

Water Ski and Wakeboard Canada  
Long Term Athlete Development

# WAKING UP CHAMPIONS



Long Term Athlete Development

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*“Success isn't something that just happens - success is learned, success is practiced and then it is shared.”*

*- Sparky Anderson*

## FOREWORD

*By Pat Messner, 1972 Olympic Medallist,  
1979 World Champion*

Physical activity and sport have always been an important part of my life. My parents believed that being active was an important part of a healthy life style. I adopted my parent's active living philosophy at a young age and, with their encouragement, participated in as many activities as I could.

I loved being in the water and spent as much time as I could in this environment. I first experienced water skiing when my father let me ride on his shoulders while he skied. Then I tried water skiing in a swimming pool, where I was most at home. Later, when I was learning to ski on my own, and after falling for the first time, I asked my Dad if I could start with just one ski. He knew it would be an almost impossible task, but he let me try nonetheless. I got up on my first try!

I soon began to do my own thing, and with the support of my parents, began to compete at age 10. At that time, tournaments were an opportunity to learn more about the sport, to enter into friendships that would last a lifetime and most importantly, to have fun. Training became a full time "occupation" when I turned 17 and began to see the dream of becoming a World Champion move ever so closer.

When water skiing was introduced as a demonstration sport in the 1972 Olympics, it was the start of a

string of firsts for me. Being the only Canadian to win an Olympic medal, I was bound and determined to move on. I soon realized that to become a World Champion would require more than just skiing. I was one of the first athletes to have my own sports psychologist when I began to work with Dr. Terry Orlick and visited the University of Ottawa, to obtain an individualized training program.

My dream finally came true in September of 1979 when I became the first Canadian woman to become a World Water Skiing Champion.

My father and I have continued to introduce thousands of children to the sport. Dad is in his eighties now, but he is still one of the best water ski coaches in the world. He continues to coach me as I follow through with a comeback that saw me return to competition at 50 years of age. Water skiing and sports in general will always be an important part of our lives. I feel particularly blessed to be able to continue to pass on both my passion and my knowledge, as I move into the next chapter of my story, coaching athletes with a disability. I will always remember the time when one of my young skiers asked me if he could try getting up on one ski after he fell during one of his first few runs.

Pat Messner remains active in Water Ski as an athlete, coach and volunteer.

Her passion for the sport remains as strong as ever. Pat's story exemplifies the principles of Long Term Athlete Development.

### **From Chris Bourne**

*Chair, WSWC Adapted Water Sports committee;  
National Adaptive Team Member*

We all know the fun, thrills and challenges that are inherent to water skiing. We realize that it is a fantastic sport for those who do it once a summer, for those who compete at the elite level and pour their lives into it, and for those who participate at some level in between. We have an appreciation for how it can become a lifelong activity that brings with it numerous benefits beyond those associated with the time spent behind a boat holding on to the tow rope. Fortunately for people with disabilities, water skiing is a very adaptable sport that can be modified to accommodate the limitations associated with different types of disabilities, making these benefits available to them as well.

Water Ski and Wakeboard Canada is dedicated to making sure that towed water sport opportunities are available to all Canadians, regardless of their level of ability. This commitment comes with a responsibility to address the unique needs of skiers with a disability that are relevant to all stages of athlete development from first entry in sport through to the high performance level. Learning from WSWC's recreational and competitive adaptive water ski programs, and building on research done to support the development of athletes with a disability, Waking Up Champions has addressed many factors that need to be considered when working with water skiers who have a disability.

The LTAD process is one that will help to develop our athletes and every stakeholder that plays a part in the growth and success of our sport system. Considering the needs of skiers with a disability enhances this process and will ensure that appropriate opportunities are available for every athlete to become involved at whatever level they aspire to.

*"Children are likely to  
live up to what you  
believe of them"*

- Larry Bird

### **From Richard Gray**

*National Barefoot Team Member 1986 – 2006*

I learned to barefoot water ski when I was 18, entered my first barefoot tournament when I was 21, and was selected for the National Team that same year. In those first few years I was self taught and learned by trial and error with persistence and determination.

I have now been on the National Team for 20 years. Looking back, I realize that all activities I took part in since childhood were unintentionally the best choices for Long Term Athlete Development. I was a participant in sport my whole life. I took part on school teams of soccer, volleyball, tennis, golf, curling, softball and more. I played community soccer for 11 years and local baseball for 5 years. I rode my bike to school everyday for 8 years. I bought a skateboard and built ramps. I played street hockey and rode my dirt bike everyday after school. I took swimming lessons and got certified as a lifeguard. I grew up on a "hobby farm" and I would walk home from the bus stop, climb onto the fence at the front of the yard, then walk on the 1.5" wide boards all the way around the fields and end up on the roof of the barn. I did all this, and more, simply because it was FUN!

When I took up barefoot water skiing at 18 it seemed that it came "easy" to me. I know now that I had been preparing with almost 18 years of training in balance, core strength, coordination, successes and failures, persistence and determination. That training got me to the National Team. To what do I attribute my 20 Years of staying on the team? I absolutely LOVE barefoot water skiing.

## INTRODUCTION: An Overview of Long Term Athlete Development

Waking Up Champions presents a general framework for optimal skier/rider development. The framework provides guidelines for appropriate training, competition and recovery environments for athletes, based on developmental age – the maturation level of an individual – rather than simply chronological age.

Waking Up Champions addresses the needs of all participants, regardless of age, ability or interest. It recognizes the need to promote a physically active lifestyle, of making informed healthy choices, and of being “Active for Life”.

These guidelines have been developed for the sport as a whole. The various sections within this document refer to an overall pathway of seamlessly linked and often overlapping stages through which a skier/rider progresses as he or she matures. Coaches, instructors, parents, educators, officials and participants must apply these guidelines with a degree of flexibility to ensure that the water ski/wakeboard experience is optimized for all participants. Each skier/rider has unique physical, mental, emotional and social needs and requires individualized programming and evaluation by qualified, accredited professionals.

### Long Term Athlete Development:

1. Is based on the physical, mental, emotional and cognitive development of children and adolescents. Each of the stages of LTAD reflects a different point in athlete development.
2. Ensures physical literacy upon which excellence can be built and
  - builds literacy in all children, from early childhood to late adolescence by promoting quality daily physical activity in the schools and a common approach to developing physical abilities through community recreation and elite sport programs.
  - recognizes the need to involve all Canadians in LTAD, including athletes with a disability.
3. Promotes a healthy, physically literate nation whose citizens participate in lifelong physical activity.
4. Ensures that optimal training, competition and recovery programs are provided throughout an athlete’s career.
5. Provides an optimal competition structure for the various stages of an athlete’s development.
6. Has an impact on the entire sport continuum, including participants, parents, coaches, schools, clubs, community recreation programs, provincial sport organizations (PSOs) national sport organizations (NSOs), sport science specialists, municipalities and several government ministries and departments (including health and education) at the provincial/territorial and federal levels.
7. Integrates elite sport, community sport and recreation, scholastic sport and physical education in schools.
8. Is “Made in Canada”, recognizing international best practices, research and normative data
9. Supports the four goals of the Canadian Sport Policy – enhanced participation, enhanced excellence, enhanced capacity and enhanced interaction – and reflect a commitment to contribute to the achievement of these goals.

### Adaptive Water Ski for Athletes with a Disability

The LTAD process is appropriate for all athletes and WSWC has made a commitment to the ongoing development and delivery of programs for athletes with a disability.

All the principles of LTAD are applicable to athletes with a disability, whether the disability is acquired or congenital. However the rate at which these athletes will progress through the stages of LTAD, and the age at which the athlete enters each stage will vary according to the individual and the nature of the disability. LTAD is a starting point for ALL athletes.

### WHY IS LTAD IMPORTANT TO WATER SKI AND WAKEBOARD CANADA?

**LTAD** is a framework for the optimal development of athletes of all ages, interests and abilities, in all the disciplines of WSWC. It provides a structure for national/provincial program design, for club program design and for coach education. It ensures that all participants have the opportunity to reach their potential and that Canada is continually represented on World podiums.

**LTAD** is a vehicle for change in our organization. By understanding and respecting the principles of LTAD, we are in a better position to make sound decisions about the future directions of our sport. It allows us to set goals that are clear and attainable, to plan programs that will allow us to achieve these goals, and to identify and address gaps in our system.



## WAKING UP! WHERE DO WE GO FROM HERE?

The success of this water ski/wakeboard development system depends on a coordinated effort from all of the major stakeholders (skiers/riders, parents, instructors/coaches, officials, facility owners, affiliated organizations such as clubs and provincial associations, and even equipment manufactures and sponsors).

All these partners must understand their roles and responsibilities and must strive for effective communication and stable, productive relationships.

### **Effective partnerships will help WSWC move forward to:**

- **Embrace change as an opportunity to develop our sport**

*Embracing change will increase our ability to adapt to changing markets, will affect revenue generation potential and will ultimately create a positive impact on athlete development and excellence at the world level.*

- **Ensure a balance of resources and energies for all aspects of the sport, from recreational to elite**

*All the disciplines of WSWC are equally important and are interdependent. The variety of opportunities for participation, performance and competition provides all participants with the ability to enjoy success, regardless of their age, level of interest and ability.*

- **Improve international performances by offering better development programs**

*All participants must develop sound movement skills and fundamental skiing and riding skills. For those that choose to move into competitive programs, sound skill development, expert development level coaching and appropriate competitive structures are required to ensure success. We must ensure that athletes receive age-appropriate amounts of training and competition, and that we avoid doing “too much, too soon”. For those athletes who must train outside of Canada, we must ensure that the National Team program is integrated with and supports this variety of training environments.*

- **Monitor the growth and development of athletes and use this information to individualize training, competition and recovery schedules.**

*We must understand that periods of rapid growth may require large adjustments to the athlete’s program, and will possibly result in a*

*temporary plateau in skill development. We must also make sure that later-maturing athletes are not eliminated from programs.*

- **Ensure that calendar planning is in the best interest of the athletes it is servicing**

*If current competitive structure or events are in conflict with LTAD principles, they should be revisited to ensure achievement of program goals and athlete performance goals.*

- **Ensure coaching excellence for all participants**

*Coaches/instructors must have more information on LTAD and must become more flexible in their teaching and coaching strategies. Coaching must be treated as a legitimate profession and clubs must be educated to value their coaches as assets.*

- **Improve awareness and understanding of how to create more inclusive programs**

*Coaches must be trained to work with participants with a variety of disabilities. Clubs must be supported and provided with incentives to offer programs for athletes with a disability.*

- **Increase public awareness of the sport and of WSWC**

*We must work to reduce the barriers to participation in towed water sports by ensuring increased accessibility of facilities and equipment. There is also a large recreational community of skiers and riders that is largely unaware of WSWC. We must work to establish a relationship and communicate with this group.*

- **Ensure integration of program delivery with the education system, community recreation programs and elite sport programs.**

*“The price of success is hard work, dedication to the job at hand, and the determination that whether we win or lose, we have applied the best of ourselves to the task at hand.”*

*– Vince Lombardi*





## OUR GOAL OF MOVING FORWARD DEPENDS ON THREE STEPS:

### STEP 1. 10 KEY FACTORS OF LTAD



By understanding the 10 key factors of long term athlete development, we are in a better position to address the shortcomings of the current system, and to move toward finding solutions.

These ten key factors provide guidance for training and competition program design that is based on principles of growth and development, and which respects periods of enhanced trainability.

### STEP 2. WSWC ATHLETE DEVELOPMENT FRAMEWORK

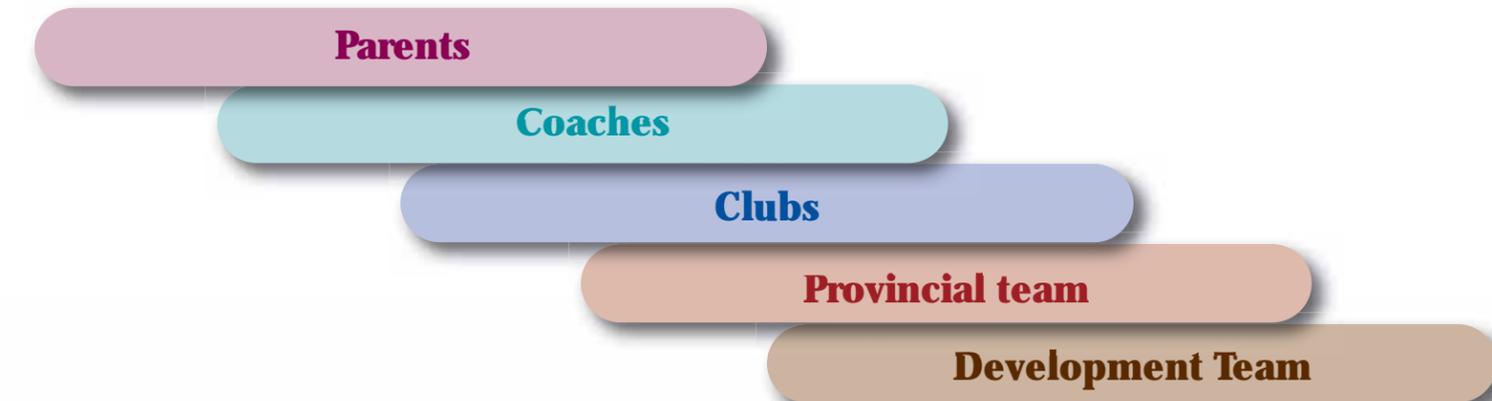
The WSWC Athlete Development framework describes stages of athlete progression. While the stages are defined roughly by chronological age, these age subdivisions are only general guidelines. Every athlete will mature at an individual rate, and will therefore progress through the stages in a unique way. However all athletes will go through all the same stages.

### STEP 3. IMPLEMENTATION PLAN

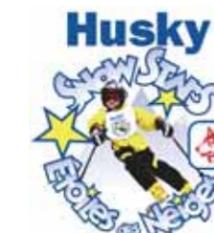
WSWC will develop a long term plan to ensure that all participants benefit from LTAD. All partners in the system – athletes, coaches, parents and administrators, as well as clubs and provincial/national sport organizations - will have an important role in the development of this plan, and in its national implementation.

Full implementation of LTAD depends on ongoing monitoring and tracking of our athletes, and on continuous review and evaluation of our programs, in relation to the goals we have set for WSWC. We must remain current in our knowledge and be prepared to modify and adapt our programs as we continue to move forward.

LTAD STAGE:	1 Active Start	2 FUN-damentals	3 FUN-dations	4 Build the Skills	5 Learn to Compete	6 Train to Compete	7 Becoming a Champion	8 Top of the Wake	9 Active for Life	
<b>Water Ski</b> Females Males						16-19 (f) 17-20 (m)	18-22 (f) 19-23 (m)	21-25 (f) 22-26 (m)	22+ (f) 25+ (m)	<b>Enter at any age, and from any LTAD Stage</b>
<b>Barefoot</b> Females Males	0-6 years	6-8 (f) 6-9 (m)	9-11 (f) 10-12 (m)	12-15 (f) 13-16 (m)	16-19 (f) 17-20 (m)	18-22 (f) 19-23 (m)	21-25 (f) 22-26 (m)	22+ (f) 25+ (m)		
<b>Wakeboard</b> Females Males					15-16 (f) 16-17 (m)	17-18 (f) 18-19 (m)	19 – 21 (f) 20-24 (m)	20+ (f) 22+ (m)		
<b>Adapted Congenital Acquired</b>	Enter at any age	Age of entry into each stage is a function of the type of disability, age at onset of disability, physical literacy and stage of development at time of disability, and of the ability of the participant to acquire specific benchmark skills in a stage.								



#### Complementary Programs:





*"If you set a goal for yourself and are able to achieve it, you have won your race. Your goal can be to come in first, to improve your performance, or just finish the race its up to you."*

- Dave Scott, Triathlete

## THE 10 KEY FACTORS OF LTAD

The following factors are the research, principles and tools upon which LTAD is built.



### The 10 year rule

LTAD KEY



It is generally accepted that several years and approximately 10,000 hours of time-on-task training are required for a talented athlete to reach elite levels.

LTAD will identify the type and level of training that is appropriate for athletes of different ages and stages of development. The volume of training will gradually increase as the athlete grows, matures and develops more advanced skills. A young beginner may participate for an hour a day, while a top level athlete may spend 5 or 6 hours a day in training.

There are no shortcuts in this process. It takes a long time to develop a champion. Short term goals must never be allowed to take priority over the long term, progressive development of the athlete.





## The FUNdamentals

LTAD KEY

2

Fundamental movement skills – agility, balance, coordination – and fundamental sport skills – running and other traveling skills, skating, skiing and other gliding skills, jumping, throwing, kicking, catching and swimming – are the basis for all other sports and are known collectively as Physical Literacy.

Children should develop physical literacy well before the onset of the growth spurt. Several activities provide excellent foundations for towed water sports:

- **Athletics:** run, wheel, jump or throw
- **Gymnastics:** ABCs of athleticism (agility, balance, coordination and speed), as well as the fundamental movement patterns of landings, statics, rotations, swings and springs
- **Swimming:** for water safety reasons, for balance in a buoyant environment and as the foundation for all water based sports.
- Activities such as cycling, skiing, skating and wheeling that develop balance while in movement

Without these basic movement skills, a child will have difficulty participating in any sport and will have fewer opportunities for athletic success and life-long enjoyment of physical activity.



*“Success isn't something that just happens - success is learned, success is practiced and then it is shared.”*

- Chuck Noll



## Specialization

LTAD KEY

3

Water Ski and Wakeboard are late-specialization sports that rely on several components of the sport system to develop physical literacy. The most successful water skiers and wakeboarders have participated in a wide variety of sports and physical activity during the FUNdamentals and FUNdations stages. The movement and sport skills they have developed have helped them reach the top levels of the sport.

### Specialization before the age of 10 can contribute to:

- One-sided, sport specific preparation
- Lack of development of basic movement and sport skills
- Overuse injuries
- Early burnout
- Early retirement from training and competition
- Disenchantment and premature departure from the sport





## Developmental Age

LTAD KEY

4

LTAD is based on developmental age, not chronological age. Every child follows the same stages of development from early childhood through to adolescence, but the timing, rate and magnitude of development varies with the individual. During late childhood and early adolescence, children who are the same chronological age may be four or five years apart developmentally.

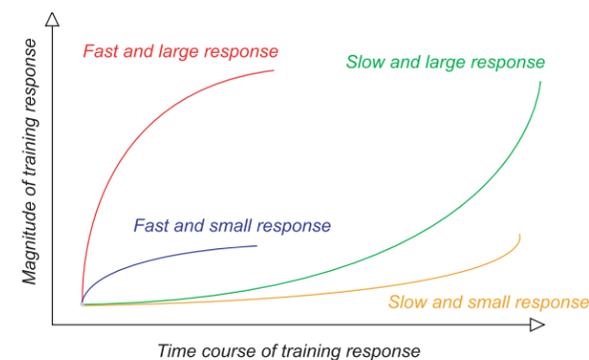
LTAD requires the identification of early, average and late-maturers to help design appropriate training and competition programs in relation to optimal trainability and readiness. The beginning of the growth spurt and the peak of the growth spurt are very significant in LTAD applications to training and competition design and athlete selection.



## Trainability

LTAD KEY

5



All physiological systems are always trainable but there are critical periods in development when the body is particularly responsive to specific types of training. To reach their genetic potential, athletes need to do the right type of training at the right stage. Athletes who miss these windows of trainability can still compete at the highest level but it will require more time and effort for them to enhance these qualities to the same level as those who did the right training at the right time.

**The 5 Basic Ss of training and performance are Stamina, Strength, Speed, Skill and Suppleness.**

• **STAMINA (ENDURANCE)**

The Windows of Optimal Trainability occurs at the onset of PHV. Aerobic capacity training is recommended before athletes reach PHV. Aerobic power should be introduced progressively after growth rate decelerates.

• **STRENGTH**

The Windows of Optimal Trainability for girls is immediately after PHV or at the onset of menarche, while for boys it is 12-18 months after PHV.

• **SPEED**

For boys, the first speed training window occurs between the ages of 7 and 9 years and the second window occurs between the ages of 13 and 16. For girls, the first speed training window occurs between the ages of 6 and 8 years and the second window occurs between the ages of 11 and 13 years.

• **SKILL**

The window for optimal skill training for boys takes place between the ages of 9 and 12 and between the ages of 8 and 11 for girls.

• **SUPPLENESS (FLEXIBILITY)**

The Windows of Optimal Trainability for suppleness for both genders occurs between the ages of 6 and 10. Special attention should be paid to flexibility during PHV.



## Physical, Mental, Cognitive and Emotional Development

LTAD KEY

6

Training programs should consider the mental, cognitive and emotional development of the athlete, in addition to the physical, technical and tactical (including decision-making skills) components of development.

A major objective of LTAD is a holistic approach to athlete development. This includes emphasis on ethics, fair play and character building throughout the various stages, an objective that reflects Canadian values. Programming should be designed to consider the athlete's cognitive ability to address these concepts.



## Periodization

LTAD KEY

7

Periodization is a planning technique that provides the framework for arranging training, competition and recovery into a logical and scientifically-based schedule that results in optimal performance at the required time.

Periodization sequences training components into weeks, days and sessions. It is situation-specific and relates to the priorities and time available to bring about the required training or competition improvement. A periodized training plan takes into account the growth, maturation and trainability principles of the stage of development of the athlete.



## Calendar Planning for Competition

LTAD KEY

8

Competition and tournament calendars should support and be consistent with LTAD principles. In the early stages of LTAD, developing physical capacities is more important than competition and short term success. In the later stages, the ability to compete well becomes the focus.

- Over-competition and under-training at the FUNdations and Build the Skills stages result in a lack of basic skills and fitness.
- Level and length of the competitive season should be aligned with the changing needs of the developmental athlete progressing through LTAD.
- The current system of competition is based upon tradition. National, provincial and club administrators need to review the existing system from entry to elite level to ensure that it supports optimal training and performance of athletes in each LTAD stage.
- Competitions in Canada must be created and schedule considering strategic planning and with due regard for the optimal performance of an athlete and the tapering and peaking requirements.

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

*"The medals don't mean anything and the glory doesn't last. It's all about your happiness. The rewards are going to come, but my happiness is just loving the sport and having fun performing."*

- Jackie Joyner Kersee





## System Alignment and Integration

LTAD KEY

9



The process of designing and implementing LTAD programs is athlete-centred, coach-driven and administration, sport science and sponsor-supported. Partners include parents, coaches, clubs, provincial and national sport organizations, education and health care systems, and all levels of government from municipal to federal. All these partners must work together to ensure that competition systems, training camps, coach education programs, skill development programs and athlete selection are aligned with the principles of LTAD and supported to ensure implementation.



## Continuous Improvement

LTAD KEY

10

改善

KAIZEN

The concept of continuous improvement, which permeates LTAD, is drawn from the respected Japanese industrial philosophy known as Kaizen.

### 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.



## ADDITIONAL FACTORS FOR ATHLETES WITH A DISABILITY

While there are many similarities between athletes with a disability and able-bodied athletes, there are some differences that change the LTAD process.



### Two More Stages of LTAD...

The 9 stages of the WSWC LTAD framework represent the “normal” pathway for able-bodied athletes. The framework for athletes with a disability includes two additional stages; Awareness and First Contact/Recruitment. These two stages are especially important for individuals with an acquired disability who may have no prior knowledge of or contact with sport for athletes with a disability. Some sports are traditionally recognized as appropriate for people with a disability. Water skiing is often not considered as feasible or available, so aggressive strategies to inform and educate participants and water ski providers are essential.

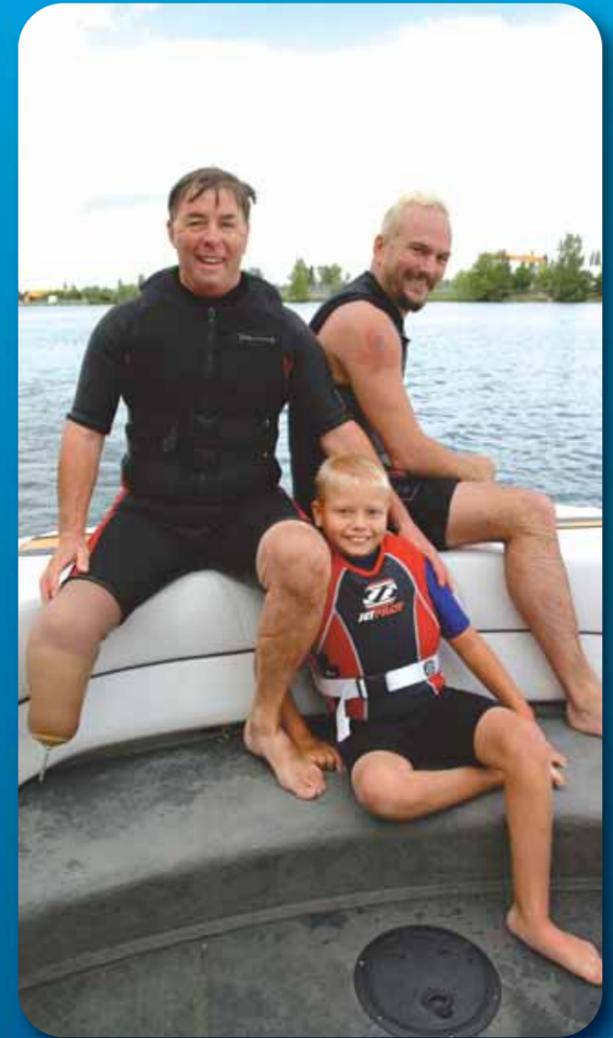
The purpose of these two stages is to inform individuals of the range of activities in which they can participate, and to provide ways for them to experience these activities. A positive first experience can go a long way to engaging persons with a disability in both competitive and recreational sporting activities.

**Factors for Athletes with an Intellectual Disability**  
Intellectual disability is the leading form of lifelong disability worldwide\* and with over 500 different forms of impairment subsumed within this group, it represents a highly diverse (ability, needs, interests) collection of

individuals. Recent estimates suggest that approximately 2.5 % of Canadians (over 800,000 people) have some form of intellectual disability.

In simplest terms, two main groups can be identified – Down Syndrome and non-Down Syndrome – roughly described as having a disability that is biological in origin versus a disability of unknown origin. An additional challenge such as fetal alcohol syndrome, autism and visual or learning impairment is referred to as an associated disability and includes 10-15% of people with intellectual disabilities.

People with an intellectual disability tend to enter physical activity programs at an older age than those without disabilities. Many do not enter sport programs until they are well into adulthood. As a result, fundamental movement and sport skill development do not always parallel chronological age and physical development. There is little research to indicate whether people with an intellectual disability go through puberty faster, slower, earlier or later than individuals without a disability. Each individual develops at a different rate, depending on the nature and severity of their intellectual disability and associated disabilities.



*“I always felt that my greatest asset was not my physical ability, it was my mental ability.”*

– Bruce Jenner

## Modifications to the Ten Key Factors for Athletes with a Disability

**Athletes with a disability pass through the same developmental stages as able-bodied athletes, but the ages and rate of progress may differ. Similarly, the 10 key factors of ITAD still apply, but they reflect the specific situation of the athlete.**

### ITAD Key 1: The 10 Year Rule

Exactly how long it takes to become an elite athlete varies with the nature of the disability. Pre-injury sporting experience and expertise, for athletes who acquire a disability, also affects the athlete's progress. Generally speaking, however, achievement of the highest levels of performance seems to take the same time and level of commitment as it does for able-bodied athletes (Mactavish, 2003). With the relatively small number of athletes with a disability competing in water skiing, qualification standards for international level competition are very attainable for competent skiers.

### ITAD Key 2: The FUNDamentals

Just like able-bodied athletes, athletes with a disability must acquire FUNDamental movement and sports skills, or physical literacy, prior to puberty. People with an intellectual disability seem to enter physical activity and sport later than the general population. However, well designed, inclusive programs for young children can result in early participation and development of fundamentals in an enriching program.

Children with a disability often face difficulties in acquiring FUNDamental skills because:

- Overly protective parents, caregivers, rehabilitation facility staff, 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 and programs do not welcome children with a disability to their activities because of a lack of knowledge about how to integrate them and concern that their inclusion may compromise the activity for other participants.
- It takes creativity to integrate a person with a disability into a group activity where FUNDamental skills are practiced and physical literacy is developed.

The physical literacy skills needed by children with a disability vary greatly depending on the nature and extent of their disability and should include all such skills learned by able-bodied children (modified as needed) as well as the additional skills required for effective use of assistive devices. Regardless of their previous skill, individuals who acquire a disability often have to learn new physical literacy skills such as wheeling their wheelchair, using a prosthetic limb or accommodating a restricted range of movement. Even though they may be adults, it is critical that individuals effectively learn the FUNDamentals of new movement and sport skills



so that those skills can be applied to a wide range of sport and recreational activities, and so they can be used as a foundation for water ski skill basics.

### ITAD Key 3: Specialization

Children with congenital or an early-acquired physical or intellectual disability must be exposed to the full range of FUNDamentals before specializing in a sport. Similarly, adults with an acquired disability should master their new FUNDamental movement skills before specializing in a single sport. However, without specializing in it, water skiing is a very appropriate sport for children and those with an acquired disability to become involved in at an early post-disability onset stage. Skills developed from water skiing will be beneficial to other sports and vice versa.

### ITAD Key 4: Age Factors

Some Some congenital disabilities are known to influence childhood and adolescent development and the timing of puberty. While the timing and the rate at which the adolescent completes the process of puberty may vary, the sequence of development usually does not. Because of variations in the timing of puberty (and therefore PHV) it is likely that there will also be variations at which the optimum periods of trainability occur. For athletes with an intellectual disability, physical maturity may not be an issue with respect to ongoing development in the sport however the mental age (a measure of intellectual development) must be considered.

### ITAD Key 5: Trainability

Little is known about periods of optimal trainability for individuals with a disability. For children with

a congenital disability, the ages of optimum trainability should be adjusted based on the observed age of puberty.

For individuals with Down Syndrome, the pre-pubertal growth spurt occurs earlier (age 9-10) and is less dramatic than other children. Sexual maturity may occur earlier than the norm in boys and later in girls. For those with non-Down Syndrome, growth patterns are often parallel to those of persons without disabilities.

Trainability of stamina, strength, skill and suppleness is different between individuals with Down Syndrome and those with non-Down Syndrome. Some of these athletes may reach levels comparable to individuals without disabilities.

- For people with Down Syndrome, stamina and strength development may not reach the levels of persons without a disability. There is some evidence that peak strength may be lower than norms for those without a disability. For people with non-Down syndrome, stamina can develop to levels close to those of their peers without a disability.
- A person with Down Syndrome will tend to develop skill later than average, and there is a high degree of variation in both the rate of skill acquisition and skill quality. Persons with non-Down Syndrome also show high variability in skill acquisition.
- A person with Down Syndrome tends to develop greater suppleness due to low muscle tone and/or excessive ligament laxicity.



*"You have to expect things of yourself before you can do them."*

- Michael Jordan



#### **ITAD Key 6: Physical, Mental, Cognitive and Emotional Development**

Sport can play an important role in helping individuals with a physical or intellectual disability to develop a new, positive self-image, as well as enhance their self-concept and their social skills. When working with athletes with an intellectual disability, it is important to consider the athlete's mental and developmental age, rather than chronological age.

#### **ITAD Key 7: Periodization**

Periodization for athletes with a disability is no different than for able-bodied athletes. Since disability may reduce functional muscle mass, susceptibility to cold and aerobic capacity, fatigue and in-water time should be carefully monitored, and rest and recovery periods should be adjusted accordingly.

#### **ITAD Key 8: Calendar Planning for Competition**

Competition in all classifications must be matched to the athlete's stage of development. Athletes must be challenged to be the best they can be under a fair and meaningful system of competition. When there are few athletes in a particular classification or discipline within a tournament, event organizers must do some creative thinking to accommodate a variety of needs and levels of disability. Training to competition ratios should be the same as for able-bodied athletes.

#### **ITAD Key 9: System Alignment and Integration**

WSWC is committed to the ongoing development and promotion of adaptive water ski programs.

However there are many components and numerous partners required to fully implement programs for athletes with a disability. These partners must work together to ensure that the sport system is aligned and functional, particularly with respect to competitions, coaching, funding, facilities and equipment, coaching assistants, volunteer support, sport science, ancillary services, daily living support and talent identification and development.

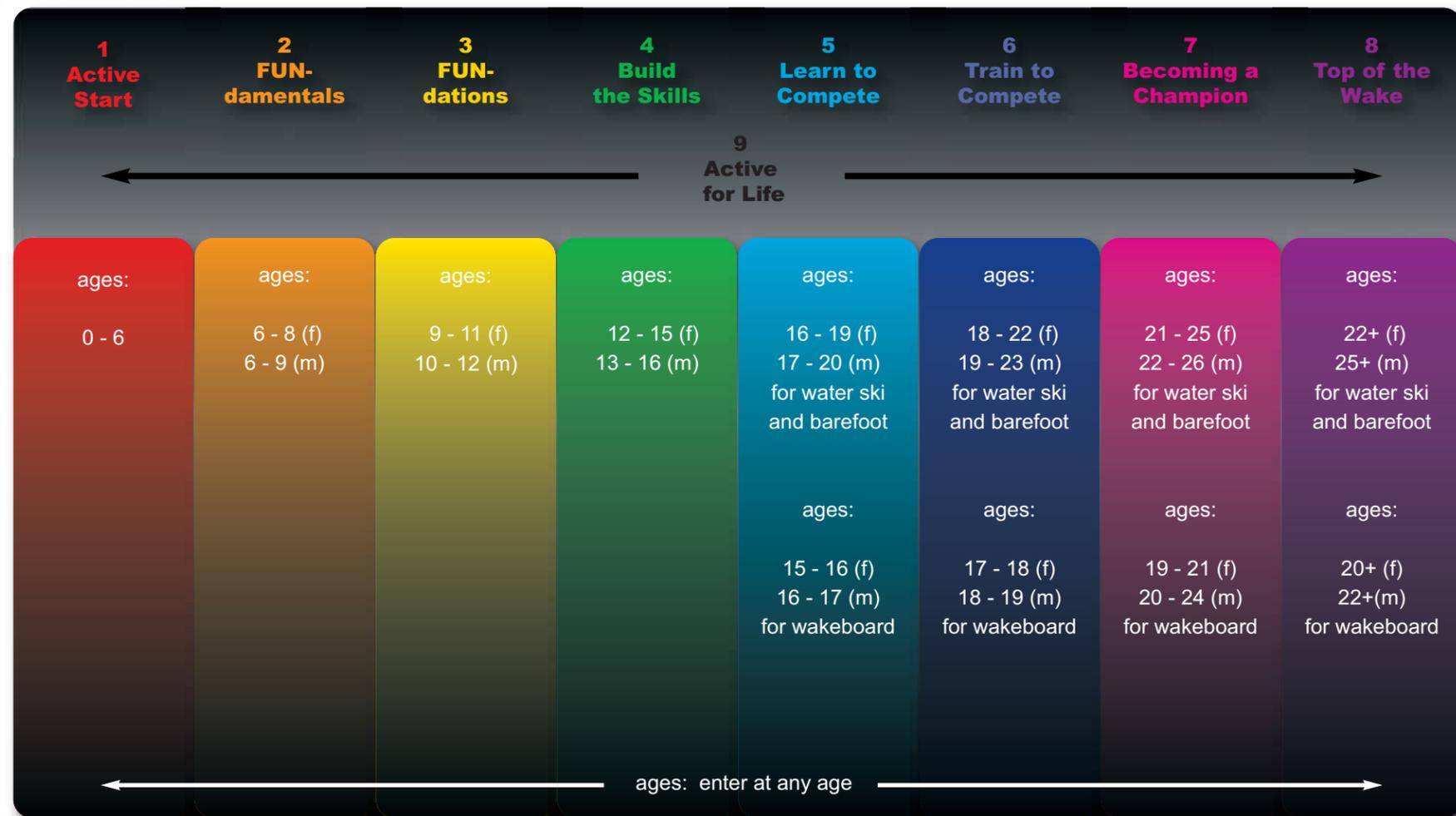
#### **ITAD Key 10: Continuous Improvement**

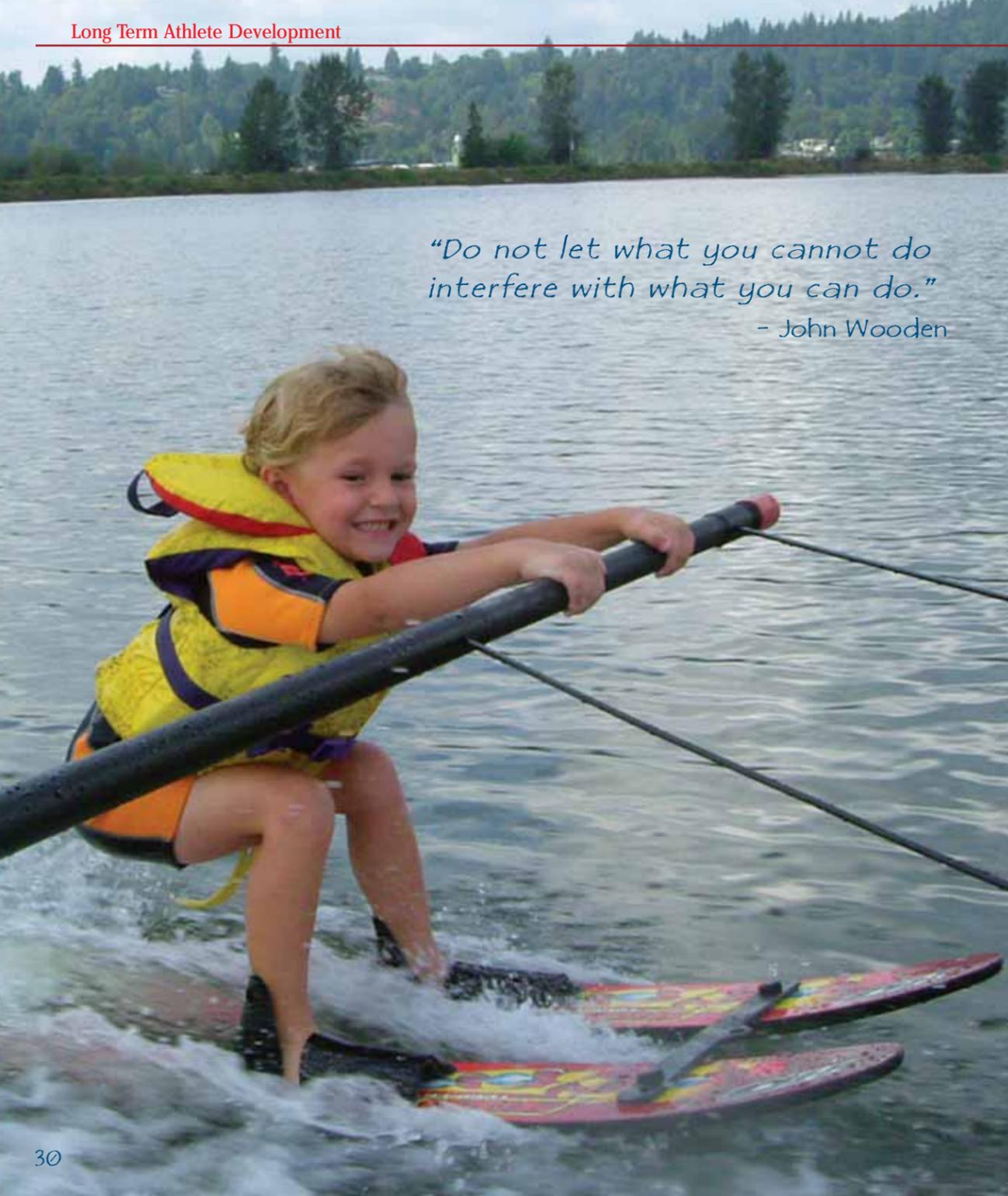
Adapted water ski equipment, training techniques, technical skills and tactical skills are evolving rapidly. Evaluating new information, selecting what information will be used, and then integrating it into programs and services must be an active, ongoing process that is tied to the concept of continuous improvement.

*"I've missed more than 9000 shots in my career. I've lost almost 300 games. 26 times, I've been trusted to take the game winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed."*

- Michael Jordan

## STAGES OF LONG TERM ATHLETE DEVELOPMENT FOR WATER SKI AND WAKEBOARD





*“Do not let what you cannot do interfere with what you can do.”*  
 - John Wooden



# Active Start

**AGE: 0 – 6 years (girls and boys)**

**Participants with a disability: enter at any age (with or without support person)**

## OBJECTIVE:

**LEARN FUNDAMENTAL MOVEMENTS AND LINK THEM TOGETHER INTO PLAY.**

### GENERAL DESCRIPTION OF ACTIVE START STAGE

- Starting in infancy, parents need to provide opportunities for daily activity that are enjoyable and which incorporate the four pillars of physical literacy. Physical activity through active play is essential for healthy child development.
- Parents must encourage the development of basic movement skills — they do not just happen as a person grows older, but develop depending on heredity, activity experiences, and environment.

### WSWC KEY FOCUS FOR THIS STAGE

**WSWC does not play an active role in this stage other than recommending that children learn to swim and play in boats with their parents as a part of developing physical literacy.**



## PROGRAM

4 Pillars of Physical Literacy:

- Swimming
- Gymnastics
- Athletics
- Sliding (water skiing, snow skiing, skating)

## SKILLS

Initiation of basic movement skills: running, jumping, kicking, throwing, catching, swimming, sliding etc.

## ADAPTIVE WATER SKIING

- For people with a disability, access to age and disability appropriate adapted equipment is an important contributor to success. Organized physical activity and active play are particularly important for the healthy development of people with a disability if they are to acquire habits of lifelong activity. Parents of children with a disability must ensure that activity is part of daily life.

- Because this is a period when children rapidly outgrow their mobility aids, communities need to find effective ways - equipment swaps or rentals, for example - to ensure that all children have access to the equipment they need to be active.

- People with a disability tend to be less active than their peers. Ensure that activities are gender neutral and inclusive so that active living is equally valued and promoted for all.

- Someone who acquires a disability may have no knowledge of what sport opportunities are available. It is important that sports develop awareness plans to inform and encourage prospective AWAD.



### ETAD Window of Opportunity

**Initiation of basic movement skills: running, jumping, kicking, throwing, catching, swimming, sliding, wheeling, cycling**



## Physical Development

- Provide physical activity every day regardless of the weather.
- Starting in infancy, provide infants, toddlers, and preschoolers with opportunities to participate in daily physical activity that promotes fitness and movement skills. Provide parents and caregivers with age-appropriate information.
- Develop gross motor skills with large muscle groups through unstructured activity.
- Develop basic movement skills such as running, jumping, twisting, wheeling, kicking, throwing, and catching from the four pillars of physical literacy. These motor skills are the building blocks for more complex movement and help lay the foundation for lifelong physical activity.



## Psychological Development

- Activity is essential for development; among its benefits, physical activity enhances:
- development of brain function
  - social skills
  - emotions, attitudes and imagination
  - confidence and positive self-esteem
  - stress reduction by quality of sleep
- Design activities that help participants to feel competent and comfortable participating in a variety of fun and challenging sports and activities

## Technical Development

- Have fun and enjoy water
- Develop basic swimming skills
- Develop comfort and safety awareness in boats, around docks, in and around the water
- Introduce deep water start on ski, wakeboard
- Introduce wake crossing



## Lifestyle

### Active, Safe and Fun

- Provide unstructured physical activity — active play — for at least 60 minutes a day, and up to several hours per day for toddlers and preschoolers. Toddlers and preschoolers should not be sedentary for more than 60 minutes at a time except while sleeping.
- Because girls tend to be less active than boys, and people with a disability less active



- than their peers, ensure that activities are gender-neutral and inclusive so that active living is equally valued and promoted for all participants.
- Ensure that games for young children are non-competitive and focus on participation
- Encourage exploration of risk and limits in a safe environment
- Develop desire to try water skiing



## Equipment and Facilities

- Beginner equipment: Small or regular boat, coast guard approved personal floatation device (PFD), beginner skis, small beginner board, and bindings, basic low-stretch to no-stretch rope
- Optional equipment: wet suit, boom
- All facilities that provide programs for people with a disability must be accessible and clutter-free



*“Winning is only half of it.  
Having fun is the other half.”*

- Bum Phillips



# FUNdamentals

**AGE:** 6-8 years (girls)

6 – 9 years (boys)

**Participants with a disability: enter at any age (with or without support person)**

## OBJECTIVE:

**REFINE FUNDAMENTAL MOVEMENT SKILLS AND ACQUIRE BASIC SPORT SKILLS.**

### GENERAL DESCRIPTION OF FUNDAMENTALS STAGE

- This stage is where participants learn physical literacy: the interrelation of movement skills and sport skills.
- The skills that participants acquire during the FUNdamentals stage will benefit them when they engage in any activity, regardless of their level of participation. Bypassing the specialized skill development in the FUNdamentals stage is detrimental to the person’s future participation in physical activity and sport.
- Basic sport skill development in the FUNdamentals stage should be well-structured, positive, and done in a FUN and social environment.
- All programs are structured with proper progression, and monitored regularly by trained coaches, instructors and parents.

### WSWC KEY FOCUS FOR THIS STAGE

- Be physically literate
- Be comfortable and confident in boats and playing in, on, and around the water
- Understand basic safety rules for boats and water
- Be able to swim 25 m with a PFD
- Bilateral balance is critical at this stage. Participants should continue activities and having fun on two skis even while learning the other disciplines



### PROGRAM

- WSWC Rip’nRide Program, all disciplines
- Club and Provincial grass-roots programs
- Continue development of the four pillars of physical literacy:
  - Swimming
  - Gymnastics
  - Athletics
  - Sliding (water skiing, snow skiing, skating)
- SkiAbility

### MONITORING

- Children in this stage have not yet begun their growth spurt. It is helpful to keep track of regular height measurements to provide a baseline for future growth.

### INSTRUCTOR/COACH RECOMMENDATIONS

- NCCP “Learn To” Instructor program
- WSWC recommends a coach to athlete ratio of 2:5 or less
- Coaches must have a sound knowledge and growth and development principles for this age group, and an understanding of physical literacy
- Coaches should be certified in first aid and CPR, and must possess a valid boat operators permit if they are driving the boat
- Coaches must understand how to appropriately adapt activities and programs for athletes with a disability

### ADAPTIVE WATER SKIING

- Ensure that adaptive equipment is appropriate in size, weight and design so that the athlete enjoys the best possible experience in the water through maximum ease of movement. This may require equipment to be modified. For example, if a sit ski seating frame is too big, foam pipe wrap can be added to ‘snug up’ the fit and make the equipment more responsive.
- Parents and support persons must seek and allow opportunities for participation in a variety of activities



### ETAD Window of Opportunity

- 1st window for speed development at age 6-8 for girls, age 7-9 for boys
- suppleness, flexibility throughout the phase
- movement skills throughout



## Physical Development

- Practice and master fundamental movement skills before sport-specific skills are introduced.
- Emphasize the overall development of the athlete's physical capacities, fundamental movement skills, and the ABC's of athleticism: agility, balance, coordination, and speed.
- Bilateral balance must be well-developed in this stage through participation in sliding, skating and gliding sports (2 ski water ski, alpine and cross country ski, and skating and roller blading)
- Provide opportunities for physical activity at least 4 times/week
- Teach appropriate and correct running, wheeling, jumping and throwing techniques using the ABCs of athletics
- Emphasize motor development to produce athletes who have a better trainability for long-term sport-specific development
- Ambidextrous sports for developing refined motor skills:
  - Athletics, gymnastics, swimming for the ABCs (agility, balance, coordination, speed and suppleness)
  - Soccer, hockey, basketball, tennis, baseball for developing catching, passing, kicking, striking
  - Biking, skiing, dancing for developing speed, balance and coordination
- Initiation to asymmetric sports for gross

- motor skills (snowboarding, wakeboarding, slalom (WS), skateboarding, surfing)
- Movement in 3 planes of balance, front and back foot control
- Initiation to physical training

### Focus:

- Introduce basic flexibility exercises
- Develop speed, power and endurance using games
- Encourage participation in a wide range of sports
- Develop linear, lateral and multi-directional speed with the duration of repetitions less than 5 seconds.
- Include strength training exercises using the person's own body weight, as well as medicine ball and Swiss ball exercises.

## Psychological Development

- Develop reasoning skills through various sports and activities
- Provide opportunities for activities that:
  - Are FUN, positive and motivating
  - Are exploratory and allow for self-discovery
  - Build confidence with a high rate of success
  - Promote individual and group participation
  - Have a "no excuse" atmosphere
  - Introduce participants to simple rules and moral dilemmas
- Ensure that games are non-competitive and focus on participation



## LEARN TO SKI, FOOT, RIDE

- Demonstrate the use of the hand signals as required in a controlled manner
- **2 Skis:**
  - Ability to ski full or mini slalom course on 2 skis
  - Jump off wake, clearing both skis from the water on 2 skis
- While wakeboard can be introduced in this stage, too much time on the board can result in muscular imbalances and one-sided development due to the fixed stance of wakeboarding
- Barefoot skiing requires large amounts of upper body strength and can be introduced, but be practiced for short times.

### Barefoot

- Rip'nRide Gold level barefoot complete
- Perform wake crossings on two feet
- Stable position on two feet at will
- Plane and plant on back deep attempts

### Wakeboard

- Proper body position, board control and balance for edging
- Dock start
- Retain control while boat turns 180°
- Cross wakes both directions
- Return to the dock/shore under control
- Surface 180 (switch and back again) up to 360
- Ride switch in control for 30+ seconds
- Butter slide, both wakes
- Basic Ollie (board off the water)
- One wake jump
- One wake jump with a grab
- Complete a single wake or bunny hop 180 with the board completely leaving the water
- Attempt wake to wake jumps

### WAKESKATE

- Deep water wake skate starts
- Cross both wakes with wake skate
- Wake skate surface rotations

### Water Ski

#### 1 SKI:

- Complete a deep water start on 1 ski
- 6 continuous cuts, maintaining proper body position throughout the turns and demonstrating proper timing by spraying all 6 buoys
- Successful completion of 3 buoys in a single pass of a slalom course (gates optional)

#### TRICK:

- Side-slide, front-to-back and back-to-front, both directions
- On both skis, cross both wakes, in both directions while jumping off the water
- 360 both directions on 2 skis
- 1 ski front-to-back and back-to-front, either side
- 1 ski 360 one side

### Adaptive

#### General:

- Knowledge of/familiarization with equipment
- Knowledge of signals (hand signals, head nods or whistle blows)

#### Sit Skier (MP1, MP2 and MP3):

- Can independently get out of the ski while in the water
- Is comfortable in the water
- Is able to turn upright in the water while wearing a PFD

- Is capable of maintaining sitting balance by holding the cage (on water and on land)

- Is successfully cutting Beginner Ski with outriggers from inside of wake to opposite inside of wake (with a side skier).

#### Standing skiers (A/L):

- Standing skiers capable of a boom or adult assisted water start
- Retain complete control on 2 skis while boat turns 180.

## Technical Skills Benchmarks



## Tactical Skills

- Participants should engage in deliberate play, and should learn basic decision making skills such as how to behave around a boat, what to do after a fall, how to come in to shore safely and how to manage rough water.
- Participants should be learning how to listen to and follow instructions, and should have a solid understanding of water safety, rules and hand signals.
- By the end of the stage, participants will be making basic decisions about skiing a slalom course, and beginning to link tricks together.

## Training and Competitive Environment

**Training:** Competition ratio 95:5  
**Training volume:** 1-2 sets of 15-20 minutes each, 2-4 days/week;  
**Training/year:** 4 weeks/month, 3-4 months/year  
**Number of competitions:** 1-3  
**Competition format:** Fun competition, festivals, jamborees; focus on skill development, not rankings

All participants enrolled in programs should wear Coast Guard approved PFDs when on deck, on the boat or in the water. At this stage it is important to create an environment where participants want to ski, enjoy being on the water and are learning basic ski skills. Lessons must be varied, interesting and fun so the participants will want to continue. It is important to build interest in the sport, self-confidence and an enjoyment of performing

## Ancillary Skills

- Dry-land training activities that provide several stations of purposeful games or activities
- Participation in other sport activities (gymnastics, swimming, figure skating, alpine skiing)
- Participants, parents and support persons should be well informed about proper clothing and equipment at practice (water bottle, PFD, sunscreen, hat, change of clothing)

## Lifestyle

### Key Concepts:

- Fun
  - Safety
  - Social interaction
  - Creating a love of the sport
  - Positive introduction
- Participate once or twice a week, so long as there is participation in many other sports 3 or 4 times/week to ensure future excellence
  - Because girls tend to be less active than boys, and people with a disability less active than their peers, ensure that activities are gender-neutral and inclusive so that active living is equally valued and promoted for all.
  - Ensure that activities revolve around the school year and are enhanced by multi-sport camps during summer and winter holidays
  - How to keep the body warm/cool/hydrated with proper clothing and beverages
  - Healthy eating

## Barefoot

### EQUIPMENT:

Small boat capable of speeds for small children  
 Coast Guard approved PFD  
 Swing for boom  
 38 cm wakes handle  
 21.5 m non stretch rope  
 Barefoot suit and padded shorts

## Wakeboard

### EQUIPMENT:

Small beginner board and bindings  
 Coast Guard approved PFD  
 15.2 – 18.25m no-stretch (spectra) rope  
 Boom (optional)

### FACILITIES:

Area with calm water

## Water Ski

### EQUIPMENT:

Proper fitting ability-appropriate 2 skis, slalom ski, wakeboard  
 Coast Guard approved PFD  
 Helmet  
 Optional:  
 Wetsuit for colder water or inclement days  
 Boom  
 Slalom Course

### SLALOM:

1 or 2 beginner slalom skis or combos  
 18.25 m rope  
 Boat speed: 24 – 32 + kph

### TRICK:

2 beginner trick skis and/or single trick ski  
 14.25 or 13 m rope  
 Boat speed: 16 – 24 kph

## Adaptive

### EQUIPMENT

Sit ski (beginner framework with rope in starting block).  
 Quick release to be used at all times if starting block is used  
 Outriggers  
 Training skis (2 skis tied together at tip and tail)  
 Boom on boat  
 2 ski ropes and handles (1 for skier, 1 for side skier)  
 PFDs in a range of sizes  
 Seadoo  
 Wetsuit (as needed for temperature regulation)  
 Delgar sling (for use with athletes with only 1 arm)  
 “Triple bar” (for skiers who require side skiers)  
 Optional: communication helmet

### FACILITIES:

Wheelchair accessible site, dock, washrooms, change rooms

## Equipment and Facilities



### FACILITIES

- Boat – sufficient power and accessories (boom etc) for introductory and basic skiing/riding
- Can be public lake but safe environment (navigable waterway with minimal boat traffic)
- Cable park
- No dock clutter



“Perhaps the single most important element in mastering the techniques and tactics of racing is experience. But once you have the fundamentals, acquiring the experience is a matter of time.”

- Greg LeMond



# FUNdations

**AGE:** 9 – 11 years (girls)

10 – 12 years (boys)

**Participants with a disability: enter at any age (with or without support person)**

## OBJECTIVE:

**REFINE OVERALL SPORT SKILLS AND DEVELOP SPORT SPECIFIC SKILLS.**

### GENERAL DESCRIPTION OF FUNdATIONS STAGE

One of the most important periods of motor development is between the ages of 9 and 12. This is a window of accelerated adaptation to motor co-ordination. At this stage, participants are developmentally ready to acquire the general sports skills that are the cornerstones of all athletic development.

In late specialization sports such as water ski and wakeboard, early specialization can be detrimental to later stages of skill development and to refinement of the fundamental sport skills. Participants should be introduced and should develop solid basics in all disciplines.

Interclub competitions can be introduced for fun, but they should not be the main focus of the program.



### WSWC KEY FOCUS FOR THIS STAGE

- Continue to develop physical literacy
- Continue participation in 2 or 3 other sports that the person enjoys
- Participants at this stage should learn solid basic skills in all disciplines. There is still no need at this stage to specialize in an event, although participants will start to identify the activities they like the best

### PROGRAM

- Club and provincial coaching
- WSWC Rip 'n Ride program – all disciplines
- SkiAbility

### MONITORING

Participants in this stage are often beginning the growth spurt. Coaches and parents should keep track of regular height measurements to provide an indicator for the onset of peak height velocity (PHV). At the same time, flexibility, particularly in the hamstrings and lower back, should be monitored. The growth spurt typically lasts about 18 to 24 months.

### INSTRUCTOR/COACH RECOMMENDATIONS

- Primarily NCCP (National Coaching Certification Program) “Learn To” instructors and “Competition – Introduction” coaches who will work from water ski clubs, or summer camps, and who will teach the skills in the WSWC Rip 'n Ride program.
- WSWC recommends a coach to athlete ratio of 1:5 or less.
- It is strongly recommended that coaches be certified in first aid and CPR
- Coaches must possess a valid boat operators permit if they are driving the boat.



### LTAD Window of Opportunity

*The FUNdations and Build the Skills stages are the most important stages of athlete preparation. During these stages we make or break an athlete!*

- Sport skills during entire phase
- 2nd speed window for girls (age 11 – 13+)
- Air awareness
- Beginning of window for aerobic stamina (girls 11-14, boys 12+)



## Physical Development

### Mastering of fundamental sport skills

- Narrow focus to a minimum of three sports
- At this stage participants are developmentally ready to acquire the general sports skills and water ski skills that are the cornerstones of all athletic development
- Maintain and refine ambidextrous sports
- Participate in sports that require similar movement patterns: ski, skate, snowboard

### Monitor growth monthly:

- Keep track of growth spurts by regularly measuring height and looking for a sudden height increase.
- Growth spurt lasts approximately 12 months

### Early in stage:

#### Introduce general fitness framework

1. Warm-up
2. Rhythm and coordination runs
3. Spatial awareness (jump distance, # of changes of direction)
4. Rest and recovery (fuel breaks, lunch, sleep)
5. Reaction time and agility
6. Focus on skill and execution
7. Cool down with short stretch and muscle rebalance – important because of rapid growth of bones and soft tissues.



### Later in stage:

#### Same as 1-7 plus the following:

8. More speed work (race a partner)
9. Explosive strength
10. Steady and clean landings
11. More stretching at the end of the training
12. Monitor volume, intensity, quality and duration of training

- Develop strength using exercises that incorporate the person's own body weight, as well as medicine balls and Swiss balls.
- Continue to develop endurance through games and relays, and develop flexibility through exercises.
- Speed can be developed by using activities that focus on agility, quickness and change of direction

## Psychological Development

**The Sampling Stage:** provide opportunities for the participant to try activities that focus on fun, pleasure and socialization.

### Encourage Goal-setting that is process-oriented:

- Long term goals (dream ahead)
- Short term goals based on skill development, not on competitive results

**Team Spirit:** learn how to relate to different groups of peers

- Development of abilities to **Concentrate**
- Development of visualization skills – transfer video image to real life situation

### 3 important psychological skills to develop:

- *deliberate effort:* the ability to deliver effort and enjoy the feeling of the effort during the activity
- *responsibility:* the ability to associate joy with effort and competition
- *success:* the ability to take risk and accept failure as a normal occurrence of sport development

At this stage it is important to create an environment where participants want to ski, enjoy being on the water and are learning sound basics in all disciplines. Lessons must be varied, interesting and fun so they will want to continue. It is important to build interest in the sport, self-confidence and an enjoyment of performing.

## Technical Development Benchmarks

### Barefoot

#### GENERAL:

- Stable position on 1 foot at will
- Shoe ski all core tricks (one foots, toes)
- Butt slides, one hand, balance drills, one foots, toe holds
- Back barefoot at will in short rope
- "Skill drills"/warm-up runs

#### SLALOM

- Stable crossings on 2 feet

#### JUMP

- Boom, short rope and long rope jump on shoe skis
- Boom jump on feet



### Wakeboard

- Understand different edging types and different body positions
- Learn consistent pop off wake
- Powerslide
- Re-entry/alley-oop, ts and hs
- Ollie over obstacle
- Surface 360 spin
- Ollie or one wake backside 180
- Consistent wake to wake jumps
- Wake to wake grabs, hs and ts
- Introduction to Double-ups
- Intro to first invert (back roll, tantrum, front roll)
- Intro to wake 360 spin
- Introduction to small sliders (under 12.2 m)
- Introduction to ramps

#### WAKESKATE:

- Surface 180s and 360s
- Wakeskate Ollie



### Water Ski

#### SLALOM

- Ski the slalom course at boat speeds applicable for the age group while demonstrating proper body position
- Understand the importance of line, and direction to run each pass wide and early up to the maximum speed
- Understand the importance of the gate and the ability to generate the speed needed to run the applicable pass
- Ability to ski in tournament conditions and in different weather conditions

#### TRICK

- 360° and 180° turns, surface and wake turns - both directions
- 180° surface and wake turns - toe

#### JUMP

- Edging and turning two skis or jump skis on open water and/or the slalom course.
- Jump successfully over a 1.5 m ramp on a single wake cut (approach the ramp with both skis on edge) with the boat path in or near the boat course.

### Adaptive

#### Sit skier (with a side-skier)

- is successfully cutting Beginner Ski with outriggers from inside of wake to opposite inside of wake.

#### Standing skiers

- capable of a boom or adult-assisted water start.
- Retain control on 2 skis while boat turns 180°.



## Tactical Skills

- Continue to encourage unstructured play.
- Can set up own equipment
- Participants should be learning how to listen to and follow instructions, and should have a solid understanding of water safety, rules and hand signals.
- Understanding of water start skills

## Training and Competitive Environment

Formal competition can be introduced in this stage, although it is not the focus of training. Competition should be low-key and fun, and structured to address differences in training age and abilities. Athletes should be recognized for their success and achievement.

Training should include fun and play activities that develop the ability to ski comfortably.

Barefoot training should also include “skill drills”/warm-up runs, one foot, one hand and sit stand

Training: Competition ratio 95:5

Training volume: 3-4 sets/day (WS) or 2-3 sets/day (WB and BF), 15-30 minutes/set

Training/year: 3-4 days/week, 3-4 weeks/month, 4-5 months/year  
1-3 sessions a week with high volume, low intensity; average duration 90-120 min  
complimentary sports 4-6 sessions/week  
number of competition: up to 3 formal competitions plus other fun events  
competition format: grassroots fun  
All persons enrolled in programs should wear PFDs when on deck, on the boat or in the water.

## Ancillary Skills

- At this stage, participants should understand the importance of warm-up and cool-down, hydration and of the proper fit and use of equipment.
- Adaptive skiers should be properly fitted, and notes kept about type and fit of equipment used
- Off-season participation in 2-3 other sports (swimming, diving, gymnastics, figure skating, tumbling) is recommended to develop core strength and balance
- Athletes with a disability should have a knowledge of classification criteria

## Lifestyle

### Fun, adventure, social, music and art

- Expose the participant to a wide range of cultural and lifestyle opportunities
- Instil an understanding of healthy training habits:
  - Warm-up and cool-down
  - Staying hydrated
  - Rules and ethics of water skiing and wakeboarding
  - Proper fit and use of equipment
  - Healthy diet
  - Eye and skin protection
- Instil an appreciation for healthy lifestyle:
  - Importance of school and education
  - Importance of family and friends
  - Importance of daily physical education and sports



## Equipment and Facilities

### Barefoot

#### EQUIPMENT:

Boat with flat wake Outboard preferable or competition BF boat  
Barefoot suit and padded shorts  
Boom  
21.5 m non-stretch rope  
38 cm wakes handle  
Front toe handle  
30 cm jump handle  
Shoe skis  
Helmet  
Barefoot jump

#### FACILITIES:

Any navigable waterway with minimal boat traffic  
Calm water



### Wakeboard

#### EQUIPMENT:

Helmet  
Small mid-upper level board  
Coast Guard approved PFD  
Non-stretch rope (16.8 m – 19.8 m)  
Any boat with extended pylon or tower

#### FACILITIES:

Calm water

### Water Ski

#### GENERAL INTERMEDIATE EQUIPMENT:

Regular boat (water ski boat or other)  
Coast Guard approved PFD  
Optional – wetsuit

#### SLALOM

1 intermediate slalom ski with 1 or 2 boots  
18.25 m slalom rope  
Slalom course  
Boat speed: 31 + kph

#### TRICK

1 or 2 trick skis  
Thick rope with toe hold handle  
PFD is not required from this stage (in trick)  
Boat speed: 20 + kph

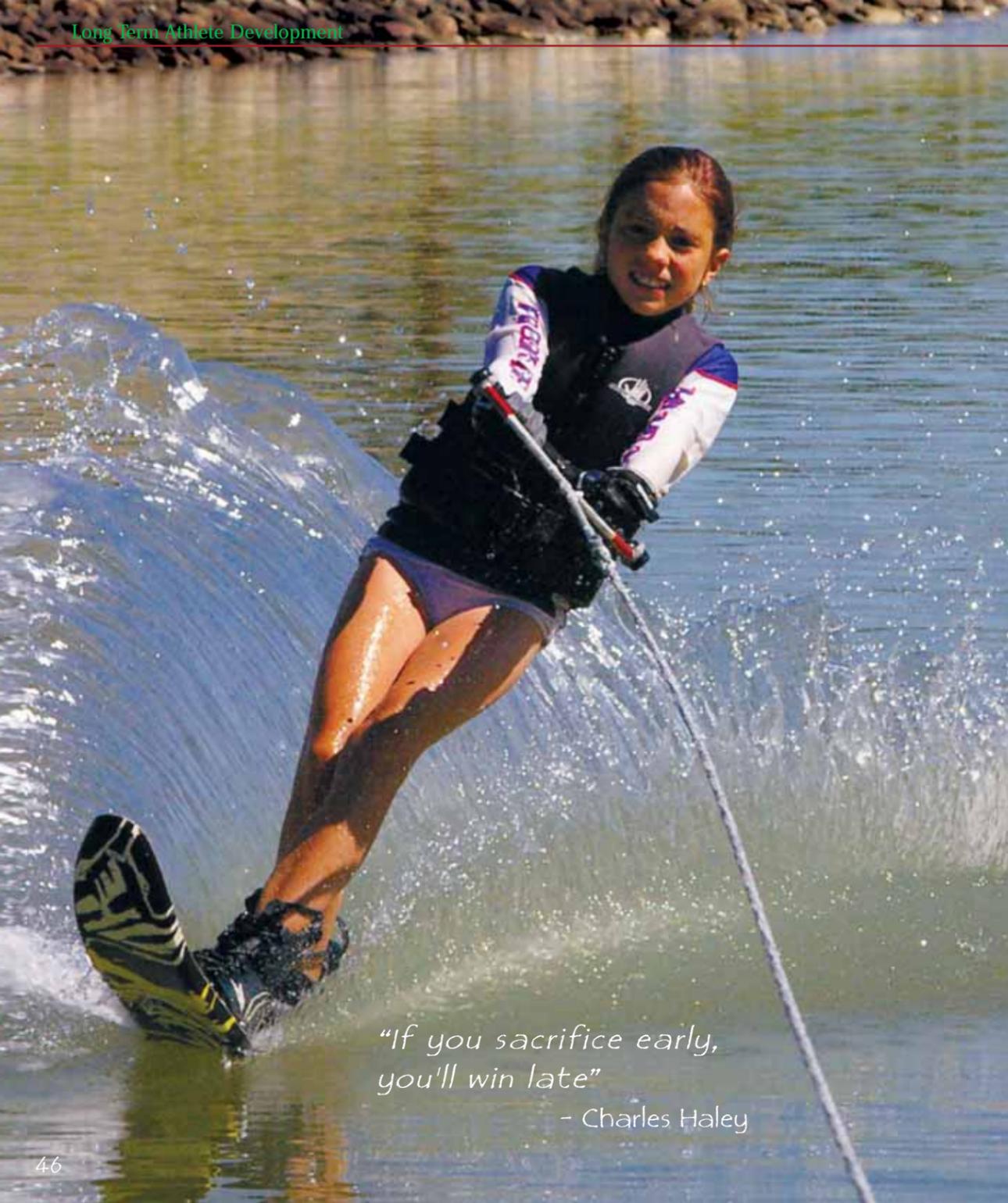
#### JUMP

Long or short board  
1.5 m jump  
18.25 m rope  
33 + kph  
wet/jump suit

### Adaptive

Beginner ski with outriggers raised  
Coast Guard approved PFD  
Wakeboard  
All sites, docks and facilities must be accessible and clutter-free





*"If you sacrifice early,  
you'll win late"*

- Charles Haley



# Build the Skills

**AGE:** 12 – 15 years (girls)

13 – 16 years (boys)

**Participants with a disability:** enter at any age (with or without support person)

## OBJECTIVE:

- **FURTHER DEVELOP AND CONSOLIDATE SPORT SPECIFIC SKILLS**
- **INTRODUCTION TO COMPETITION**
- **DEVELOP SPEED AND STRENGTH**
- **SUPPORT TRAINING BY DEVELOPING STAMINA AND MAINTAINING FLEXIBILITY**

## GENERAL DESCRIPTION OF BUILD THE SKILLS STAGE

This is a window of accelerated adaptation to aerobic, speed and strength training and for maximum improvement in skill development. As well, good training habits are developed during this stage. Technical and fitness training programs should be individualized. While formal competition is included, the focus remains on learning the basics through training, with competition being of secondary importance. Activities should remain as high volume, low intensity, with lots of time on-water to develop an ease of skill performance. Training volume will increase as the athletes progress through the stage.

Towards the end of this stage, athletes will likely begin to specialize in one discipline (e.g. water ski, wakeboard, barefoot).



## WSWC KEY FOCUS FOR THIS STAGE

- Building the physical engine – endurance, speed and core strength
- Develop strong technical skills
- Begin to specialize in a discipline

## PROGRAMS

- Club and provincial development programs
- National junior team development programs
- SkiAbility

## MONITORING

- Note that both aerobic and strength trainability are dependent on the maturation levels of the athlete. For this reason, the timing of training emphasis differs depending on whether athletes are early, average, or late maturers. Monitoring for PHV is crucial as almost all participants will move through their major growth spurt during this stage.
- Must consider growth spurt in programming. A decrease in coordination may be expected during this stage.
- Monitor flexibility and emphasize flexibility training given the rapid growth of bones, tendons, ligaments, and muscles.
- Monitor general endurance throughout the stage

## INSTRUCTOR/COACH RECOMMENDATIONS

- NCCP "Competition-Introduction" coaches early in the stage
- NCCP "Competition-Development" coaches later in the stage

## ADAPTIVE WATER SKIING

- Continue to introduce athletes with a disability to sport-specific equipment such as sit skis and encourage independence of movement. For all athletes, the use of body-size and skill-level appropriate equipment remains important

### ETAD Window of Opportunity

*The FUNdations and Build the Skills stages are the most important stages of athlete preparation. During these stages we make or break an athlete!*

- Increased strength is optimized for girls 1-2 months after peak of PHV
- Increased strength is optimized for boys 12-18 months after peak of PHV
- The endurance window is between 11 and 15 years old
- The second speed window for boys is between 13 and 16 years old, and for girls is between 11 and 13 years.



## Physical Development

### STABILIZATION AND FOUNDATION BUILDING

Proper and regular monitoring of physiological adaptation to training is essential. Continue monthly monitoring for PHV. The average age for girls reaching PHV is 12, for boys, 14. PHV is the reference point to begin a strength training program.

Continue participation in complementary sports for

- Skill
- Speed
- Endurance
- Lifestyle

### INTRODUCE SPECIFIC FITNESS FRAMEWORK

Early in stage, dry-land focus on the following:

1. Introduce free weights
2. Injury prevention exercises (high reps, low intensity, focus on execution)
3. Core and stabilizer strength
4. Explosive arm and leg power
5. Maximize speed development
6. Introduction to physical testing and functional assessments 2X/year

### INITIATE FIT TO TRAIN

Further in stage:

7. Maximum strength (females and early developing males)

8. Strength endurance
9. Power/speed endurance
10. Build a level of fitness that allows the athlete to maintain high volume, high quality training
11. On-water training develops endurance
12. Maximize stamina/aerobic capacity window of trainability for recovery, regeneration and training capacity
13. Monitor training for high volume, low intensity sessions.

- **Provide variation in dry-land and on-water activities to avoid over-use injuries**
- **Emphasize flexibility and stretching exercises to manage the effect of rapid growth**
- **With rapid growth and changes in body proportions, athletes may need to re-learn some skills that were previously refined**

## Psychological Development

Provide training and competition opportunities that focus performance on a preferred discipline. Mental skills learned in the previous stage of athlete development should continue to be practiced and incorporated into all types of training and competitive situation.

The athlete should:

- Take personal responsibility for training, preparation, performance and recovery

- Bring consistent effort to training and competitions
- Become involved with coaches in decision-making (e.g. drills, exercises, training plan)
- Identify “what works” in the ideal performance state
- Be coachable – accept constructive criticism and work with other coaches or athletes
- Continue basic mental skills development: coping strategies, goal setting, imagery, self-awareness
- Be introduced to the idea of self-reflection after training or competitions
- Have a training diary

- Athletes in this stage are ready to learn how to focus. They can understand that what they feel and think affects their performance, and learn how to develop control over these feelings and thoughts.
- Effective goal setting becomes more important in this stage and is related to outcomes, process and performance.
- Introduce athletes to breathing and relaxation skills.
- Teach athletes how to communicate effectively with coaches and how to ask for feedback.



## Technical Development Benchmarks

### Barefoot

#### GENERAL:

- Emphasis on execution of tricks in a stable, controlled “at will” manner
- Skill drills/warm-up runs include: 4 feet off tumbles, one foot, one foot/one hand, toe holds, one foot stand ups

#### BOYS:

**SLALOM:** 14+

**TRICK:** 2000+ points

- Two 180 surface turns
- Shoe ski all advanced tricks
- All four tumbles to 1 foot
- Back toes
- Toe start

**JUMP:** 12m+

- inverted on short rope

#### GIRLS:

**SLALOM:** 8+

- Forward 1 foot crosses in control

**TRICK:** 1200+ points

- All four tumbles to 1 foot
- Back toes

**JUMP:** 8m+

### Wakeboard

- Successfully apply various edging and body position techniques to multiple tricks
- Understand the art of landing in the flats and off the double up
- Wake-to-wake jumps into flats
- proper wake-to-wake off the double-up
- Wake-to-wake 360 one with grab
- ollie backside 180 landing wrapped
- hs and ts 180 spins with grabs
- Attempt 540 spins
- Consistently land base inverts
- Complete one of each invert style (trip, flip and roll)
- Boys: first Raley
- Switch wake-to-wake
- Switch 180 (half cab)
- Intro to switch invert
- Intermediate slider (15.2m – 18.3m)
- Ollie on to slider (both directions)
- Successful rampkicker air

#### WAKESKATE:

- Wake-to-wake jump
- Shuv-it
- Surface 360
- Small slider

### Water Ski

#### SLALOM

- Understand and know all the slalom's competition rules (starting speed, re-ride, ball, 1/2 ball and 1/4 ball, etc.)
- Demonstrate the ability to successfully complete 16 m and 14.25 m passes
- Execute strategy for any wind or weather conditions
- Boat speed: 28 – 52 kph

#### TRICK

ENTERING INTO THIS PHASE, ATHLETES SHOULD BE TRICKING INTO THE 2000+ POINTS

- Reverse toe tricks
- 360's front-to-front and back-to-back
- 540° wake tricks
- Back flips
- Intro to skiline tricks
- Boat speed: 20 – 30 kph

#### JUMP

- Introduction to 3/4 cuts
- Ride and control long boards
- Demonstrate balanced edging through the wakes
- Demonstrate proper lifts
- Jump at the maximum speed for the age group
- Good position crossing the wakes, in the air and in the landing.
- Boat position: split position (in the middle of the course)
- Boat speed: 30 – 45 kph

### Adaptive

- Standing skiers can independently maintain neutral position while in water
- For wakeboarding, ride at 90°, turn to switch, then back, edging
- Sit skier can start, with handle in hand, (within two attempts) using the beginner ski (minimal assistance with starter)
- Sit skier uses intermediate ski
- Competent unassisted deep water start on 2 skis
- Outriggers are removed from sit ski
- Introduction to inner-buoy course
- Competition in recreational wake-cross event
- Side skier replaced by water starter only
- Determination of proper classification



## Build The Skills

### Tactical Skills

- Learn how to “read” the water in various conditions to appropriately prepare for waves.
- Determine types of skills that are most appropriate for each athlete and look at specialization in a discipline.
- Sequence several tricks of various difficulty.

### Ancillary Skills

- Athletes in this stage should be responsible for doing a proper warm-up and cool-down as part of practice.
- They should also be developing a competition warm-up procedure.
- Athletes should be aware of the importance of proper nutrition and hydration for competition days.

### Lifestyle

#### SMOKE-FREE ENVIRONMENT AND DRUG-FREE SPORT

- Optimize training and education in:
  - Cultural and lifestyle habits
  - Smoke-free environment
  - Drug-free sport
  - Safe sex practices
  - Wearing proper safety equipment
  - Care and maintenance of equipment
  - Proper nutrition and hydration
  - Self-management
  - Taking responsibility for actions
  - Respect for others
  - The Code of Conduct for WSWC

### Training and Competitive Environment

#### Barefoot

- Warm-up run suitable to conditions and practice goal
- 2-3 sets/day at 20-25 minutes/set
- 30-40 quality wake crossings/set
- Boys: 10 completed surface turns/set
- 2-5 days/week, 4 months of the year
- 2-3 weeks training out of country in warmer climates
- Off water: dry land training with a handle 15 min/day, 5 days/week, year round
- Training: Competition ratio = 10-15:1
- Single periodization
- Level of competition: local and provincial level
- 2-4 sets/day, 25-30 minutes/set
- 3-4 days/week, as many months as season permits

#### Wakeboard

- Training: competition ratio = 80:20
- 2-5 competitions/year
- Level of competition: provincial standard events; provincial development team

#### Water Ski

- 3-5 sets / day, at 15-30+ minutes/set
- 4-6 days/week, 4 weeks/month, as many months as season permits, plus 1-2 months out of country
- Single periodization according to water access and availability
- Training: competition ratio = 70:30 or 25:1
- Competition format: formal tournament structure
- Competition goals: enjoyment, build toward provincial team selection
- Level of competition: regional, provincial and national championships
- Competition for athletes with a disability in recreational wake/cross event

#### Adaptive

- **Include competitive activities in training to develop the ability to perform on demand.**
- **Continue participation in other complementary sports, 2-4 times/week, 4-6 times/week in off-season.**



## Build The Skills

### Barefoot

#### EQUIPMENT:

- Boat with a flat wake
  - Outboard preferred or competition barefoot boat
  - Barefoot suit and padded shorts
  - Boom
  - 21.5 m non-stretch rope
  - 38 cm wakes handle
  - Front toe handle
  - Back toe handle
  - 30 cm jump handle
  - Shoe skis
  - Helmet
  - Barefoot jump
  - Jump course buoys
- #### FACILITIES:
- Little to no boat traffic
  - Calm water while training



### Wakeboard

#### EQUIPMENT:

- Larger wake-oriented boat with extended pylon or tower
- Coast Guard approved PFD
- Helmet
- Upper level board
- Non-stretch rope (16.8 m – 18.25 m)
- 38 cm handle

### Water Ski

#### GENERAL INTERMEDIATE EQUIPMENT:

- Water ski boat
- Coast Guard approved PFD
- Optional: “perfect pass” (control speed system on the boat)

#### SLALOM

- 1 intermediate-advanced slalom ski with 1 or 2 boots
- 18.25 m rope with all sections (repeated at the end)
- Boat speed: up to 55 kph for girls, and 58 kph for boys

#### TRICK

- 1 advanced trick ski
- non stretch trick rope with toe hold handle
- Boat speed: 20 – 30 kph

#### JUMP

- Appropriately sized skis for height and weight
- 18.25 m jump rope
- 1.5 m jump (adjustable to 1.65 m – Optional for Junior Boys 1 and 2)

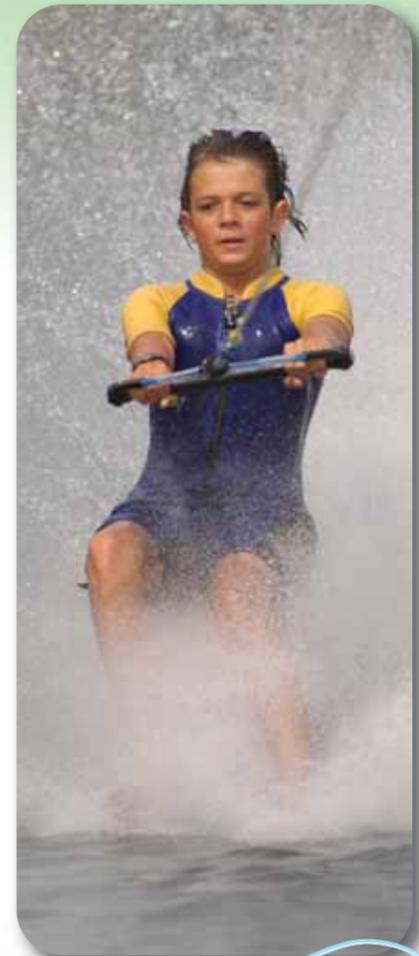
- Jump suit
- Boat speed: up to 51 kph

#### FACILITIES:

- Access to tournament lake or site during minimum of 50% of training

### Adaptive

- Coast Guard approved PFD
- Deep V handle



### Equipment and Facilities



*"You can become a winner only if you are willing to walk over the edge."*

- Damon Runyon



# Learn to Compete

AGE: **Water Ski:** 16 – 19 years (f) 17 – 20 years (m) **Wakeboard:** 15 – 16 years (f) 16 – 17 years (m) **Barefoot:** 16 – 19 years (f) 17 – 20 years (m)  
**Participants with a disability: enter at any age (with or without support person)**

## OBJECTIVE:

- **PREPARING FOR THE COMPETITIVE ENVIRONMENT**
- **REFINE TECHNICAL SKILLS**
- **CONTINUING DEVELOPMENT OF PHYSICAL ATTRIBUTES AND ANCILLARY SKILLS**

## GENERAL DESCRIPTION OF LEARN TO COMPETE STAGE

- All the objectives of the Build the Skills stage must be achieved before the objectives of Learn to Compete can begin.
- Optimize fitness preparation and skills to specialize in a discipline. Training is individualized to the athlete's particular needs in skill development, mental preparation, fitness and recovery
- Training volume increases, as does training intensity
- Competitions and tournaments become more important and the focus shifts to performance. Emerging performers are introduced to the international competitive stage.
- Athletes learn to prepare for competition, and learn to handle competitive pressures in any situation
- Training season is longer, may be year-round, and is discipline- and event-specific.
- Consolidate individual strengths and rectify weaknesses



## WSWC KEY FOCUS FOR THIS STAGE

- **Refine technical skills**
- **Confidence in a variety of competitive situations**
- **Good decision-making skills**
- **Appropriate and measurable improvements in endurance, strength and speed**

## PROGRAMS

- Club programs
- Provincial development team programs
- National development team programs
- Collegiate programs

## MONITORING

- Monitor development of endurance, strength and speed
- Monitor fitness – endurance, core strength, flexibility

## INSTRUCTOR/COACH RECOMMENDATIONS

- NCCP "Competition- Development" coach

## ADAPTIVE WATER SKIING

- At this stage, skiers will be well beyond the basics and require more training time and advanced instruction than is typically provided through SkiAbility programs

## ITAD Window of Trainability

- **Speed Window #2 for Boys early in stage**
- **Strength Window for boys is 12-18 months after PHV**





## Physical Development

### Optimize endurance, strength and speed training.

- The athlete must have sufficient levels of fitness to withstand the demands of training and competition without sustaining injuries or burnout.
- Develop individualized programs for fitness and recovery
- Ensure progressive overload in training

## Psychological Development

- The athlete should have well-developed mental preparation skills, and should continue to refine these skills.
- Competition becomes more important and athletes must learn to perform on demand
- Training and practice in mental preparation will help the athlete cope with the stresses associated with training, tournaments and selection, and will contribute to their overall development as competitive athletes.
- Athletes should have input in setting training goals and priorities, and should be included in decision-making process.
- Athletes are capable of self-coaching and should be encouraged to think for themselves, rather than relying on coach feedback.



## Technical Development Benchmarks

### Barefoot

#### GENERAL:

- Skill drills/warm-up runs include: 4 feet off tumbles, One foots
- One foot/one hand, Toe holds, Toe Neg-Pos, Back one foots and back toes, and boys: B-F, F-B

#### BOYS

- SLALOM:** 16+
- TRICK:** 3000+ points
- All 4 surface turns
- Step turn B-F
- Toe turn F-B

#### GIRLS

- SLALOM:** 10+
- TRICK:** 1800+ points
- Two 180 surface turns
- Both back toes
- Toe up start

#### JUMP:

- 10m+



### Wakeboard

- Spins up to 540° and 1 to 2 inverts off the double-up
- Consistent backside 180 landing wrapped
- Able to land all back rolls, front rolls, flips and tantrums
- Spins up to 540° and ts both ways
- Switch spins up to 360°
- ts and hs raley
- ts and hs raley/glides with grabs
- All base inverts landing in the flats
- Inverts with one rotation
- 1 to 2 switch inverts
- Introduction to mobes
- Consistent intermediate sliders
- 360° and basic inverts off kicker or jumps

#### WAKESKATE:

- Wake to wake jumps
- Ollie board spins

#### GENERAL:

- Understand and attempt all the basic flips, spins and raley tricks both regular and switch
- Ability to combine all tricks of judging spectrum within a tournament length run

### Water Ski

#### SLALOM

- Girls: 6 at 14.25 m • Boys: 6 at 13 m
- Improve skills and apply strategies in a competition context.
- Know and apply the competitive rules of slalom
- Complete course at 12 m line
- Apply strategies for competition and for wind/weather

#### TRICKS

- Girls: 3000 pts • Boys: 4000 pts
- Know the rules of tricks competition
- Learn and perform the more difficult tricks. Includes:
- 360° and 540° toe turns
- 540° and 720° wake turns
- Boys: 4 – 5 flips
- 2 – 3 skiline tricks
- Girls: 2 – 3 flips

#### JUMP

- Boys should be entering the stage being able to jump 38 m
- Girls should be entering the stage being able to jump 30 m
- Ability to change timing and the body position effectively for different wind/weather conditions.
- Jump at the maximum speed for the age division.
- “Double wakes” cut.
- Jump on a 1.65 m ramp (or 1.8 m - men, optional).

### Adaptive

#### Sit skier

- Experiments with jumping the wakes and landing in “sweet spot” of opposite wake at speeds up to 42 kph
- Skier starts independently
- Consistent with starts on intermediate ski, using deep-V handle (within two attempts)
- Uses advanced slalom ski
- On 2 skis, cross both wakes while keeping the skis on edge
- Introduction to trick skiing for all skiers
- Introduce standing skiers to slalom skiing



## Tactical Skills

- Athlete will specialize in one discipline.
- Emphasize the development of individual strengths, and minimize weaknesses through careful selection of skills.

## Ancillary Skills

- Ensure that key support systems (fitness monitoring, recovery and regeneration, psychology, nutrition and health needs) are in place and integrated with the training program.
- Regular, year-round aerobic and strength training
- Athletes should refine and individualize their own ancillary capacities

## Lifestyle

### Refine the skills listed in the Build the Skills stage.

- Athlete assumes increasing responsibility for managing his/her competitive and training schedules, deadlines, registrations etc.
- Athlete assumes responsibility for his/her own behaviour as representative of WSWC, his/her club, province and country.

### Barefoot

• Teach athletes, who are now proficient at performing basic and discipline-specific skills, to perform those skills under a variety of competitive conditions during training.

• Change the training-to-competition and competition-specific training ratio to 40:60. Devote 40% of available time to the development of technical and tactical skills and improving fitness and 60% of training to competition and competition-specific training.

• Use single or double periodization, depending on international calendar.

• Continue other complementary sports in off-season, plus off-water training and mental training

- 2-3 sets/day, 25-30 mins/set
- BOYS: 40-50 quality wake crossings/set and 20 surface turns/set
- GIRLS: 30-40 quality wake crossings/set
- 3-5 days/week, 6 months/year
- 4-6 weeks of training out of country in warmer climates
- Training: competition ratio = 10-15:1
- Off-water: dryland training with a handle 15 minutes/day, 5 days/week, year round
- Single periodization
- Competitions at local, provincial, national levels
- 5 formal competitions/year, with 2 competitions out of country

- 3-4 sets/day, 25-30 minutes/set
- 3-5 days/week, for all summer months and one winter camp (5-6 months total)
- Training: competition ratio = 65:35
- 4-6 competitions/year
- Provincial and national standard competitions

- 3-5 sets/day, 10-30 minutes/set
- 4-6 days/week, 5 months/year in Canada plus 1-3 months out of country
- Training: Competition ratio = 70:30
- 7-10 competitions/year
- Selection to Provincial team, national development team, national team



### Wakeboard

### Water Ski

### Adaptive

### Barefoot

#### EQUIPMENT:

- Competition barefoot boat
  - Barefoot suit and padded shorts
  - Second suit and shorts
  - Heater shirt
  - Dry suit for extended season training
  - Boom
  - 21.5 m non-stretch rope
  - 38 cm wakes handle
  - Front toe handle
  - Back toe handle
  - 30 cm jump handle
  - Shoe skis
  - Helmet
  - Barefoot jump
  - Jump course buoys
- FACILITIES:**
- Only boat on the area
  - Predictable, calm water conditions



### Wakeboard

#### EQUIPMENT:

- Larger, more wakeboard oriented boat with extended pylon or tower
  - Helmet
  - Upper level board
  - Non-stretch rope (19.8 m – 18.25 m)
- FACILITIES:**
- Beginner to intermediate levels of slides and jumps/kickers



### Water Ski

Same as in Build the Skills stage, plus:  
**GENERAL:**  
Intermediate/advanced equipment  
Water ski boat, PFD  
Required: "perfect pass" (control speed system on the boat)

#### SLALOM

- 1 intermediate-advanced slalom ski with 1 or 2 boots
- 18.25 m rope with all sections
- Maximum boat speed for division

#### TRICK

- 1 advanced trick ski non stretch trick rope with toe hold handle
- Maximum boat speed for division

#### JUMP

- Personally owned appropriate sized skis and bindings(should have own equipment, not shared)
- 18.25 m jump rope
- 1.5 m jump (adjustable to 1.65 m and 1.80 m)

#### Jump suit

- Maximum boat speed for division

**ADVANCED EQUIPMENT:**  
Comfortable and safe life jacket  
18.25 m slalom rope with all sections

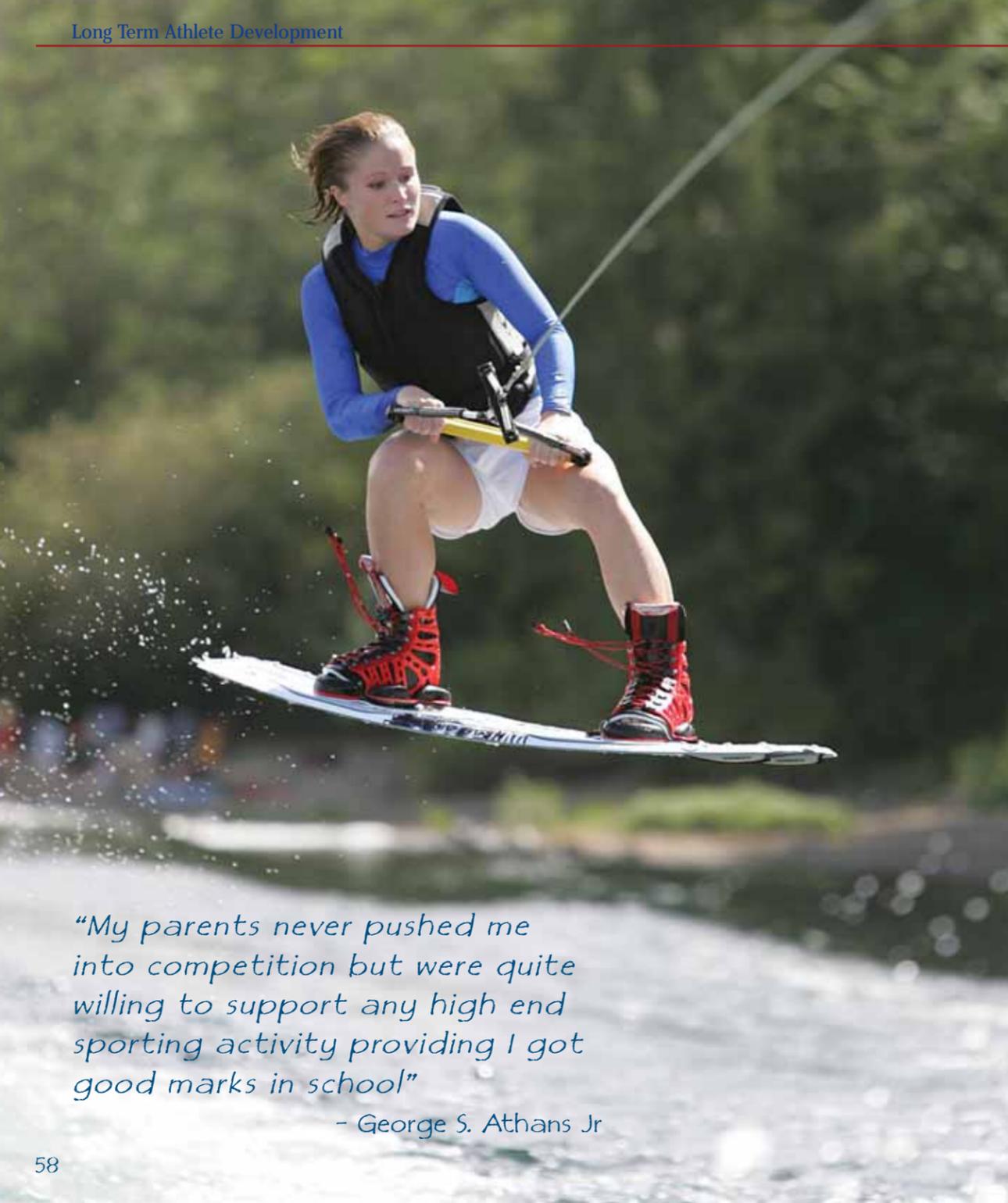
#### FACILITIES:

- Slalom course with exact dimensions
- Predominantly train at tournament ski site

### Adaptive

- Intermediate Ski
- Deep V handle
- PFD
- Trick ski for sit skiers





*“My parents never pushed me into competition but were quite willing to support any high end sporting activity providing I got good marks in school”*

- George S. Athans Jr



# Train to Compete

AGE: **Water Ski:** 18 – 22 years (f) 19 – 23 years (m) **Wakeboard:** 17 – 18 years (f) 18 – 19 years (m) **Barefoot:** 18 – 22 years (f) 19 – 23 years (m)  
**Athletes with a disability: enter at any age (with or without support person)**

## OBJECTIVE:

- **TRANSFER FROM TRAINING ENVIRONMENT TO COMPETITIVE ENVIRONMENT**
- **CONSOLIDATE TECHNICAL SKILLS**
- **MAINTAIN UNDERLYING PHYSICAL AND ANCILLARY CAPACITIES**
- **COMPETITIVE PERFORMANCE IS PREDICTABLE AND APPROPRIATE**

## GENERAL DESCRIPTION OF TRAIN TO COMPETE STAGE

- Training volume remains high while intensity increases with the importance of competitions.
- Training is usually 10 months of the year and is discipline- and event-specific. Athletes will be training outside of Canada in a warm-weather environment.
- Training is individualized to the athlete’s particular needs in skill development, mental preparation, fitness and recovery.
- Consolidate individual strengths and rectify weaknesses



## WSWC KEY FOCUS FOR THIS STAGE

- **Compete well in a variety of conditions**
- **Understand their own role in critical thinking and decision making both in and out of sport settings**
- **Manage lifestyle to meet training and competition commitments**

## PROGRAMS

- WSWC Development Team program
- National Team program
- College/University programs

## MONITORING

- Must conduct regular medical monitoring
- Monitor for fatigue and under-recovery
- Monitor to maximize individual performance potential

## INSTRUCTOR/COACH RECOMMENDATIONS

- NCCP “Competition- High Performance” Coach

## ADAPTIVE WATER SKIING

- At this stage, skiers will be well beyond the basics and require more training time and advanced instruction than is typically provided through SkiAbility programs



## Physical Development

### Maturation is completed during this stage.

- Ensure that all muscle groups and body alignments are well-balanced, complemented with optimal flexibility ranges.
- All physiological systems are fully trainable.
- Use periodized training programs to develop:
  - Upper and lower body and core stabilization
  - maximum strength
  - anaerobic endurance
  - speed strength



## Psychological Development

- The athlete in this stage takes full responsibility for his/her training and competitive performance.
- Work with coaches is more collaborative, as athlete is capable of self-analyzing and correcting and refining skills.
- Goal setting is important to give direction and purpose to the training program.

## Tactical Skills

- Competitive events and tournaments should be selected carefully, with a specific purpose and performance objective in mind.
- Athletes must apply critical reasoning skills to maximize performance in competition.
- Model high level competitions in training and develop competitive abilities under a range of simulated training conditions.
- Continue to focus on long-term, not short-term success.

## Ancillary Skills

- Ensure all programs for fitness, recovery, technical skill development and psychological preparation are individualized to focus on the specific needs of the athlete.

## Lifestyle

- The athlete must learn to balance the demands of training, competition, school, employment, family and social life.
- The athlete makes a full commitment to specialization in a discipline.
- As more travel is required, athlete must learn to travel with a team, adapt to new environments and make choices for meals, hydration, rest and recovery that promote sound training and meeting competition performance goals.
- Athlete is an ambassador for Canada, must adhere to WSWC code of conduct.

## Technical Development Benchmarks

### Barefoot

#### GENERAL:

- Can refine tricks by managing technique
- Compete at Regionals and Nationals every year
- Sport specific and position specific technical and tactical development

#### MEN

**SLALOM:** 17+

**TRICK:** 5000+ points

**JUMP:** 20m+

- Skill drills/warm-up runs on the long line to include: 4 feet off tumbles, one foots
- One foot/one hand, toe holds
- F-B. back 1's, toes, BF

#### WOMEN

**SLALOM:** 12+

**TRICK:** 2000+ points

**JUMP:** 11m+

- Skill drills/warm-up runs on the long line to include: 4 feet off tumbles, one foots, one foot/one hand, toe holds and
- Back, back 1's, back toes

### Wakeboard

- 360 with grabs, and flips with grabs on the double-up
- All flips and rolls with one rotation, some with grabs
- All 360° spins, 2 or more 540° spins, most with grabs
- Most raley tricks, most with grabs
- Riding switch for 50-60% of each run
- Introduction to 720's
- One-two mobes
- All base inverts into the flats with grabs
- Advanced sliders
- 540's and flips on kickers and jumps
- Girls: first Raley
- Consistently landing all basic flips, spins and raley tricks in sequence; confident riding
- Ability to combine all tricks of judging spectrum within a tournament length run in multiple sequences



### Water Ski

#### GENERAL:

- Exceed open criteria for each discipline

#### SLALOM

• Women: 2 at 12 m

• Men: 2 at 11.25 m

- Optimize all skills in a competition context

#### TRICKS

• Women: 5000 points

• Men : 7000 points

- Continue developing
  - Ski Line tricks
  - Flips
  - Toe wake line tricks

- Execute strategies for competition and wind/weather conditions

#### JUMP

• Women: 37 m

• Men: 52 m

- Jump at maximum speed and ramp height for the division

### Adaptive

#### Sit skier

- Consistently jumps wakes and lands in "sweet spot"
- Sit skier is consistent with starts on intermediate or advanced slalom ski and trick ski using a standard handle (within two attempts)
- Meets IWSF entry standards for slalom and tricks
- Introduction to jumping
- Basic wake tricks



# Train to Compete

# Train to Compete

## Barefoot

## Wakeboard

## Water Ski

## Adaptive

- **40% of time should be devoted to ongoing development of fitness, technical and tactical skills**
- **60% of time should be on training that is focused on competitive requirements, i.e. selected tournaments, plus simulated competitive situations during training.**
- **Use double periodization, depending on international competitive schedule.**
- **Continue participation in complementary sports in off-season to support training (e.g. trampoline, snowboard).**

- 3 sets/day at 25-40 minutes/set
- 3-5 days/week, 7 months of the year

Men: 50-60 quality wake crossings/set; 40 surface turns/set

Women: 40-50 quality wake crossings/set

- 2-3 months training out of country in warmer climates
- Off-water: dry-land training with a handle 15 min/day, 5 days/week, year round

• Training: competition ratio = 10-15:1

- Double periodization
- National and international competitions
- 7 competitions/year, with 2 competitions out of country

- 3-4 sets/day, 25-40 minutes/set
- 4-5 days/week for all summer months, plus 1-2 winter camps (total 6-7 months)

• Training: competition ratio = 60:40

- 5-7 competitions/year at provincial/national standards level

• Selection to Provincial Team

- 3-5 sets/day, 10-30 minutes/set
- 4-6 days/week, 10 months of the year on-water
- development/maintenance of fitness continues year-round; include active rest in off-water months

• Increase volume and intensity of aerobic and strength training

• 10-15 competitions/year

• Competition: selected formal tournaments and pro events at all levels up to international



## Barefoot

## Wakeboard

## Water Ski

## Adaptive

### EQUIPMENT:

Competition barefoot boat  
Barefoot suit and padded shorts  
Second suit and shorts  
Heater shirt  
Dry suit for extended season training

Boom

21.5 m non-stretch rope

38 cm wakes handle

Front toe handle

Back toe handle

30 cm jump handle

Shoe skis

Helmet

Barefoot jump

Jump course buoys

### FACILITIES:

Private/Semiprivate site  
Predictable, calm water conditions

### EQUIPMENT:

Larger, more wakeboard oriented boat with extended pylon or tower

Helmet

Upper level board

Non-stretch rope

(21.5 m- 22.8 m)

### FACILITIES:

Intermediate to advanced levels of sliders and jumps/kickers

Same as in Learn to Compete stage

### SLALOM

Intermediate or advanced slalom ski

PFD

Higher cage or raised sling position

Standard handle

### TRICK

Trick ski

Lower sling than position used in slalom

Standard or trick handle

Second timer and air horn to indicate 20 second mark





*"The vision of a champion is someone bent over, drenched in sweat, to a point of exhaustion, when no one else is watching."*

- Anson Dorrance



# Becoming a Champion

AGE: Water Ski: 21 – 25 years (f) 22 – 26 years (m) Wakeboard: 19 – 21 years (f) 20 – 24 years (m) Barefoot: 21 – 25 years (f) 22 – 26 years (m)  
 Athletes with a disability: enter at any age (with or without support person)

## OBJECTIVE:

- **STABILIZATION OF PERFORMANCE-ON-DEMAND CHARACTERISTICS**

## GENERAL DESCRIPTION OF BECOMING A CHAMPION STAGE

- Transition period between national level podiums and international level podiums.
- This is the final phase of athletic preparation. Maturation is complete and all the performance factors should be fully established to optimize performance in international competitions.
- The athletes in this stage will be the top international performers in the next four years and beyond. It is important to build a winning strategy with these athletes, and to individualize training and recovery programs to prevent over-training.



## WSWC KEY FOCUS FOR THIS STAGE

- Athletes must achieve peak performances at major competitions.
- Athletes must be capable of performance-on-demand.

## PROGRAMS

- National High Performance programs
- College/University programs
- Personal professional programs

## MONITORING

- Must conduct regular medical monitoring
- Monitor for symptoms of fatigue and/or under-recovery
- Monitor to ensure that training program supports performance goals
- Test and monitor discipline-specific performance factors

## INSTRUCTOR/COACH RECOMMENDATIONS

- NCCP "Competition High Performance" coach

## ITAD Window of Trainability

- Specific individual training program based on:
- 6 S's of physical training: Stamina, Strength, Speed, Skill, Suppleness and Stability
  - 7 C's of psychological training: Cohesion (team spirit), Control (emotions), Concentration, Centre (goal setting), Condition (ideal performance state), Critical reflection, Confidence
  - Tactical skills according to the discipline



## Physical Development

- All the athlete's physical capacities are fully established and the focus shifts to maximizing performance.
- Continue to improve/maintain ideal strength, speed and power requirements of the discipline.
- Ensure (through monitoring) that athlete's fitness level supports the intensive training regimen to avoid injuries and burnout, and supports maximum performance.



## Ancillary Skills

- The athlete must work with a team of specialists to ensure maximum benefit and integration of physical, technical and psychological preparation, recovery and regeneration

## Lifestyle

- Athletes begin to travel and are exposed to a wider range of social, cultural, geographic and climactic situations. Coaches should encourage athletes to explore these opportunities to enhance personal development and growth.
- At the same time, travelling athletes become ambassadors for Canada and they will be able to perform this role more completely if they have a sound appreciation of other cultures and societies

## Psychological Development

### The athlete should:

- Be clear about life after sport and give full commitment to his/her athletic career
- Be confident, motivated and highly competitive; have a will to win
- Have the constant desire to improve and tinker with his/her performance
- Have well-developed, refined and individualized mental skills and routines
- Be open to new ideas, different coaches and coaching methods
- Be creative and innovative
- Prepare and implement a pre-competition and competition plan
- Learn to interact with a team of coaches, sport science professionals and media



## Technical Development Benchmarks

### Barefoot

#### GENERAL:

- Execute competition strategies to maximize placement
- Able to adapt to conditions to maximize performance
- Peak at major competitions
- Skill drills/warm-up runs

#### MEN

**SLALOM:** 18+

**TRICK:** 7000+ points

**JUMP:** 22m+

- Skill drills/warm-up runs on long line include: one foot/one hand, Toe holds, and F-B, back 1's, back toes, B-F

#### WOMEN

**SLALOM:** 14+

**TRICK:** 2400+ points

**JUMP:** 12m+

- Skill drills/warm-up runs on long line include: one foot, and F-B, back 1's, B-F

### Wakeboard

- Spins up to 720° with grabs, flips with grabs and a mobe off the double up
- All flips and rolls with both directions of rotation and grabs
- All 540° spins, two 720° spins, most with grabs
- All Raley tricks with glide variations and grabs
- Raley variations with spins (180° and 360°)
- Introduction to 900's
- Consistently land two or more mobes, regular and switch
- All slides on kinked rails, gaps and spinning on or off rail
- All spins and kicks off ramps/kickers
- Riding switch for 50-70% of each run
- Consistent runs on demand, landing all flips, spins and raleys, regular and switch with trick variations and two solid mobes

### Water Ski

#### GENERAL:

- Demonstrate ideal form and technical skills.
- Maximize skills in a competition context.
- Optimizing the regularity of skills in conditions.
- Execute competition strategies

#### MEN

**SLALOM:** into 4 @ 10.75 m +

**TRICK:** 9400+ points

**JUMP:** 58 m +

#### WOMEN

**SLALOM:** into 11.25 m or shorter

**TRICK:** 7000+ points

**JUMP:** 46 m +

### Adaptive

#### Sit skier

- Experiment with shortening tow rope to 12 m, increasing speed up to 52 kph
- Holding cut through both wakes
- MP1 sit skiers complete the mid buoy course at 49 kph
- MP2 sit skiers ski mid buoy slalom course at short line 12 m at speeds up to 58 kph for men and 55 kph for women
- MP3 skiers skiing full buoy slalom course at 18.25 m (slower speeds to start with)



## Becoming a Champion

### Training and Competitive Environment

#### Barefoot

- 3 sets/day, 20-40 min/set
- Men: 60+ quality wake crossings/set; 50 surface turns/set
- Women: 50+ quality wake crossings/set; 10 surface turns/set
- 3-5 days/week, 10 months of the year
- Off-water: dryland training with a handle 15 min/day, 5 days/week, year round
- Training:competition ratio = 25:1
- national and international competitions
- 10-12 formal competitions/year
- multiple periodization

#### Wakeboard

- 3-4 sets/day, 30-45 minutes/set
- 5-6 days/week, year round, including international events (9-11 months)
- Training:competition = 60:40
- 7-10 competitions/year
- Competition at open level, professional contests, alternative events
- National Team, Junior Pro Tour, International competition

#### Water Ski

- 3-5 sets/day, 10-30 minutes/set
- 4-6 days/week, 10 months of the year
- development/maintenance of fitness continues year-round; include active rest in off-water months
- 10-15 competitions/year
- Competition: selected formal tournaments and pro events at all levels up to international
- Preparation for competition at World Championships
- Double or multiple periodization

#### Adaptive

- Skiers may specialize in one or two disciplines in this stage.
- Training focus shifts to maximum performance, and peaking for major tournaments.
- Training should be at high intensity and relatively high volume.
- Double periodization is appropriate, depending on international calendar.
- Training: Competition ratio should be near 25:75, with the competition portion including competition-specific training activities.
- Allow frequent preventative breaks to prevent physical and mental burnout.
- Model all possible aspects of training and performance.



## Becoming a Champion

### Equipment and Facilities

#### Barefoot

- Athletes at this level of performance must have access to the most up-to-date, world-class equipment.
- Equipment must be fine-tuned to the demands of the sport and to the requirements of the athlete.
- Barefoot equipment is same as for Train to Compete Stage, less Jump course buoys, plus full jump course
- Maximum boat speed for event and division

#### Wakeboard

#### Water Ski

#### Adaptive



*“Competition at a world class level in sports now requires athletes to make sure they have the best coaching, training facilities, equipment, sports science, nutrition, physical and psychological preparation. They will need all that and more to stay on top of the game.”*

- George S. Athans Jr.



# Top of the Wake

AGE: **Water Ski:** 22+ years (f) 25+ years (m) **Wakeboard:** 20+ years (f) 22+ years (m) **Barefoot:** 22+ years (f) 25+ years (m)  
**Athletes with a disability: enter at any age (with or without support person)**

## OBJECTIVE:

- **INTERNATIONAL EXCELLENCE AND PODIUM PERFORMANCES AT WORLD CHAMPIONSHIPS**

## GENERAL DESCRIPTION OF TOP OF THE WAKE STAGE

- Performance-on-demand is the criterion standard
- This stage builds on the progression from the “Becoming a Champion” stage. The athlete has gained experience in competing in pressure situations at the highest possible level. S/he will continue performing, and winning consistently at a high level for an extend period of time
- All aspects of training are directed toward ensuring consistent performances at the highest level
- Injury prevention and recovery strategies are crucial in this stage



## WSWC KEY FOCUS FOR THIS STAGE

- Ability of athlete to perform on demand, in any condition
- Athlete assumes full responsibility for own performance and behaviour.

## PROGRAMS

- WSWC National Team program
- Personal professional program

## MONITORING

- Monitor for symptoms of fatigue and under-recovery
- Monitor to ensure that training program supports performance goals
- Test and monitor discipline-specific performance factors

## INSTRUCTOR/COACH RECOMMENDATIONS

- NCCP “Competition High Performance” coach



## ITAD Window of Trainability

Creative and innovative strengths in:

- Psychology
- Strategy
- Training specificity
- Technology

## Physical Development

- Maintain capacities as in previous Stage:
  - All the athlete's physical capacities are fully established and the focus shifts to maximizing performance
  - Continue to improve/maintain ideal strength, speed and power requirements of the discipline
  - Ensure (through monitoring) that athlete's fitness level supports the intensive training regimen to avoid injuries and burnout, and supports maximum performance
- Training remains at high intensity and fairly high volume
- Shift focus to optimizing performance



## Psychological Development

- Maintain mental preparation skills that have been developed and focus shifts to optimizing performance. Mental skills and routines should be well-developed, refined and individualized.
- Athlete should have a well-developed will to win, concentration and focus.
- Attention to detail in the training and performance environment will assist in managing distractions.

## Tactical Skills

- The athlete has reached the pinnacle of performance in the sport. In this stage the athlete can display true mastery of the sport through creative and innovative performances that challenge the limits of the sport, or that result in new skills or combinations.
- The athlete has the ability to change and adjust runs to compete strategically on a consistent level.

## Ancillary Skills

- As in previous Stage**
- The athlete must work with a team of specialists to ensure maximum benefit and integration of physical, technical and psychological preparation, recovery and regeneration

## Lifestyle

- Athlete has all the tools to compete with success
- Athletes should begin to plan for life after competition, thinking ahead to career planning and future sport participation
- Full integration of sport, career and life goals

## Equipment and Facilities

- As for previous Stage**
- Athletes at this level of performance must have access to the most up-to-date, world-class equipment.
  - Equipment must be fine-tuned to the demands of the sport and to the requirements of the athlete.
  - Barefoot equipment is the same as in Becoming a Champion stage.
    - Maximum boat speed for event and division

## Technical Development Benchmarks

### Barefoot

#### GENERAL:

- Execute competition strategies to maximize placement
- Able to adapt to conditions to maximize performance
- Peak at major events

#### MEN

**SLALOM:** 19+

**TRICK:** 9000+ points

**JUMP:** 25m+

- Skill drills/warm-up runs on long line include: one foot/one hand, Toe holds, and F-B, back 1's, back toes, B-F

#### WOMEN

**SLALOM:** 16+

**TRICK:** 3500+ points

**JUMP:** 14m+

- Skill drills/warm-up runs on long line include: one foot, and F-B, back 1's, B-F

### Wakeboard

- All flips, spins and Raleys with grabs, regular and switch in all variations. Consistent and with more height and distance (.75+ m over other categories)
- Every trick with variations off the double up, consistent 900° spin and inverts with 720° rotations
- All spins, on and off axis, with grabs, consistent 900 and possibly 1080 rotations
- All Raley variations including 180°-540° rotations
- Ability to land most tricks and variations - regular and switch
- Multiple mobes in most riding conditions
- Mobe 540's
- All forms of sliders including 30+ m
- Stunt rails with 12 m gaps and over obstacles
- Wakeskate kick-flip and multiple variations
- Consistent tournament run in calm and rough conditions
- Ability to perform a trick with new variation (peak creativity)
- Consistently land all tricks with unique style and above average height on any day, in any water condition

### Water Ski

#### GENERAL:

- Maximize skills in a competition context.
- Performance-on-demand regardless of conditions.
- Execute competition strategies

#### MEN

**SLALOM:** into 10.75 m or shorter

**TRICK:** 7300+ points

**JUMP:** 49 m +

#### WOMEN

**SLALOM:** into 2 @ 10.25 m +

**TRICK:** 10,500+ points

**JUMP:** 65 m +

### Adaptive



# Top of the Wake

## Barefoot

## Wakeboard

## Water Ski

## Adaptive

•The same training conditions apply as in previous stage, except that the athletes now have the benefit of experience and are established, high level performers.

•Multiple periodizations are appropriate.

•Training is high intensity and fairly high volume.

•Competitions should be selected to provide the best preparation for World Championships or professional success.

- 2 sets/day, 15-30 min/set
- 3-5 days/week, 10 months of the year
- Off-water: dryland training with a handle 15 min/day, 5 days/week, year round
- Training:competition ratio = 25:1
- 10 competitions/year
- National and international level competitions

- 3-4 sets/day, 30-60 minutes/set
- 5-6 days/week, year round,
- Training:competition = 50:50
- 15+ competitions/year
- Competitions are professional contests and alternative events around the world. Also National Team, North American Tour to Australian Pro Tour and various global events

- 3-5 sets/day, 10-30 minutes/set, 4-6 days/week
- 4 weeks/month, 10 months of the year
- development/maintenance of fitness continues year-round; include active rest in off-water months
- 10-15 competitions/year
- Competition: selected formal tournaments and pro events at all levels up to international



*"If you don't do what is best for your body, you're the one who comes up on the short end."*

- Julius Erving



# Active for Life

**AGE:** enter at any age



## OBJECTIVE:

- ENJOYMENT OF LIFELONG PHYSICAL ACTIVITY AND PARTICIPATION IN SPORT AND RECREATION

## GENERAL DESCRIPTION OF TOP OF THE WAKE STAGE

WSWC is structured to allow participants to continue competing in age group levels up to any age, at the local, national and international level. Clubs welcome and encourage participants of all ages and abilities, and there are many opportunities for adults and seniors to continue to enjoy the sport at their own level of performance.



## PROGRAMS

- Masters competitions
- Recreational Festivals
- Club programs

## INSTRUCTOR/COACH RECOMMENDATIONS

- Participants often are self and club coached, but may seek out qualified coaches at the appropriate level.
- NCCP "Learn To" Instructor



In this stage participants are also encouraged to:

- Try a different discipline of the sport.
- Make a transition from competitive to recreational activities.
- Participate in age group competition such as Master's Games.
- Enter sport-related careers such as coaching, officiating, sport administration, small business enterprises, or media.
- "Give back" to the sport through volunteering

**A positive experience in sport is the key to retaining athletes after they leave the competition stream.**



*"All of the lessons I have learned in sports I'm now using in my professional career as a TV producer and director. I know you never get anywhere in life without intelligence, hard work and sacrifice."*

*I did not get rich or famous from water skiing but it did bring me much joy and personal confidence. I'm making sure my children lead a sporting life so they can be happy and healthy."*

- George S. Athans, Jr.

# Active for Life

## Physical Development

- Keep active through participation in sports
- Continue training to maintain endurance, strength and flexibility

## Psychological Development

- Re-adjust to non-competitive environment
- Relaxation
- Involvement as a skier for fun, fitness and challenge

## Training and Competitive Environment

- Maintain ongoing active participation in sports for a minimum of 30 minutes/day or 60 minutes 3 times/week, as recommended by guidelines for physical activity
- Enter tournaments/festivals that are of appropriate skill level

## Equipment and Facilities

- Equipment should be properly fitted, and matched to athletes' ability levels and goals

## Technical Development

- Retain skills or develop new skills
- No injuries
- Still having fun

## Tactical Skills

- Continue involvement at the recreational level, and in other sports
- More focus on development of sport for other skiers (volunteer, coach, instructor, official)

## Ancillary Skills

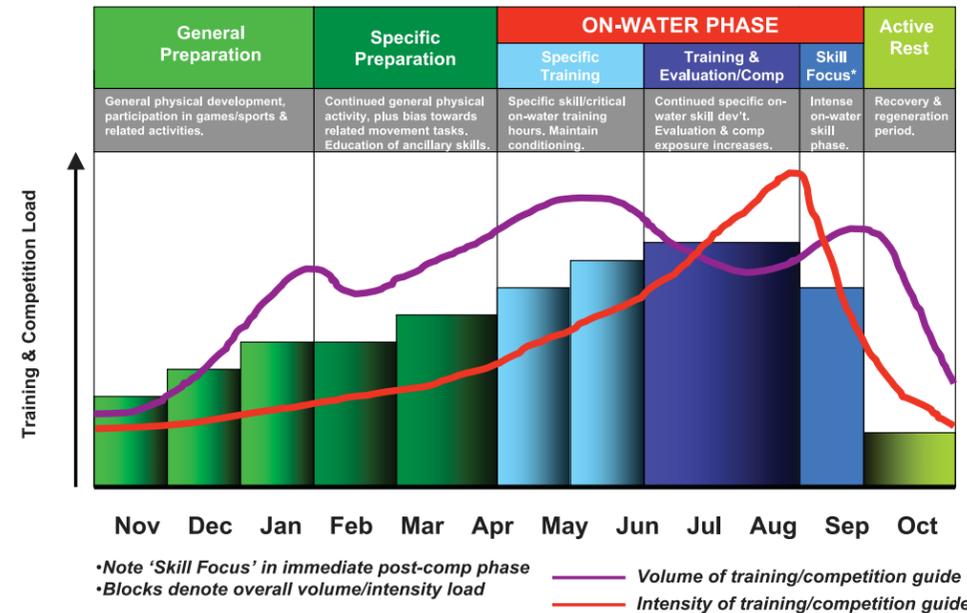
- Ensure that new participants receive instruction about the benefits of regular physical activity, proper warm-up and cool down, safety, nutrition and hydration

## Lifestyle

- Pursue family and personal goals
- Continue education or career development
- Continue involvement as a coach, official, administrator
- Re-set goals, apply skills developed through sport into life (e.g. leadership, critical thinking, problem solving)

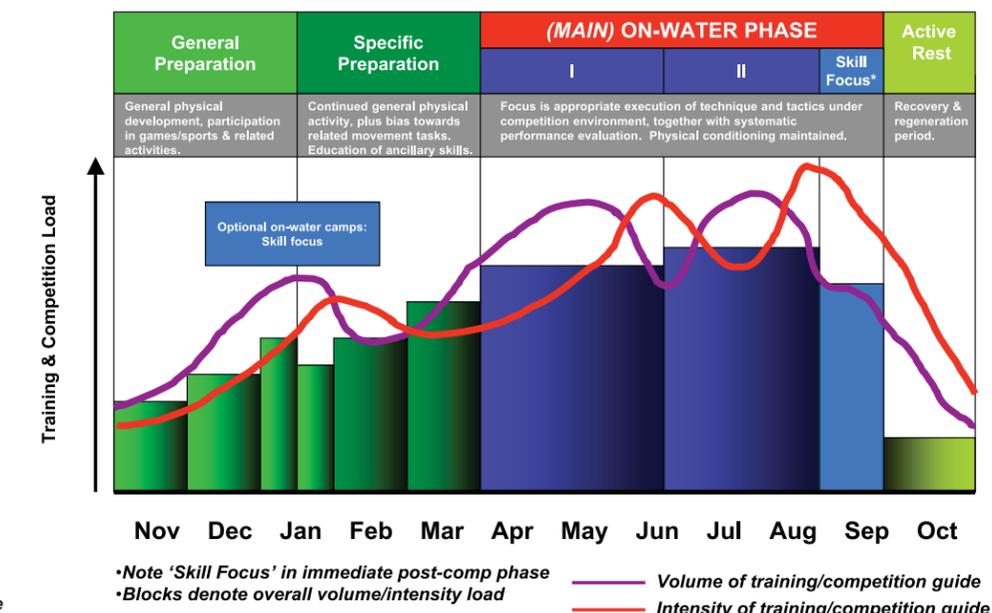


### POSSIBLE YEARLY PLAN DURING THE 'BUILD THE SKILLS / LEARN TO COMPETE' PHASE

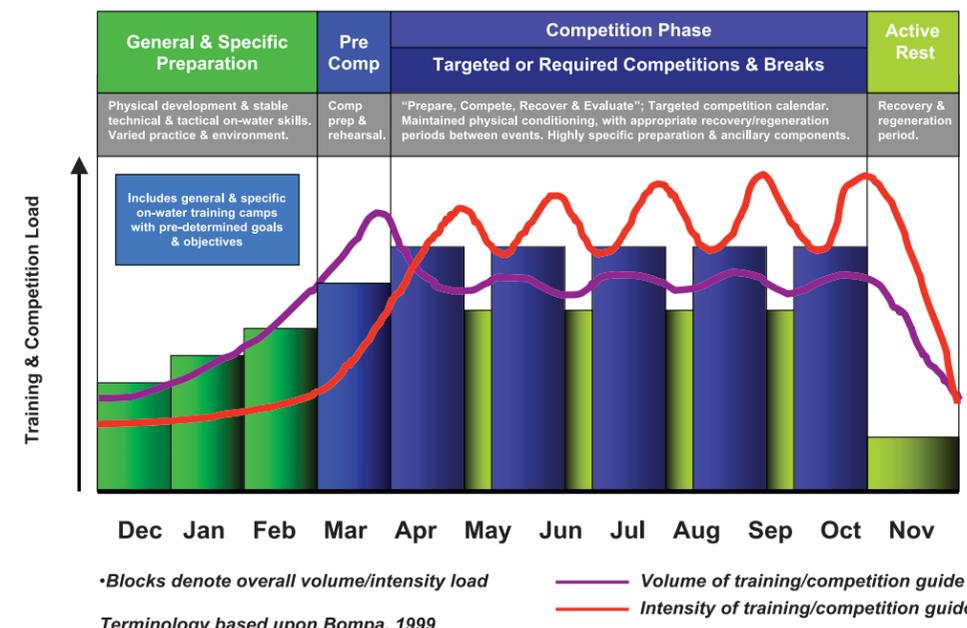


### POSSIBLE YEARLY PLAN DURING THE 'LEARN TO COMPETE / TRAIN TO COMPETE' PHASES

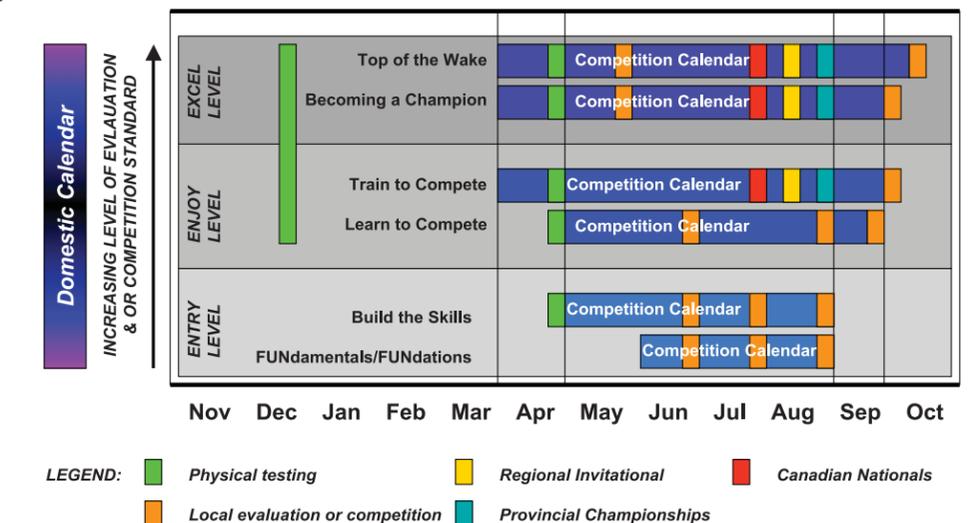
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### EXAMPLE YEARLY PLAN DURING THE 'BECOMING A CHAMPION / TOP OF THE WAKE' PHASES



### HYPOTHETICAL DOMESTIC CALENDAR



## GLOSSARY OF LTAD TERMS

### Adaptation

refers to a response to a stimulus or a series of stimuli that induces functional and/or morphological changes in the organism. Naturally, the level or degree of adaptation is dependent upon the genetic endowment of an individual. However, the general trends or patterns of adaptation are identified by physiological research, and guidelines are clearly delineated of the various adaptation processes, such as adaptation to muscular endurance or maximum strength.

### Adolescence

is a difficult period to define in terms of the time of its onset and termination. During this period, most bodily systems become adult both structurally and functionally. Structurally, adolescence begins with an acceleration in the rate of growth in stature, which marks the onset of the adolescent growth spurt. The rate of statural growth reaches a peak, begins a slower or decelerative phase, and finally terminates with the attainment of adult stature. Functionally, adolescence is usually viewed in terms of sexual maturation, which begins with changes in the neuroendocrine system prior to overt physical changes and terminates with the attainment of mature reproductive function.

### Ancillary capacities

refer to the knowledge and experience base of an athlete and includes warm-up and cool-down procedures, stretching, nutrition, hydration, rest, recovery, restoration, regeneration, mental preparation, and taper and peak. The more knowledgeable athletes are about these training and performance factors, the more they can enhance their training and performance levels. When athletes reach their genetic potential and physiologically cannot improve anymore, performance can be improved by using the ancillary capacities to full advantage.

### Childhood

ordinarily spans the end of infancy — the first birthday — to the start of adolescence and 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 preschool children aged 1 to 5 years, and late childhood, which includes elementary school-age children, aged 6 through to the onset of adolescence.

### Chronological age

refers to “the number of years and days elapsed since birth.” Growth, development, and maturation operate in a time

framework; that is, the child’s chronological age. Children of the same chronological age can differ by several years in their level of biological maturation. The integrated nature of growth and maturation is achieved by the interaction of genes, hormones, nutrients, and the physical and psychosocial environments in which the individual lives. This complex interaction regulates the child’s growth, neuromuscular maturation, sexual maturation, and general physical metamorphosis during the first 2 decades of life.

### Critical periods of development

refers to a point in the development of a specific behaviour when experience or training has an optimal effect on development. The same experience, introduced at an earlier or later time, has no effect on or retards later skill acquisition.

### 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.”

### Growth and maturation

The terms “growth” and “maturation” are often used together and sometimes synonymously. However, each refers to specific biological activities. Growth refers to “observable, step-by-step, measurable changes in body size such as height, weight, and percentage of body fat.” 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.”

### Peak height velocity (PHV)

is the maximum rate of growth in stature during growth spurt. The age of maximum velocity of growth is called the age at PHV. Peak strength velocity (PSV) is the maximum rate of increase in strength during growth spurt. The age of maximum increase in strength is called the age at PSV.

### Peak strength velocity (PSV)

is the maximum rate of increase in strength during growth spurt. The age of maximum increase in strength is called the age at PSV.

### Peak weight velocity (PWV)

is the maximum rate of increase in weight during growth spurt. The age of maximum

increase in weight is called the age at PWV.

### Physical literacy

refers to the mastering of fundamental motor skills and fundamental sport skills.

### Post-natal growth

is commonly, although sometimes arbitrarily, divided into 3 or 4 age periods, including infancy, childhood, adolescence, and puberty.

### Puberty

refers to the point at which an individual is sexually mature and able to reproduce.

### Readiness

refers to the child’s level of growth, maturity, and development that enables him/her to perform tasks and meet demands through 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.

### 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.

### Trainability

refers to the genetic endowment of athletes as they respond individually to specific stimuli and adapt to it accordingly. Malina and Bouchard (1991) defined trainability as “the responsiveness of developing individuals at different stages of growth and maturation to the training stimulus.”



## GLOSSARY OF WAKEBOARDING TERMS

### Air

Getting in the air, the amount of space between the rider and the water. Commonly referred to as “pop” off the wake

### Ballast

Extra weight added to the boat to make the wake bigger. Ballast can be people, fat sacks, lead, or anything else that's heavy. Some boats include Ballast systems which are built in systems that fill with water.

### Bindings

The boots that are attached the board to hold the board to the rider's feet.

### Butterslide

A term used for turning the board to a 90° angle and riding either in the flats or on top of the wake.

### Cable

Cable wakeboarding is riding at a cable park instead of behind a boat. A cable park is a place where there are a series of mechanical cables connected by towers that pull the rider around the water. There are over 100 cable parks in the world, including one in Canada.

### Deep-water start

Method of starting. The rider sits in the water

and lets the boat pull you up on top of the water.

### Dock start

Method of starting. The rider can either sit on the edge of the dock and let the boat pull them off or stand and jump off the dock as the boat drives away.

### Double-up

When the boat circles around and crosses back over its own wakes at an approximate 90° angle, the wakes converge causing the resulting wake to be twice the size allowing the rider to get more air and perform bigger tricks.

### Extended pylon

A pylon which is usually 1.8 m tall or higher, used to attach the rope to so it's higher off the water. A higher rope gives less downward pull on the rider while in the air.

### Flats

The section of the water outside of the wakes where the water is flat. If a rider does a big trick where s/he lands way outside the wake, s/he is doing a trick "into the flats".

### Grab

While in the air, if the rider reaches down to the board and clasps his/her hand on the edge of the board. There are many

different types of grabs that can be done alone or added to other tricks.

### Handle

The handle is at the end of the rope, and a wakeboard specific is generally 38 cm wide. Some include a smaller handle in front of the main handle in a “V” or “T” style to aide in wrapped tricks.

### Heelside edge

The heelside edge is the side of the board closest to your heels. Most riders are more comfortable edging with this edge when beginning.

### Helmet

A helmet is usually used when a rider hits an obstacle such as a slider or kickers.

### Invert

When the rider goes upside down while in the air, two types:

- **Roll:** An invert where the board travels in an edge over edge rotation. However, some tricks that follow that rotation aren't called Rolls, and a Back Roll has a tip over tail rotation, so it's very confusing.
- **Trip flip:** A type of invert in which you approach the wake and at the base you allow the wake to trip you into the inverted motion. Stop and pop, or go up more instead of going out.

### Non-stretch rope

Rope with no stretch or spring generally made of Spectra or Kevlar material. Common wakeboard lengths are 16.7 to 26 m.

### Mobe or mobius

An invert with at least a 360° spin included.

### Ollie / Bunny-hop

When the rider pops the board into the air by pushing down on their back foot and jumping up leading with their front foot. Derived from skateboarding.

### Raley

When a rider launches off the wake and in a swinging motion extending his/her body with the board coming up and behind, even over head level.

### Ramp / Kicker

A jump ramp hit by a rider or wakeskater to catch air, generally .9 – 1.8 m high.

### Re-entry / Ally-oop

When the rider jumps off the wake and lands on the same wake. Often done off the rollers that cause a double up.

### Rider

Another name for the person riding the wakeboard.

### Slider / Rail

A long rail made of metal, PVC, or wood used as an obstacle to slide by a wakeboarder or wakeskater. Sliders are created in various shapes and sizes from 6 to over 30 m and even combined with ramps.

- **Backside boardslide/lipslide:** A butterslide trick where the rider approaches the slider or wake with their back closest to the object being used.
- **Frontside boardslide/lipslide:** A butterslide trick where the rider approaches the slider or wake with the front of his/her body closest to the object being used.
- **Boardslide:** A slide on an obstacle or wake where the nose of the board is what travels over the obstacle. Example: if you approach a slider with your chest facing it and ollie up and slide with the nose over the slider, it's a Frontside Boardslide.
- **Lipslide:** A slide on an obstacle or wake where the tail of the board travels over the obstacle first. Example: if you approach a slider with your chest facing it and ollie up and put the tail of the board over the obstacle, you're doing a Frontside Lipslide.

### Spin

A spin is when the rider and board rotate around on a vertical axis.

- **Backside spin:** A spin where the rider rotates with the back of his/her body

towards the boat first. For a left-foot forward rider this would be clockwise. Sometimes referred to as a "blindsided spin".

- **Frontside spin:** A spin where the rider rotates with the front of his/her body towards the boat first. For a left-foot forward rider, this would be a spin in the counter-clockwise direction.
- **Off-axis spin:** When a rider does a spin but goes off the vertical axis so the board usually gets up to shoulder level or above. Also referred to as a “monkey spin.”
- **Blind:** Landing blind is also like landing wrapped, where the rider does not pass the handle so s/he lands with the handle behind his/her back with his/her back facing the boat.
- **Handle pass:** Used when the rider passes the handle from hand to hand behind his/her back to complete a 360° spin or more.
- **Wrapped:** When the rider has the rope wrapped around his/her back allowing the rider to spin without doing a handle pass.

### Stances

- **Regular foot:** A rider who normally rides with their left foot forward.
- **Goofy foot:** A rider who normally rides with their right foot forward.
- **Switch stance:** Riding the board backwards from your normal riding stance also known as fakie or revert. Trick names with 180's commonly end with any version of the term. (example Roll to Revert)

**Surface trick**

A trick performed with the board on the water the whole time.

**Toeside**

The side of the board closest to the rider's toes.

**Tower**

A "cage-like" aluminum attachment to a boat used for tying the rope to, placing boardracks, speakers, etc.

**Wake to wake**

When the rider does a trick where they take off from one wake, and land on the down-slope or past the second wake.

**Wakeboard**

The board a wakeboarder rides, usually between 115 and 145 cm in length. Generally have removable fins, molded fins or a combination.

**Wakeskate**

A combination of a wakeboard and a skateboard. The board doesn't have bindings, is smaller, and covered with grip tape or foam.

**Wake-surfboard**

A hybrid board between a wakeboard and surfboard used to ride the wave created

directly behind the boat at slow speeds (16-24 kph).

**Boat speed and rope length**

- **Beginner:** 15-18 m rope 29-32 kph
- **Intermediate:** 18-22 m rope 32-35 kph
- **Advanced:** 22-26 m rope 35-40 kph

***Note:** Every boat handles differently and produces a varying wake dependent on hull, weight and weight distribution. Rule-of-Thumb for any particular rope length and weighting dynamics: the washy/foamy portion of the wake should be just behind the rider, so the rider is launching off the farthest portion of the crisp wake lip. The faster the speed the farther the wash, slower speeds bring the wash closer.*

**Reference:**

[www.wakeboarder.com/tricks/tricklist.phtml](http://www.wakeboarder.com/tricks/tricklist.phtml) accessed March 11, 2007

*"The only way to maximize potential for performance is to be calm in the mind."*

- Brian Sipe

**LTAD STEERING COMMITTEE****Russ Dickson  
(Chair)**

Russ Russ has been actively coaching a number of sports over the last 27 years, much of it with athletes in the key developmental ages. His is a Certified Level 3 coach and is also a course conductor and facilitator for both able-body and adaptive programs.

An International level Boat Driver, he attended the 2006 Pan Am Championships in Mexico as both an appointed Driver and as member of the Canadian Team (Veteran I division). He is also a Record Capable Technical Controller and Chief of Competition.

Russ has been involved with Water Skiing for the past 18 years serving on the WSWA Board and a variety of WSWC committees. He chairs both the WSWC Athlete Development Committee as well as this committee and is the current President of Water Ski & Wakeboard Alberta.

**Richard Gray  
(Barefoot)**

Richard has been a member of the Canadian Barefoot Team since 1986, and has been at every Open World Barefoot Championships since then as well. He has coached the team in 2000, 2004, 2006 and 1992 where the team won the Bronze medal. He will complete his level 3

certification with the NCCP this year.

Richard is a level 1 official (highest world ranking) as well as a senior level judge, driver and scorer. He is the athlete representative on the Executive Board and has been a member of the board in that capacity for several years. He is also a member of the World Rules Committee for the IWSF Barefoot Division, and administers the World Records in Barefoot.

Richard has a deep passion for the sport and offers experience and knowledge to the committee on the barefoot side.

**Mélanie Savard  
(Water ski)**

Mélanie has a B.Sc degree in kinesiology and is one of the main coaches at Benoit Allard's waterski school in Montreal and is a "Nautilus Plus" fitness personal trainer. She has been coaching Team Québec for the past 4 years and is a Level 3 certified water ski coach and official. She has been water skiing for over 20 years and has been coaching for more than 10 years. She is currently on the Québec Water ski federation Executive Board and is mentoring with Steve Bush with the National Team program. Her goal is to work with the Junior National Team in the near future.



## LTAD STEERING COMMITTEE

### **Chris Bourne (Adaptive)**

As a member of the Canadian Adaptive Water Ski Team Chris has competed in the 2003, 2005 and 2007 World Disabled Water Skiing Championships and the 2006 Pan Ams. He also the Chairperson of Water Ski and Wakeboard Canada's Adaptive Water Sports committee and a member of the International Water Ski Federation Disabled Commission.

Coming from a wheelchair racing background, Chris is also an accomplished triathlete. He has competed and medaled at 3 World Championships. In his professional life, Chris works as the Community Development Manager with the Active Living Alliance for Canadians with a Disability. He holds a Masters degree in Recreation and Leisure Studies with a focus on the development and management of opportunities for persons with a disability.

### **Lonn Vokey (Wakeboard)**

Lonn has been wakeboarding for about 12 years and coaching for over 6 years. He has been operating the Hangtime Wake School for the past 6 seasons and has hosted the WakeJam Pro-Am Event as well as the King of the Lake, both held in Manitoba.

Lonn currently works as a Financial Advisor at Assante Financial Management in Winnipeg while not volunteering his time in some way or another to wakeboarding.

### **Guillaume Paré (Wakeboard)**

Former 3-event and wakeboard National Champion, All-American Team on the Collegiate Water Ski Association, past SBC wakeboard magazine editor and Wakestock organizer, full-time summer wakeboard coach and course conductor. I surf, ski, wakeskate, all-around water man!

### **Nathalie Müller (LTAD Project Leader)**

Programs Manager at Water Ski and Wakeboard Canada and project coordinator for the LTAD.

### **Dr. Steve Norris, PhD (LTAD Expert Group Consultant)**

Dr. Norris is one of six LTAD experts gathered by Sport Canada to lead the LTAD initiative and has also worked on LTAD initiatives with several sports in the UK. He is a world renowned applied physiologist and faculty

member at the University of Calgary, in the Department of Kinesiology and Director, Sport Physiology & Strategic Planning at the Canadian Sport Centre – Calgary. He works with athletes and coaches from several glide and slide sports (such as swimming, alpine ski, bobsleigh) from around the world.

### **Cathy Haines (LTAD Technical Writer)**

Cathy is a sport consultant specializing in LTAD and Coaching Education. She has over 30 years of experience in artistic and rhythmic gymnastics, as an athlete, coach, administrator, parent and volunteer. From 1987-2000, Cathy was the Coaching Development Coordinator at Gymnastics Canada. Cathy has also been a consultant with the Coaching Association of Canada, and is presently working with a variety of sports on LTAD, as well as with WSWC on NCCP design and development. She holds a B.Sc. (Kin) degree from the University of Ottawa.

### **Jane Evans (Graphic Designer)**

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*“The principle is competing against yourself. It's about self-improvement, about being better than you were the day before.”*

*– Steve Young*

## PROVINCIAL CONTACTS FOR WATER SKI AND WAKEBOARD

### Water Ski & Wakeboard BC

P.O. Box 42049 / RPO North  
Winfield, BC V4V 1Z8  
Toll free: 1-888-696-6677  
(250) 766-5188  
(866) 467-6638 (f)  
www.wswbc.org

### Water Ski & Wakeboard Alberta

11759 Groat Rd., Percy Page Ctr.,  
Edmonton, AB T5M 3K6  
(780) 415-0088  
(780) 422-2663 (f)  
1-866-258-2754  
www.wswa.ca

### Water Ski & Wakeboard Saskatchewan

Box 202  
Warman, SK S0K 4S0  
(306) 249-3061  
(306) 249-3062(f)  
www.wswsask.com

### Water Ski & Wakeboard Manitoba

200 Main St., Winnipeg, MB R3C 4M2  
(204) 925-5700  
(204) 925-5703(f)  
www.waterski.mb.ca

### Water Ski & Wakeboard Ontario

1185 Eglinton Ave. E., Suite 307,  
North York, ON M3C 3C6  
(416) 426-7092  
(416) 426-7378(f)  
www.owsa.com

### Fédération Québécoise de ski nautique

4545, ave. Pierre de Coubertin, CP 1000 Succ. M  
Montreal, QC H1V 3R2  
(514) 252-3092  
(514) 252-3186(f)  
www.skinautiquequebec.qc.ca

### Nova Scotia Water Ski Association

PO Box 783,  
Dartmouth, Nova Scotia B2Y 3Z3  
www.nswsa.com



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