealthy pre-competition weight reduction practices.
10. Require black belt testers to maintain their ability to accredit black belts by ensuring attendance at regional testing summits once every three years. Summits would be educational in nature and would update participants on current Kukkiwon standards, long-term athlete development, combative sport structure, and other requirements for black belt testing.

# National Championships Quota System

Long term athlete development is not about eliminating competition but ensuring that the competition structure is appropriate for the growth and maturation of the athlete. Many experts in long term athlete development agree that while competition is necessary for development, it has pitfalls if it is used to guide development or as a primary tool for athlete selection. One question to consider is whether the National Championships are "open" tournaments, or a showcase for top talent.

As an open tournament athletes may lack suitable prior experience, and may not be ready physically, mentally, or emotionally for the level of competition. As a result, this may be: 1) detrimental to ongoing retention; 2) place athlete in a position of risk; and 3) impose unnecessary financial demands on parents.

As a showcase event for top talent, athletes should be selected to compete based on the quality of their performance. A quota system could be used to limit the size of the field (example: maximum 16 or 20 fighters per weight class), but ensure that each province or territory is guaranteed one quota spot. Additional quota spots could be allocated based on the demographics of participation in Canada (example: *X* number of athletes from each province based on percent of Taekwondo membership). Coaches would need to be strategic in who they select for second or even third spots, and ensure adequate selection procedures.

# Taekwondo Planning

Planning adequate training, competition and recovery is the critical blueprint for athlete success and sport system alignment. Periodization is expressed through an annual training plan that is broken down into workable units. The proper sequencing of these units is necessary to realize an athlete's potential (Cardinal, 1993). In order to reach optimal performance in a competition environment, the design of the plan must include:

- An audit of athlete needs based on sport demands, competition calendar, and required physical abilities.
- A prescribed plan that integrates the performance factors (equipment, environment, psychological, physical, tactical and technical) in a complex and harmonious blend.
- A monitoring strategy that measures key factors used to prepare the athlete to perform at identified and strategically selected competitions, and to modify training.

*So many talented athletes do well and try hard but do not win because they focus on repetition of techniques only.*

- Grandmaster Chong Soo Lee

When prescribing the plan, smaller units of time are organized into blocks of training or competition called ***phases***, ***mesocycles***, and ***micro cycles***. Phases are the largest blocks (8 to 16 weeks in length) within the annual training cycle and prioritize training of key performance factors at different times of the year. One recommendation of LTAD is to identify the training phases for the high performance stages of development, so that coaches can provide optimal training that is similar across the country. A challenge in developing optimal training phases is the sport's competition calendar, which is usually based on administrative and logistical demands, rather than sequenced planning. Taekwondo LTAD has recommends annual training plans for each stage of development (See diagrams on pages 88, 89).

***Single***, ***double,*** and ***multiple periodization*** refers to the number of competitive peaks within the annual calendar. Single periodization plans will have one competitive phase that builds towards one main competition. Double periodization plans will have two competitive phases and two major peaks, while multi periodized plans cycle through a series of tapering and peaking. The table below provides an example of the phases in a single and double periodization plan.

| Single Periodization | Double Periodization |
|---|---|
| • General Preparation Phase (GPP) | • General Preparation Phase (GPP) |
| • Specific Preparation Phase (SPP) | • Specific Preparation Phase (SPP) 1 |
| • Pre-Competition Phase (PCP) | • Pre-Competition Phase (PCP) 1 |
| • Competition Phase Peak (CP) | • Competition Phase (CP) 1 Peak One |
| • Transition Phase (TP) | • Specific Preparation Phase (SPP) 2 |
| | • Pre-Competition Phase (PCP) 2 |
| | • Competition Phase (CP) 2 Peak Two |
| | • Transition Phase (TP) |

Mesocycles are smaller blocks of time, usually about a month long and describe optimal training and recovery in order to maximize athletic potential. Mesocycles are made up of micro cycles which are usually one week in duration. A mesocycle will typically describe the training load over a 2 to 6 week period where the volume and intensity of training within each micro cycle is adjusted to either increase or decrease the load. For example, a four-week mesocycle would prescribe 3 weeks of progressive loading with one week of unloading (decrease in volume and intensity) for recovery. The length of a mesocycle is determined by the introduction of recovery micro cycles after 1 or more loading microcycles. Example: (1:1), 2 (2:1), 3 (3:1) or 4 (4:1).

Microcycles provide detailed training plans for a given week within a mesocycle and provide an indication of the volume and intensity of individual training sessions. The *volume* of training is the amount of training expressed by the length of time, distance or repetitions. The *intensity* of training is the amount of effort exerted and can be expressed in terms of heart rate, breathing rate, or perceived exertion. A microcycle plan will provide the optimal sequencing of activities throughout the training week where certain physical abilities are strategically trained at different times during the week or day.

The plans on the following pages identify basic information that can be used to sequence training programs within specific stages of the high performance pathway.

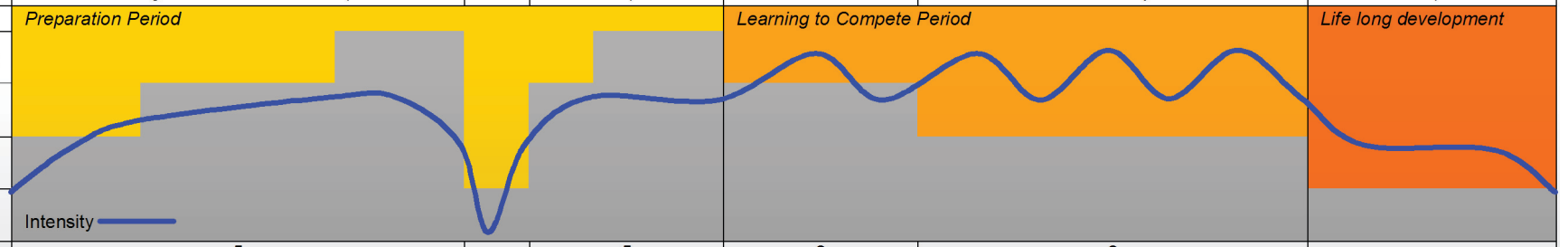
## Common Competition Calendar

One of the pitfalls in developing athlete excellence is the lack of technical planning that allows optimal timelines to develop athletic abilities throughout the year. The reason for this lack of planning is inconsistent competition calendars from one year to the next. An example of the difficulty in developing a calendar of common dates in Taekwondo is the timing of Junior World Championships and the assumption that National Championships is used a selection tool for Worlds. This has an effect on the scheduling of all other competitive events in Taekwondo and makes it impossible to identify optimal training phases. Hence the training plans are dictated by international competition, rather than a strategic application of optimal periodization.


A common calendar structure would outline when certain competitive events should occur on a yearly basis, regardless of the timing of Junior World Championships. This would also identify clear training phases throughout the year, where an adequate general preparatory phase could be used to enhance certain physical abilities that may be optimal to ongoing progression in the sport. Specific preparatory, pre-competitive and competitive phases could be outlined on a consistent basis across Canada, and adjusted to the stage of athlete development. Through the implementation of a common competition calendar, Taekwondo athletes will have greater potential to achieve world class performance.

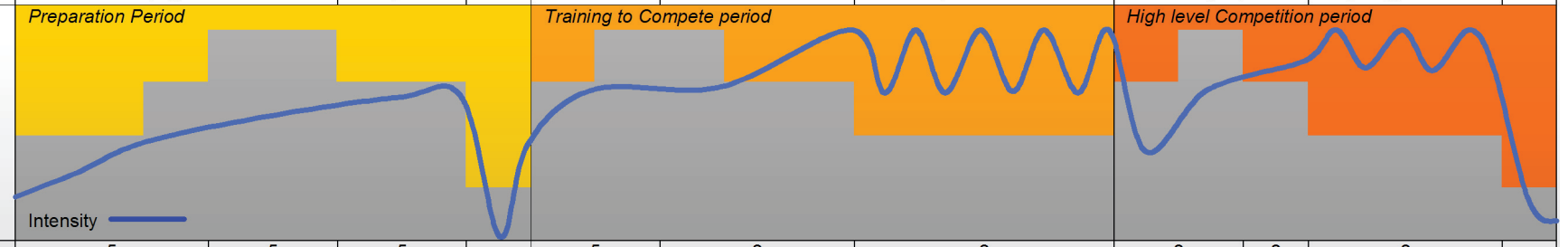
# Train to Train Plan – Single Periodization

| Month | September | October | November | December | January | February | March | April | May | June | July | August |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phases | GPP | | | TR | SPP | | PCP | Competitive Phase | | | Transition | |
| Competitions | Few (For experience only) | | | | Local | | Provincials | Nationals and Inter Provincial | | | Other Sports | |
| Emphasis | General Strength and Conditioning program Encourage involvement in 1 to 2 other sports | | | | Maximize Fitness Development | | Build technical foundations | Develop Decision Making, technical style and tactical readiness. Maintain Physical abilities | | | No Taekwondo training Maximize other sport involvement | |
| Loading | *Preparation Period* | | | | | | *Learning to Compete Period* | | | | *Life long development* | |
| Emphasis: Equipment | 5 | | | | 5 | | 2 | 2 | | | | |
| Emphasis: Environment | 5 | | | | 5 | | 3 | 3 | | | | |
| Emphasis: Psychological | 15 | | | | 10 | | 15 | 20 | | | | |
| Emphasis: Physical | 30 | | | | 30 | | 20 | 15 | | | | |
| Emphasis: Tactical | 10 | | | | 15 | | 25 | 30 | | | | |
| Emphasis: Technical | 35 | | | | 35 | | 35 | 30 | | | | |




# Train to Compete Training Plan – Double Periodization

| **Month** | **September** | **October** | **November** | **December** | **January** | **February** | **March** | **April** | **May** | **June** | **July** | **August** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phases** | GPP | | SPP | TR | SPP | PCP | | Comp Phase | SPP | PCP | COMP Phase | TR |
| **Competitions** | Few (not a priority) | | Regional | None | Local | Provincials | | Nationals – Trials | Trials Interprovincial | | National - International | |
| **Emphasis** | Well structured strength and conditioning program | | Train Through Competition | Active Rest | Boost Physical modalities | Maximize Tactical Readiness | | Taper and peak – Optimize competitive readiness | Boost Physical Modalities and Ancillary Capacities | | Optimize all factors impacting performance | Rest |
| **Loading** | *Preparation Period* | | | | *Training to Compete period* | | | | *High level Competition period* | | | |
| Emphasis: Equipment | 5 | 5 | 5 | | 5 | 2 | 2 | | 2 | 2 | 2 | |
| Emphasis: Environment | 5 | 5 | 5 | | 5 | 3 | 3 | | 3 | 3 | 3 | |
| Emphasis: Psychological | 15 | 15 | 20 | | 10 | 15 | 20 | | 15 | 20 | 20 | |
| Emphasis: Physical | 30 | 25 | 15 | | 30 | 20 | 15 | | 25 | 20 | 15 | |
| Emphasis: Tactical | 10 | 15 | 25 | | 15 | 25 | 30 | | 20 | 25 | 35 | |
| Emphasis: Technical | 35 | 35 | 30 | | 35 | 35 | 30 | | 35 | 30 | 25 | |



# Learn To Win and Train to Win – Multiple Periodization

| Month | | September | October | November | December | January | February | March | April | May | June | July | August |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phases** | | TR | GPP | PCP | TR | Competitive Phase | | | | | | | |
| **Competitions** | | None | Few (Not a priority) | Selected Competions | None | Local | Provincials | Nationals and Trials | | International | | | |
| **Emphasis** | | Highly individualized training supported by integrated team of specialized practitioners | | | | Continual peak and taper for competition. Monitor and adjust training loads to maximize competitive readiness. Integrate use of specialized practitioners to enhance athlete preparation | | | | | | | |
| **Loading** | Very High<br>High<br>Med<br>Low | *Preparation Period* | | | | *Multiple High level Competition Period* | | | | | | | |
| Emphasis | Equipment | 5 | 5 | 5 | 5 | 5 | 2 | 2 | | 2 | 2 | 2 | |
| | Environment | 5 | 5 | 5 | 5 | 5 | 3 | 3 | | 3 | 3 | 3 | |
| | Psychological | 15 | 15 | 15 | 20 | 10 | 15 | 20 | | 15 | 20 | 20 | |
| | Physical | 30 | 25 | 20 | 15 | 30 | 20 | 15 | | 25 | 20 | 15 | |
| | Tactical | 10 | 15 | 20 | 25 | 15 | 25 | 30 | | 20 | 25 | 35 | |
| | Technical | 35 | 35 | 35 | 30 | 35 | 35 | 30 | | 35 | 30 | 25 | |

Intensity

# Glossary of Terms

| | |
|---|---|
| **Adaptation:** | Refers to a response to a stimulus or a series of stimuli that induces functional and/or morphological changes in the organism. The level or degree of adaptation is dependent upon the genetic endowment of an individual, but can also be influenced substantially through practice and training. |
| **Adolescence:** | The transitional period between childhood and adulthood. It is a difficult period to define in terms of the time of its onset and termination. Structurally, the period of adolescence begins with an acceleration in the rate of growth (growth spurt), which then slows and terminates with the attainment of adult stature. Functionally, adolescence coincides with sexual maturation where changes in hormones produce physical changes in reproductive and other body functions. |
| **Ancillary Capacities:** | Refers to the knowledge and experience base of an athlete that enhances training and performance in sport. Ancillary capacities include warm-up and cool-down procedures, stretching, nutrition, hydration, rest, recovery, restoration, regeneration, mental preparation, and taper and peak. When athletes reach their genetic potential and physiologically cannot improve anymore, performance can be improved by using the ancillary capacities to full advantage. |
| **Attack and Defense Techniques:** | A combination of different Taekwondo skills that are used to generate an attack, or to counter attack based on an opponents actions. These skill combinations can be used in both Taekwondo Sport to score points by hitting a target area, or in Martial Arts to demonstrate technical form for attack and self defense. |
| **Blocking (Makki):** | A series of skills used to defend an opponent's attack, or to demonstrate defensive form. In Martial arts there are a number of blocking skills that are used to demonstrate possible options that could be used against an opponent's attack. In Taekwondo sport, there are very few blocking techniques which aim to evade or control an opponent's attack. |
| **Breaking (Kyukpa):** | Gupka is the symbolic action of breaking various thicknesses of different materials by hitting or striking. The most frequently used material is soft wood (usually pine). Breaking is used to demonstrate the performer's technical ability, precision, speed of execution, strength, resistance and courage. While it is a popular and spectacular exercise which is used in demonstrations to promote the merits of Taekwondo, it should be practiced with extreme caution in young participants who have not achieved full maturation. |
| **Canadian Sport for Life:** | A generic framework that recommends progressive stages for long-term athlete development and promotes inclusion and participation in all sports throughout Canada. |
| **Childhood:** | A period of development that ordinarily spans the end of infancy — the first birthday — to the start of adolescence. It is characterized by relatively steady progress in growth and maturation and rapid progress in neuromuscular or motor development. It is often divided into early childhood, which includes pre-school children aged 1 to 5 years, and late childhood, which includes elementary school- age children, aged 6 through to the onset of adolescence. |

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| **Chronological age:** | Refers to "the number of years and days elapsed since birth" and provides a timeframe in which growth, development, and maturation operate. Children of the same chronological age can differ by several years in their level of biological maturation. |
| **Coach Evaluation (Certification):** | The process whereby a judgment is made on the ability of the coach or instructor to achieve and demonstrate a series of coaching outcomes, to the appropriate standard of performance. |
| **Coach Status:** | A designation that indicates a coach's / instructor's engagement in particular coaching outcomes and may be used to apply legislative requirements for coaching within a given sport. |
| **Coach Training:** | The process whereby general and specific skills and abilities are acquired and/or refined, in order to support the achievement of selected coaching outcomes. |
| **Coaching Competency:** | The integration of knowledge, skills, and attitude that confers the ability to act, judge, or decide appropriately in a given context. The five competencies identified for the NCCP are Critical Thinking, Interaction, Leadership, Problem Solving, and Valuing. |
| **Coaching Standard:** | The absolute level to which a given coaching outcome must be demonstrated. An outcome identifies performance that the coach is expected to demonstrate for certification purposes, given the functions and tasks deemed most relevant to his or her context. The standard is determined by the intrinsic demands of the outcome(s) identified, and the nature of the criteria used in the evaluation process. The criteria identifies what is evaluated within a given outcome and describes desirable <the scope of> coaching characteristics or behaviours. Evidence is information gathered which identifies discrete, observable coaching behaviours that need to be verified in order to successfully evaluate a given criterion and may infer the extent to which core competencies have been achieved. |
| **Competition Format:** | Is the structure by which participants engage in Taekwondo sport and requires a series of matches to determine a winner. Competition formats may be single elimination, where the loser of a match is eliminated and unable to engage in subsequent matches. Double elimination formats provide opportunities for losers of matches in the first round of competition to re-engage opponents and vie for a championship. Consolation draws are single elimination events where winners of the first round vie for the championship final, and losers of the first round vie for consolation final. Round robin draws allow opponents a series of predetermined matches against other opponents. |
| **Critical periods of development:** | Refers to a point in an individual's development when experience or training has an optimal effect on specific behaviours or physiological attributes. |
| **Dan (Black Belt):** | A level of certification issued by Kukkiwon that requires the ability to demonstrate a given criteria of Taekwondo Skills. Dans are ranked by level 1 to 9, with the first dan commonly referred to as a Black Belt. For individual under the age of 15, attainment of required Dan criteria is called a Poom. The nine dan ranks represent a particular item of the Korean tradition and are: Koryo (Korea); Keumgang (diamond); Taebek (Mount Baekdoo); Pyongwon (nature); Sipjin (decimal); Jitae (earth); Cheonkwon (sky); Hansoo (water); and Illyo (Unity) |

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| **Development:** | Refers to "the interrelationship between growth and maturation in relation to the passage of time. The concept of development also includes the social, emotional, intellectual, and motor realms of the child." |
| **Dobuk:** | The uniform worn to practice Taekwondo. The dobuk is made of sturdy material and lose fitting. There is a robe like top which is held together by a belt and trouser like bottoms. |
| **Dojang:** | The place or environment in which Taekwondo is practiced |
| **Fight (Kyorugi):** | Kyorugi is the Korean term used to define a fight. A fight is the combative engagement of two or more opponents in which each fighter attempts to immobilize or defeat the other fighter. In Taekwondo sport the object of the fight is to score points by hitting appropriate target areas as defined by WTF Taekwondo rules. These fights require that opponents are of the same category (weight and belt), in an approved area, and for a limited duration. |
| **Foot Strikes (Chagi):** | The main form of scoring points in WTF Taekwondo sport, which requires foot contact to a specific target area. Foot striking skills in Martial arts Taekwondo demonstrates the sequencing of body parts to perform to a desired or structured form. |
| **Grabs (Jabki):** | A series of skills used in Taekwondo Martial Arts to demonstrate offensive or defensive combative techniques. In self defense, grabs may be used to immobilize, control or defend against an attacker. Grabs are illegal in Taekwondo Sport, however, modified forms of clinching are commonly used to control an opponent in order to maximize scoring opportunities or defend against attack. |
| **Growth:** | Refers to "observable, step-by-step, measurable changes in body size such as height, weight, and percentage of body fat." |
| **Hand Strikes: Punch (Jireugi); Thrust (Tzireugi); Striking (Chigi)** | A series of skills that propels the hand into positions to immobilize an opponent or demonstrate form. Hand striking is predominantly used in Taekwondo Martial art to demonstrate a variety of self defense techniques. Hand strikes in Taekwondo Sport can be used to score points, but are more effective in controlling the opponent for the use of foot striking techniques. |
| **Kukkiwon:** | The World Headquarters for certification of Dans and Pooms. Kukkiwon certificates are the only certification recognized by the World Taekwondo Federation. The black belt certificate is commonly referred to as a Kukkiwon. |
| **Martial Art:** | The term used to refer to the aesthetic and philosophical qualities of Taekwondo where specific techniques are practiced in order to master form and body control. The martial arts skills are demonstrated in patterns or poomsae and other non-combative forms. |
| **Master:** | In Canada, Master is the Taekwondo title given to individuals who achieve Fifth Dan WTF Kukkiwon certification which is registered and recognized by the WTF Taekwondo Association of Canada.<br><br>Grandmaster is the title given to individuals who achieve Eighth Dan and Ninth WTF Kukkiwon certification which is registered and recognized by the WTF Taekwondo Association of Canada. To be promoted to Eighth or Ninth Dan, individuals must be recommended by WTF Taekwondo Association of Canada and be tested in front of a panel at WTF Kukkiwon Headquarters in Seoul, Korea. |

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| **Master** *(Continued)***:** | In the National Coaching Certification Program the term 'master' is used to identify people who have demonstrated advanced coaching competencies, and facilitate and evaluate NCCP training workshops and coach certification process (Eg. Master Learning Facilitator or Master Evaluator). |
| **Matches:** | Refers to fights with a specific number of rounds and duration of round depending on the stage of development. Matches typically end when time has elapsed, one player reaches a set point ceiling, or a maximum score difference is reached. |
| **Maturation:** | Refers to "qualitative system changes, both structural and functional in nature, in the organism's progress toward maturity; for example, the change of cartilage to bone in the skeleton." |
| **National Coaching Certification Program (NCCP):** | A Canadian coach education system that provides a standard for the training and evaluation of coaches in over 65 different sports within all geographic areas of Canada. |
| **NCCP Certification:** | The recognition by the NCCP, following a successful evaluation, that context-specific coaching outcomes have been demonstrated to an acceptable standard. |
| **NCCP Context:** | The specific characteristics of sport programs and activities that determine the needs of participants. The context is determined by variables such as participants' age and proficiency level, the primary reasons for being involved in sport, the nature of the program they are involved in (duration of typical sessions, frequency of sessions/contact with the coach, duration of the program/season), and the environment in which the sport experience takes place (club, school, community league, high performance centre, etc.). |
| **Peak height velocity (PHV):** | Is the maximum rate of growth in stature during growth spurt. PHV is calculated by dividing a series of growth measures by a unit of time that has elapsed between measurements. |
| **Physical literacy:** | Refers to the mastering of fundamental motor skills and fundamental sport skills. |
| **Poomsae:** | A choreographed pattern of continuous movement to demonstrate a variety of offensive and defensive skills. Poomsae are representative of the traditional and historic elements of the Korean philosophy. |
| **Puberty:** | Refers to the point at which an individual is sexually mature and able to reproduce. |
| **Readiness:** | Refers to an individual's level of growth, maturity, and development that enables him/her to perform tasks and meet demands of training and competition. Readiness and critical periods of trainability during growth and development of young athletes are also referred to as the correct time for the programming of certain stimuli to achieve optimum adaptation with regard to motor skills, muscular and/or aerobic power. |
| **Self-defense:** | A main objective of Taekwondo where the defender prevents or diverts the attack of an opponent or aggressor. Taekwondo has developed a wide range of techniques for self-defense against one or more attackers. The type of self defense is context-dependant and the resulting effect may vary from dodging to serious contact with the adversary. |

| | |
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| **Skeletal age:** | Refers to the maturity of the skeleton determined by the degree of ossification of the bone structure. It is a measure of age that takes into consideration how far given bones have progressed toward maturity, not in size, but with respect to shape and position to one another. |
| **Stances and Steps:** | Are the preliminary movements that enable both a balanced and optimal (space) position from which to execute other Taekwondo skills. |
| **Taegeuk:** | Refer to the basic poomsae that represent a progression of coloured belts towards the attainment of Black Belt or first Dan. The Taegeuks represent the deepest philosophy which is the basis for the creation and norms of human life, and represents a particular item of the Korean tradition. The Taegeuk symbol is easily recognizable with its two parts which symbolize yin (negative) and yang (positive) rotating throughout time. |
| **Taekwondo:** | A sport of Korean origin in which TAE means "kick"; KWON means "punch"; and DO means "art". The breakdown of this word indicates that Taekwondo is the art of punching and kicking. The World Taekwondo Federation defines Taekwondo as the physical expression of the human will to survive, and an activity which fulfills an individuals' spirit. |
| **Taekwondo Sport:** | The term used to refer to the combative nature of the sport where the objective is not to hurt the opponent but rather to score points in a structure competition governed by WTF rules. |
| **Trainability:** | Refers to the genetic endowment of an individual as they respond to specific stimuli and adapt to it accordingly (Malina, R.M. and Bouchard, C. 1991). All systems in the body are always trainable. |
| **World Taekwondo Federation (WTF):** | Is the governing body in Korea that presides over the practice of Taekwondo, and is officially recognized by the International Olympic Committee as the Olympic version of Taekwondo Sport. |

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# Taekwondo System Matrix

| Stage | Active Start | | | Fundamentals | | | | Learn to Train | | | Train to Train | | | | Train to Compete | | Learn to Win | Train to Win | Active For Life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Age | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18+ | 18 -21+ | > 21 | All Ages |
| Female Age | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17+ | 17 – 21+ | > 19 | |
| Training Age (Years in Taekwondo) | 0-3 Years | | | 0-4 Years | | | | 2-6 Years | | | 4-8 Years | | | | 6-12 Years | | 8-14 Yrs | 10-18 Yrs | Varies |
| NCCP Contexts | Assistant Instructor Instructor – Beginners | | | | | | | Instructor Competition Introduction | | | | | | | Performance Coach – Comp-Dev Olympic Coach - Comp - HP | | | | |
| Benchmarks | Colour belt | | | Colour Belt | | | | Black Belt / 1st poom | | | Top 20% Provincial Championships | | | | Top 20% National Championships | | Top 20% International | Podium | Personal Best |
| Emphasis | Fun activity | | | Fun and Discipline | | | | Learning the game | | | Playing the Game | | | | Competing | | Performing | Defeating | Fun and Learning |
| Philosophy | Start dreaming | | | Dream to have fun | | | | Dream to Learn | | | Dream to Train | | | | Dream to compete | | Dream to win | Realize Dreams | Dream for life |
| Behavior | Simple dojang rules<br>Introduce good etiquette | | | Safety<br>Learn to Listen | | | | Safety<br>Self Control and respect | | | Self confidence and respect | | | | Hard work, self-discipline and commitment | | Believe in ability | Perform on demand | Commitment and Self control |
| Technical Emphasis | Basic / Stances / Punches / Kick | | | Basic Stances / Punches / Kicks | | | | Defensive Skills: Safe / Block / Counter<br>Attacking Skills: Targeting (Single and Multiple) | | | Consolidate skills and develop advanced skills | | | | Expand repertoire of all combative techniques | | Refine basic and advanced technique. | Refine all techniques | Varies |
| Tactical Emphasis | None | | | Simple attack and defense strategies | | | | Timing and Distance Strategies for attack and defense | | | Game Management<br>Develop individual style | | | | Expand repertoire of Strategies<br>Enhance individual styles | | Specialization in attack and defense strategies | Refine winning strategies | Varies |
| Physical Emphasis | Motor Skill (ABC's)<br>Movement Skills (Run / Jump) | | | Motor Skills – ABC - Reaction time.<br>Movement Skills (Twist / Run / Jump) | | | | Flexibility<br>Introduce Speed ?<br>Stamina ?<br>Monitor Growth | | | Speed<br>Stamina (? & ? )<br>Introduce Strength<br>Monitor Growth | | | | Optimize Fitness<br>Strength | | Optimize | Optimize | |
| Windows of Trainability | | | | ←←Suppleness→→<br>←Speed 1→ | | | | ←←Skills→→<br>←Speed 2 ? → | | | ←←Stamina→→<br>←Speed 2 ? → | | | | ←←Strength→→→→ | | ←←Optimize / Refine→→ | | |
| Mental Emphasis | Listen | | | Focus<br>Understand rules of dojang | | | | Concentration<br>Understand rules of game | | | Develop basic mental skills | | | | Emphasize mental skills | | Develop mental toughness | Mental confidence | Concentrate |
| Competition Level | None | | | Club | | | | Club and Regional | | | Regional and Provincial | | | | National | | International | International | Club, regional, National |

# Competition Structure

| Stage | Active Start | | | Fundamentals | | | | Learn to Train | | | Train to Train | | | Train to Compete | | | Learn to Win | Train to Win | Active For Life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Age | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18+ | 18 -21+ | > 21 | All Ages |
| Female Age | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17+ | 17 – 21+ | > 19 | |
| Training Age (Years in Taekwondo) | 0-3 Years | | | 0-4 Years | | | | 2-6 Years | | | 4-8 Years | | | 6-12 Years | | | 8-14 Yrs | 10-18 Yrs | Varies |
| NCCP Contexts | Assistant Instructor Instructor – Beginners | | | | | | | Instructor Competition Introduction | | | | | | Performance Coach – Comp-Dev Olympic Coach - Comp - HP | | | | | Instructor Comp-Int |

| Performance Stream | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Divisions | None | | | Poom D | | | | Poom C | | | Poom B | | | Poom A | | | Senior | | | See Recreation Stream |
| Age Range | | | | 10 and Under | | | | 11 – 12 | | | 13 – 14 | | | 15 – 17 | | | 15 and over | | | |
| Birthdate | | | | Dec 31 | | | | Dec 31 | | | Dec 31 | | | Dec 31 | | | Dec 31 | | | |
| Minimum Belt | | | | Black | | | | Black | | | Black | | | Black | | | Black | | | |
| Rounds | | | | 3 | | | | 3 | | | 3 | | | 3 | | | 3 | | | |
| Duration (sec) | | | | 45 | | | | 60 | | | 90 | | | 120 | | | 120 | | | |
| Rest (sec) | | | | 45 | | | | 60 | | | 60 | | | 60 | | | 60 | | | |
| Equipment | | | | Instep Footpads | | | | Instep Footpads | | | Instep Footpads | | | | | | | | | |
| Head Contact | | | | None | | | | None | | | WTF Rules "One Point Head" | | | WTF Rules | | | WTF Rules | | | |
| Tournament Format | | | | Round Robin | | | | Round Robin Double elimination | | | | | | Single or Double Elimination | | | Single or Double Elimination | | | |
| Max. Level | | | | Regional / Provincial | | | | Eastern / Western | | | National | | | Junior International | | | Senior International | | | |

| Recreation Steam | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Divisions | None | | | Division D | | | | Division C | | | Division B | | | Division A | | | Performance Stream Only | Senior | | |
| Age Range | | | | 10 and Under | | | | 11 – 12 | | | 13 – 14 | | | 15 – 17 | | | | 18+ | 18+ | 40+ |
| Birthdate | | | | Dec 31 | | | | Dec 31 | | | Dec 31 | | | Dec 31 | | | | Dec 31 | | |
| Minimum Belt | | | | Coloured | | | | Coloured | | | Coloured | | | Coloured | Red Up | | | <Red | >Red | >Red |
| Rounds | | | | 2 | | | | 2 | | | 2 | | | 2 | 2 | | | 2 | 2 | 2 |
| Duration (sec) | | | | 45 | | | | 60 | | | 90 | | | 90 | 90 | | | 90 | 90 | 90 |
| Rest (sec) | | | | 45 | | | | 60 | | | 60 | | | 60 | 60 | | | 60 | 60 | 60 |
| Equipment | | | | Instep Footpads | | | | Instep Footpads | | | Instep Footpads | | | Instep Footpads | | | | Instep Footpads | | |
| Head Contact | | | | None | | | | None | | | None | | | None | WTF | | | None | WTF | None |
| Tournament Format | | | | Round Robin | | | | Round Robin Double elimination | | | | | | Single or Double Elimination | | | | All types | | |
| Max Level | | | | Regional | | | | Regional | | | Provincial | | | Provincial | | | | National | | |

| Weight Classes | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Division | None | | | Poom D | | | | Poom C | | | Poom B | | | Poom A | | | Olympic | | | Senior | |
| Sex | | | | Male | | Female | | Male | | Female | Male | | Female | Male | | Female | Male | | Female | Male | Female |
| Fin | | | | <20 kg | | <18 kg | | <27 kg | | <30kg | <39 kg | | <38 kg | <45 kg | | <42 kg | <58 kg | | <49 kg | <54 kg | <47 kg |
| Fly | | | | 20-24 | | 18-22 | | 27-31 | | 30-33 | 39-43 | | 38-42 | 45-48 | | 42-44 | | | | 54-58 | 47-51 |
| Bantam | | | | 24-28 | | 22-26 | | 31-35 | | 33-36 | 43-47 | | 42-46 | 48-51 | | 44-46 | 58-68 | | 49-57 | 58-62 | 51-55 |
| Feather | | | | 28-32 | | 26-30 | | 35-39 | | 36-40 | 47-51 | | 46-50 | 51-55 | | 46-49 | | | | 62-67 | 55-59 |
| Light | | | | 32-35 | | 30-33 | | 39-42 | | 40-44 | 51-54 | | 50-53 | 55-59 | | 49-52 | | | | 67-72 | 59-63 |
| Welter | | | | 35-38 | | 33-36 | | 42-45 | | 44-48 | 54-57 | | 53-56 | 59-63 | | 52-55 | 68-80 | | 57-67 | 72-78 | 63-67 |
| Light Middle | | | | 38-42 | | 36-40 | | 45-49 | | 48-52 | 57-61 | | 56-60 | 63-68 | | 55-59 | | | | | |
| Middle | | | | 42-46 | | 40-44 | | 49-53 | | 52-57 | 61-65 | | 60-64 | 68-73 | | 59-63 | | | | 78-84 | 67-72 |
| Light Heavy | | | | 46-50 | | 44-48 | | 53-57 | | 57-62 | 65-69 | | 64-68 | 73-78 | | 63-68 | >80 | | >67 | | |
| Heavy | | | | >50 | | >48 | | >57 | | >62 | >69 | | >68 | >78 | | >68 | | | | >84 | >72 |

# Planning Considerations

| Stage | Active Start | | | Fundamentals | | | | Learn to Train | | | | Train to Train | | | | Train to Compete | | | Learn to Win | Train to Win | Active For Life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Age | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18+ | 18 -21+ | > 21 | All Ages |
| Female Age | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17+ | 17 – 21+ | > 19 | |
| Training Age (Years in Taekwondo) | 0-3 Years | | | 0-4 Years | | | | 2-6 Years | | | | 4-8 Years | | | | 6-12 Years | | | 8-14 Yrs | 10-18 Yrs | Varies |
| NCCP Contexts | Assistant Instructor Instructor – Beginners | | | | | | | Instructor Competition Introduction | | | | | | | | Performance Coach – Comp-Dev Olympic Coach - Comp - HP | | | | | Instructor Comp-Int |
| TKD Sport % | 10 | | | 25 | | | | 55 | | | | 80 | | | | 90 | | | 95 | 95 | 15 |
| TKD Martial Art % | 90 | | | 75 | | | | 45 | | | | 20 | | | | 10 | | | 5 | 5 | 85 |
| Emphasis: Skill % | 35 | | | | | | | 40 | | | | 30 | | | | 35 | | | 30 | 30 | 30 |
| Emphasis: Stamina % | 10 | | | | | | | 10 | | | | 20 | | | | 20 | | | 20 | 20 | 15 |
| Emphasis: Speed % | 15 | | | | | | | 15 | | | | 20 | | | | 15 | | | 20 | 25 | 10 |
| Emphasis: Strength % | 10 | | | | | | | 10 | | | | 20 | | | | 20 | | | 20 | 20 | 15 |
| Emphasis: Suppleness % | 30 | | | | | | | 25 | | | | 10 | | | | 10 | | | 10 | 5 | 30 |
| Skill Emphasis: ABC % | 35 | | | | | | | 20 | | | | 10 | | | | 5 | | | 5 | 5 | 20 |
| Skill Emphasis: Stances/Steps | 15 | | | | | | | 15 | | | | 15 | | | | 15 | | | 15 | 15 | 20 |
| Skill Emphasis: Blocking % | 10 | | | | | | | 10 | | | | 5 | | | | 5 | | | 5 | 5 | 10 |
| Skill Emphasis: Hand Strikes % | 10 | | | | | | | 5 | | | | 5 | | | | 5 | | | 5 | 5 | 10 |
| Skill Emphasis: Foot Strikes % | 20 | | | | | | | 30 | | | | 40 | | | | 30 | | | 25 | 20 | 25 |
| Skill Emphasis: Attack & Defense % | 10 | | | | | | | 20 | | | | 25 | | | | 40 | | | 45 | 50 | 15 |
| Practices / week – TKD specific | 1 – 2 | | | 2 - 3 | | | | 2 – 3 | | | | 3 - 4 | | | | 4 – 6 | | | 6 - 8 | 8 - 10 | 2 – 3 |
| Practice Length TKD Specific | 30 - 45 minutes | | | 45 - 60 minutes | | | | 60 - 75 minutes | | | | 75 - 100 minutes | | | | 90 – 120 minutes | | | 100-150 minutes | 100-150 minutes | 75-100 minutes |
| Practices / week Str & Cd / other | Engage in a variety of other activities for enjoyment 3-5 times / week | | | | | | | | | | | 1-2 + other activity | | | | 2-3 | | | 3-4 | 3-4 | Other activities for enjoyment |
| Practice Length Str & Cd / other | 30-75 minutes | | | | | | | | | | | <90 min + other activity | | | | <90 min | | | <90 min | <90 min | |
| Volume / Week TKD | 40-75 minutes | | | 1.5 - 3 Hours | | | | 2 - 3.75 Hours | | | | 3.75 – 6.6 Hours | | | | 6 – 12 Hours | | | 10-20 Hours | 13.3-25 Hours | 2.5 – 5 Hours |
| Avg Total Volume / week (all activity) | 4.5 hrs | | | 6 hours | | | | 7.5 hours | | | | 10 hours | | | | 12.5 hours | | | 19 hours | 23 hours | 9 hours |
| | | | | | | | | | | | | | | | | | | | | | |
| Fights / Year | 0-6 | | | 6-10 | | | | 8-15 | | | | 10-20 | | | | 15-25 | | | 20-30 | 26-36 | 0-15 |
| Physical Testing | | | | | | | | | | | | | | | | | | | | | |
| Belt Testing | | | | | | | | | | | | | | | | | | | | | |

*The following tables have been copied with permission of the Coaching Association of Canada's* Coaching Athletes with a Disability *Resource.*

## Athletes with intellectual disabilities

The term "intellectual disabilities" describes a wide range of conditions having the main characteristics of low or very low intelligence and deficits in adaptive behaviour. The term "intelligence" refers to intellectual functioning in a general cognitive ability sense, rather than one facet of ability (or problems in just one area). "Adaptive behaviour" refers to the effectiveness with which individuals meet the standards of personal independence and social responsibility expected of people of their age and cultural group. Deficits in adaptive behaviour are evaluated according to developmental age. During infancy and early childhood, these deficits may be observed in areas such as sensori-motor, communication, self-help, and socialization skills. During childhood and early adolescence the deficits may focus more on the application of basic academic skills, reasoning and judgment, and social skills. During late adolescence and adulthood, adaptive behaviour centres more on vocational and social responsibilities.

| Key characteristics | Implications for sport participation | Benefits of sport and physical activity | Safety considerations | Special considerations | Recommendations to coaches |
|---|---|---|---|---|---|
| Heterogeneous group of characteristics, wide range of ability levels.<br><br>Chronological age may not match developmental ability.<br><br>**Key concepts:**<br>Sub-average intellectual functioning<br>Deficits in adaptive behaviour<br>Disability occurs during developmental period (birth–18 yrs)<br>May lag behind in basic motor skills<br>Under-represented group, may not have had opportunity to participate in sport and physical activities<br><br>Associated disabilities or disabilities in addition to intellectual may be prevalent, more common ones include Down syndrome, seizures, autism, Atlanto-axial instability (greater than normal flexibility in upper two vertebrae; characteristic of approximately 17% of people with Down syndrome)<br><br>Greatest needs often reported in the learning/cognitive and social/emotional areas. | Note heterogeneity and varying abilities.<br><br>May require basic motor skill development as a prerequisite to performing or executing specific sport skills, and increased supervision.<br><br>Transportation to practice/competitions may be a key accessibility issue.<br><br>Some athletes may be on fixed income and consideration needs to be made for purchase of equipment and registration fees. | Evidence supports that participation in sport and physical activities has a positive impact on the quality of life of people with intellectual disabilities (e.g., fitness, self-esteem, employability, as well as cognitive, motor, and social development).<br><br>Sport and physical activity also provide the opportunity for increased participation in society for people with intellectual disabilities. | Collaborate with athlete, parent or guardian on behavioural and supervision needs.<br><br>Emergency Action Plan must include procedure for seizures. Obtain seizure history to include type, length of the seizure, and presence of auras (athlete able to anticipate onset of seizure).<br><br>If coaching athletes with Down syndrome, determine if they have been cleared for Atlanto-axial instability (examination includes x-rays by a physician briefed on the nature of the condition). If not examined, restrict from participation in sports and activities such as contact sports, diving, and gymnastics. Determine if athlete with Down syndrome has other characteristics you should be aware of such as congenital heart condition, underdeveloped circulatory system, or low respiratory capacity. | A large number of athletes with intellectual disabilities medicate for various medical or behavioural conditions. Be aware of what these medications are and of potential contraindications for participating in sport and physical activities. Articulate your need to know if medications change and the impact this change may have on performance and behaviour.<br><br>Athletes may have difficulty with transfer of skills from one environment to another (e.g., from one playing field to another or from indoor to outdoor setting).<br><br>Change of routine, or change in coaching staff or volunteers, may elicit behavioural reactions (e.g., the participant may become apprehensive about getting involved in the activities; he or she may be stubborn or show signs of decreased attention). Athletes with intellectual disabilities are comfortable with routine and structure.<br><br>Talk with the parent, guardian, or caregiver to get the information that is needed to provide consistent management of behaviours that may require special considerations or interventions (this includes necessary supervision and correction of behaviours). | Do not be afraid to ask questions.<br><br>Review or discuss with best contact any athlete medical considerations (including medication and associated disabilities) you as coach may need to be aware of from a practice planning or safety perspective.<br><br>Plan drills/activities that are age appropriate (i.e., chronologically appropriate but also adapted to the degree of cognitive understanding of the participant).<br><br>Communicate about changes in medication (that may affect performance or behaviour) and any incidents that may have occurred prior to practice or competition.<br><br>Determine level of ability in all domains (learning/cognitive, social/emotional, physical/motor).<br><br>Determine level of participation in the past in sport or other physical activity programs (integrative or not) and the outcome (if they were involved).<br><br>If the athlete will be participating with athletes without disabilities, find out about prior experiences that other members of the team or group (including coaches and other volunteers) have had with athletes with disabilities. These discussions will assist in clarification and create a more welcoming environment.<br><br>Be aware of necessary prerequisite skills (e.g., basic motor skills) required for success in specific sport skills.<br><br>Do not "overload" participants with instructions. Check for understanding. Make sure you have the athletes' attention before giving instructions (e.g., maintain good eye contact).<br><br>You may need to complete a task analysis in more detail than first thought.<br><br>Adhere to appropriate and safe supervision practices at all times. This is especially important during the early stage of the coach–athlete relationship (e.g., when the coach is still assessing the athlete's abilities)<br><br>The athlete with an intellectual disability may take longer to process information or instructions. Remember to check frequently for understanding.<br><br>Repetition, structure, and routine are helpful.<br><br>Research and review SOC sport rules to prepare athlete for Special Olympic competitions if the athlete is training in a generic program but competing in Special Olympic competitions.<br><br>Familiarize yourself with the SOC divisioning process or concept that addresses fairness of competition. |

**Remember. Coaching is Coaching.**

# Athletes with physical disabilities

Mobility Impairment - Spinal Cord Injury (SCI)

Description: Disruption of the spinal cord prevents transmission of nerve signals from the brain to the muscles, keeping muscles below the level of injury from functioning. Spinal cord injury is most often acquired through traumatic injury.

| Key characteristics | Implications for sport participation | Benefits of sport and physical activity | Safety considerations | Special considerations | Recommendations to coaches |
|---|---|---|---|---|---|
| The level of disability is related to where in the spinal cord injury occurs. The nearer the injury is to the head (higher up the spinal cord), the greater the disability.<br><br>**Quadriplegia** means that arms, trunk, and legs are affected.<br><br>**Paraplegia** means that the trunk and legs are affected.<br><br>Most SCI athletes use a wheelchair both for daily living and for sport. Different sports use different wheelchair designs for high performance sport. A "sport" type daily living wheelchair is adequate for introduction to most sports.<br><br>Following the initial body changes in the months after the injury, disability remains the same over time, with little progression. | SCI athletes engage in all wheelchair sports and most other sports. Popular competitive sports are quad rugby, wheelchair basketball, wheelchair tennis, swimming, track and field, cross country skiing, and downhill skiing. With appropriate adaptations to equipment and rules, SCI athletes take part in almost all sports.<br><br>People who were athletes before injury often adapt to wheelchair versions of sports more readily than people who were not involved in sport before injury.<br><br>Transportation and facility accessibility are major barriers to participation. Wheelchair-accessible transportation to and from training and competition can be difficult.<br><br>Facilities need to be equipped with wheelchair-accessible playing surfaces, pools, washrooms, doors, ramps, etc. In addition, alternate formats of signs are needed, and facility staff must be sensitive to the needs of athletes with a disability. | Sport participation for people with SCI is important to their cardiovascular health, since it is more difficult to raise the heart rate to a "fitness-benefit" level when the large muscles of the hips and legs are not used.<br><br>Sport develops good wheelchair handling skills and endurance, which make daily living easier.<br><br>Athletes with a disability have a feeling of being included.<br><br>In addition, there are important self-esteem and social benefits to sport participation. | Since there is often little or no feeling in the lower limbs, it is possible for the athlete to injure a limb and not be aware of it. The coach and the athlete with a disability therefore need to keep an eye open for feet or toes dragging on the ground, and athletes may need to be reminded.<br><br>For the same reason, care needs to be taken that SCI athletes do not transfer onto surfaces that are hot from summer sun or very cold in winter.<br><br>Some quadriplegics have a limited ability to control their body temperature. Care therefore needs to be taken to prevent the athlete from getting too cold or overheating.<br><br>Because of difficulty accessing bathrooms at some sport venues, athletes sometimes restrict fluid intake. Encourage adequate hydration. | SCI athletes use wheelchairs for both daily living and sport, and in both cases almost all of the motion is in a forward direction. This uses some muscles around the shoulder much more than others and can lead to overuse injuries. For this reason, pre and post exercise stretching is important, and training should strengthen all the muscles in the shoulder region.<br><br>If the muscles of the trunk function poorly, then sitting balance will be difficult, and the upper body will need to be supported by the wheelchair design, including proper strapping.<br><br>Difficulties with bowel and bladder control may require athletes to interrupt or discontinue a particular training session. | Think of the wheelchair as a piece of sporting equipment, like a kayak, that is propelled by the arms:<br><br>• Pushing on the hand rim causes wear and tear on the hands. Athletes should protect their hands with gloves or tape.<br>• For best communication get eye-to-eye with the athlete by kneeling or sitting. Don't make the athlete always look up at you.<br>• Be aware that the surface the athlete is wheeling over makes a huge difference to how hard the athlete has to work. Smooth hard surfaces are better than rough soft surfaces.<br><br>The key message is that athletes need to self-identify their needs and their abilities.<br><br>Don't ask what caused an athlete's injury. If athletes want to tell you, they will. |

**Listen to the athletes: They are the "experts" on their disability and they know what accommodations they need.**

# Mobility Impairment - Amputees

Description: A person who has had all or part of a limb removed/amputated or is born without a limb.

| Key characteristics | Implications for sport participation | Benefits of sport and physical activity | Safety considerations | Special considerations | Recommendations to coaches |
|---|---|---|---|---|---|
| Loss of a limb can be either congenital or acquired.<br><br>With the use of a prosthesis (artificial limb) many athletes can compete in both able-bodied sport and Paralympic sport. | In lower limb amputees, the energy required for daily living and sport activities increases the higher on the leg the amputation occurred. The athletes may grow fatigued more rapidly.<br><br>Sport prostheses are as important to amputees as sport equipment is to able-bodied athletes. | The higher level of energy required for daily living activities in lower limb amputees encourages a sedentary lifestyle.<br><br>Sport and physical activity offer important contributions to reducing weight, increasing fitness, and protecting against heart disease and diabetes. | Care of stumps is a critical daily activity for people with an amputation, and sport performance may place additional wear and tear on both the stump and any prosthesis. It is therefore important for the amputee to pay particular attention to breakdown in the skin of the stump and to any hair follicle infections.<br><br>It is also important to wear the right thickness of stump sock and to keep the sock dry (particularly after exercise). This is essential to help prevent skin irritations and blisters.<br><br>Wearing a protective helmet should be considered, particularly during the early stages of sport wheelchair use. | Amputees who use a wheelchair for sport activity frequently tip their chairs over and fall out of them. This is due to their higher centre of gravity (no legs to bring the centre of gravity down lower) and no ability in many cases to brace the body in the chair using their legs.<br><br>Tipping backwards is particularly common, and for this reason many athletes playing basketball or tennis have small wheels attached to stability arms coming out the back of the wheelchair. When the chairs tip back, these small wheels come in contact with the floor and stop the chairs from tipping. | In some ways, these athletes most closely resemble their able-bodied peers, and it is easier for many coaches to concentrate of the technical aspects of coaching when working with these athletes.<br><br>Treat these athletes as you would any other athlete you coach. |

**Open your eyes to the possibilities, for the person with a disability and you!**

# Cerebral Palsy (CP)

Description: Injury to different parts of the developing brain during gestation, birth, or early infancy results in muscle weakness, paralysis, poor coordination, and uncontrolled limb movements. The person's disability can range from very mild to very severe. Although most individuals with CP have the same intelligence as individuals without a disability, some may also have an intellectual impairment.

| Key characteristics | Implications for sport participation | Benefits of sport and physical activity | Safety considerations | Special considerations | Recommendations to coaches |
|---|---|---|---|---|---|
| CP may affect the arms, legs, trunk, or head, and may affect one side of the body more than the other or some limbs more than others. This disability affects all people differently.<br><br>Some people with CP can run, walk and talk, some are in wheelchairs, and others have speech impediments.<br><br>There are three major types of CP. **Spastic CP** is characterized by weak muscle tone, poor coordination, and muscle contractures that make affected limbs "stiff". **Athetoid CP** is characterized by almost continuous uncontrolled, purposeless movements that may involve the face and tongue as well as limbs. **Ataxic CP** is characterized by poor balance, uncoordinated movements, and a lack of spatial awareness.<br><br>Lack of coordination and movement control does not mean that the athlete is less intelligent than other athletes. | CP athletes engage in a wide range of sports, with higher participation in swimming, basketball, cycling, boccia, soccer, and track and field.<br><br>Lack of coordination and difficulty with rapid purposeful movements makes high level participation in ball sports or other sports with fast movements difficult.<br><br>Since this condition is almost always present from birth (or very early in life), overprotective parents and caregivers may not permit young children with CP to engage in the full range of childhood activities that develop sport-related skills. It is therefore important to expose individuals with CP to a wide range of sport-related activities. | CP athletes benefit from sport participation physically, socially, and psychologically.<br><br>Successful sport participation increases self-esteem and opens up additional possibilities for social interactions.<br><br>Water-based sports in which the water supports body weight reduce the balance and coordination symptoms of the disability.<br><br>Sport participation may improve balance and coordination, and systematic stretching activities may improve range of movement in affected limbs. | Since balance is often affected, falling is an ever-present risk for many CP athletes, and care should be taken to remove as many obstacles from the environment as possible.<br><br>Situations in which the athlete is required to make rapid controlled movements to avoid collisions with other participants or objects should be avoided or undertaken with extreme care.<br><br>Climbing, bike riding, and similar activities should be approached slowly and with caution, using appropriate protective equipment. | Stress, fatigue, and even hunger can have a large effect on the extent to which CP impairs movement and learning. Calm, well-rested, and well-fed athletes learn best. Care should be taken to allow the CP athlete to attempt new skills where they will not be the centre of attention.<br><br>Despite historical concerns that resistance training might increase spasticity, the experimental evidence suggests that resistance training can improve movements of daily living, provided adequate stretching is also part of the training program.<br><br>People who suffer head injuries that affect motor skills can be classified using a similar system as the one employed with CP athletes. | Athletes with CP have difficulty learning skills using methods in which they have the whole skill demonstrated to them and are then asked to copy that skill. For optimum learning, they need the skill to be broken down into very small steps and they need to master each step before continuing.<br><br>Do not continue trying to teach a new skill when the athlete is fatigued, excited, or overly frustrated<br><br>Some athletes with CP have speech difficulties that can make communication difficult, which can frustrate the coach, who wants to understand the athlete but cannot. Although this may be a new situation for the coach, it is a familiar situation for the athlete. Don't pretend to understand if you don't, ask the athlete to repeat what was said, and, if necessary, get help from the athlete's family, friends, or caregiver. |

**See the person, not the disability!**

# Brain Injuries

Description: Acquired Brain Injury (ABI), Traumatic Brain Injury (TBI) and Hemiplegia are designations for disabilities resulting from damage to the brain.

| Key characteristics | Implications for sport participation | Benefits of sport and physical activity | Recommendations to coaches |
|---|---|---|---|
| ABI is the result of various non-traumatic but damaging conditions of the brain such as tumours or blood clots.<br><br>As the name implies, TBI is caused by a trauma to the head.<br><br>Both conditions may cause temporary or permanent damage to the brain due to pressure from swelling or direct damage from the trauma. Depending on which part of the brain was damaged, a person who has experienced a brain injury may be affected in motor control (sometimes affecting speech), personality, and/or cognitive abilities.<br><br>Hemiplegia involves paralysis or partial paralysis of one side of the body. It may be caused by a variety of factors including stroke, head trauma, or cerebral palsy. The extent of involvement may vary or only be noticeable with increased activity. | Persons with ABI or TBI may have poor balance, uncoordinated movements, and/or a lack of spatial awareness resulting in difficulty walking, as well as impulsiveness or poor judgment. Lack of coordination and difficulty with rapid purposeful movements makes high level participation in ball sports or other sports with fast movements or rapid decision-making difficult.<br><br>ABI and TBI athletes whose motor skills are affected can be classified using a similar system as the one employed with CP athletes.<br><br>Persons with hemiplegia often have movement patterns present in the arm and leg. Typically, this includes flexion in the arm and extension in the leg. There may also be trunk strength and coordination deficits that cause the person to lean more to one side. Due to the difference in musculature on different sides of the body, activities that require a lot of balance may pose certain difficulties as the athlete may have a tendency to compensate with the strong side. | Successful sport participation increases self-esteem and opens up additional possibilities for social interactions.<br><br>Sport participation may improve balance and coordination, and systematic stretching activities may improve range of movement in affected limbs. | Encourage them to educate you about what they can and cannot do, and work slowly to extend the intensity, duration, and complexity of their athletic activities.<br><br>For ABI and TBI athletes who have motor disabilities, many of the strategies recommended for athletes with cerebral palsy are applicable.<br><br>For ABI and TBI athletes whose personality or cognitive abilities are affected, collaborate with the athlete, parent(s) or guardian(s) on behavioural and supervision needs. Where necessary, implement some of the strategies recommended for athletes with an intellectual disability. |

**Understand the disability through communications and awareness.**

# Sensory Impairment

Description: In sport terms, the two most prominent sensory impairments are loss of sight and loss of hearing.

| Key characteristics | Implications for sport participation | Benefits of sport and physical activity | Safety considerations | Special considerations | Recommendations to coaches |
|---|---|---|---|---|---|
| **Blind/Low vision**<br>Loss of sight may be total or partial, and with some conditions, vision may be progressively lost. Blindness may be congenital or acquired. Individuals born blind, or who lose their vision before fundamental skills have been learned, need to learn differently (and take much longer to learn sport skills) than people who learned the fundamental running, jumping, catching, and kicking skills before losing their sight.<br><br>**Deaf/Hearing impaired**<br>Many individuals who are deaf do not consider themselves to be disabled, but rather consider themselves to be members of an alternate culture – one that uses a different language (usually American Sign Language) for communication. Many individuals with hearing impairments use a hearing aid. | Athletes who are blind require the support of guides or pilots in some sports, and the trust relationship between the athlete and his or her guide is of great importance.<br><br>Many deaf athletes compete in a very wide range of able-bodied sports, and in addition take part in events like the Deaf Olympics. Although participation in most sports presents no problem, accommodations have to be made to ensure that athletes who are deaf (for example, those who cannot hear a whistle) can receive and understand decisions made by referees and other officials Coloured flags can be a useful way to do this. | There is considerable evidence that children and youth who have visual impairments or are blind have lower levels of fitness than their able-bodied peers, while at the same time needing to use more energy in activities of daily life. In addition, sport participation may improve balance and coordination as well as cardiovascular health.<br><br>People who are deaf or who have a hearing impairment benefit from sport in the same ways as people with no disability | Athletes who are blind or deaf need well-established alternate signals to alert them to any dangers. It is particularly important to have them clearly understand a "stop immediately" signal, so that in the event of a developing situation they can be alerted and prevented from continuing into danger.<br><br>In the case of contact activities, athletes with a hearing impairment who are involved in mainstream sport may not be able to benefit from verbal warnings or other messages from teammates or from the coach, and alternate communication strategies need to be developed. | Sensory impairments mean that alternate communication strategies need to be developed by the coach. For athletes who are visually impaired or blind, clear, concise verbal instructions coupled with physically guiding the athlete through the movement works well.<br><br>Athletes who have been blind from birth or an early age have greater difficulty creating internal visualizations of skills and strategies than do those who lose their sight later in life when sport skills have been acquired.<br><br>It may take much longer for an athlete who is blind to internalize sport experiences.<br><br>For athletes who are deaf or have a hearing impairment, clear demonstrations and visual cues work well. Recruiting a volunteer who can sign instructions to the athlete can be a great help. | Don't give in to frustration – using new and different forms of communication can take time to develop. If you relax, the athlete will too, and that will help you both.<br><br>Make sure that the athletes can use their available senses to best advantage. For blind athletes, try to coach in a quiet environment where they will have least trouble hearing instructions. Keep instructions short, clear and to the point. Make some noise when approaching the athletes so that you don't startle them, and use the athletes' names when speaking to them so that they know they are being addressed and can focus their attention. For athletes who are deaf or have a hearing impairment, ensure that they have a clear view of your face and lips and that background distractions are reduced to the minimum. Speak normally – don't exaggerate your lip and mouth movements; it doesn't help and probably hinders communication. |

**Don't be afraid to ask questions!**

# Acknowledgements

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