

WSRC U16/U18 PROGRAM

The WSRC U16/U18/U21 Program is a twelve week Train to Race program for athletes aged 14 and older (as of Dec 31st,2022) that will begin the weekend of January 8th and run until the weekend of March 25th & 26th at Ski Wentworth.

The WSRC offers a 2 DAY (Saturday and Sunday) U16/U18 Program

16/U18 Program Goals – Train to Race

1. To provide such training opportunities that our U16 / U18 Athletes are able to train as close as possible to the AIM Document's recommended number of on-snow training days. Days on snow recommended by alpine Canada is 115 - 147 +/- . WSRC is offering 100 +/- Days of possible training/racing.
2. To provide a corresponding number of Competitive starts to our training opportunities. 15 to 25 Starts + Speed. WSRC is offering 24 possible Starts.
3. To have ALL of the athletes at this level of the Program have the opportunity to participate at the FIS Level of Racing. To offer a suitable FIS Racing schedule for our U18 Group.
4. To develop a competitive professional attitude / commitment to all aspects of the Program cultivating a desire to excel.
5. That each athlete builds and maintains a Process-Based goal-oriented plan for their Season that they review bi weekly with their Coach / Mentor.
6. To develop and implement a Processed based Mental Training plan with goals and objectives for each athlete.

The WSRC is offering a seven day Pre-Xmas Camp at Mont Ste Anne (Dec 3rd – 9th), a ten-day Pre-Xmas Camp at Mont Ste Anne (Dec 11th – 21st), a seven day Christmas training Camp at Ski Wentworth (Dec 27 – Jan 2nd), a four day GS Camp at Mont Ste Anne (Jan 3rd-6th), a five day SPEED Camp at Mont Ste Anne (Jan 16th -20th), a four day SPEED Camp at Crabbe (Jan 30th – Feb 2nd) a five day March Break Training Camp (March 13-17), a seven-day Spring Camp at Mont Ste Anne (April 7 – 13). There are also various Training Camp opportunities held in conjunction with Race events over the course of the season. In total we are offering our U16/U18 athletes the opportunity to train for 100 days +/-.

Before the first of December the coaches will spend some one-on-one time with these athletes establishing a jumping-off-point for the season as well as some season long Process-Based goals with intermediate milestones along the way so that they can track their progress and adjust when necessary. Hopefully, we can get most of the athletes covered over the Pre- Christmas Camps.

For each athlete, this path through the season will be different with different Process Based goals and objectives.

Each athlete will be asked to outline their goals and objectives for the season along with the Coaches. The athlete will then be asked to keep a training journal (outlining what they are doing each training day – both on and off the snow) so that we can track their progress toward their goals checking off the smaller milestones that will need to be reached along the route.

Also, so that we can review what an athlete did / ate/slept/thought/tuned/dreamed on the day they trained/raced REALLY well or REALLY poorly.

These goals/objectives will encompass nutritional, mental, physical, technical and tactical aspects of each athlete's development over the course of the season.

We would suggest that to succeed at the U16 - Up Competitive level of racing that your athlete attends / commits to a Fall Dry-Land training program working on their own or with a trainer outside of the Club.

We would also suggest that to be competitive at this age-group level that your U16/U18 athlete attends one (or both) pre-season training camps offered at Mont Ste Anne or elsewhere.

Our first training Camp at Wentworth will be from Dec 27th to Jan 2nd . We will be offering training through the Winter every Thursday and Friday at Wentworth for this group on a per-diem basis.

We will need a minimum of 6 athletes to hold Thursday or Friday training.

The Athletes are to be at the Race Shack at 8:10 to meet with coaches and to prepare for the day's training. They should be dressed and ready to ski by 8:40 .

The outdoor weekend training Program Day begins at 8:45 sharp in the morning (warm up in front of Timing Shack) and goes until 11:30 (most days – sometimes this will change) when the athletes break for lunch. We begin again in the afternoon at 12:25 and run until 2:45. Video and debrief sessions will be from 3:15 to 3:45 +/- in the Race Shack.

After Video/debrief, the athletes will have the opportunity to ski on their own for an hour or so – We would hope that they would take advantage of this time to ski – Research has shown that those who become expert in their sport spend MORE time practicing on their own than those who are average.

These Racers will have the opportunity to race all AAA events.

For the U18 athletes that hold a FIS Card we will try to run a schedule of FIS Races in Ontario and Quebec.

EQUIPMENT NEEDS

U16 / U18 Athletes should have Race Slalom and Race GS skis (2 pairs of SL & GS - Racers & Trainers - is a HUGE advantage if budget allows)

They will also need a pair of SG skis if they plan to train & race Super G.

Boots should be front overlap design Race boots of appropriate size & stiffness.

Shin guards / pole guards GS Hard ear Helmet / Slalom helmet with chin bar for slalom

Skin suit / race suit

Hard ear FIS APPROVED helmet for GS as well as a back protector of appropriate size. Back protectors are mandatory for GS and SG training and racing. A soft ear slalom helmet is great – but not mandatory.

NOTE : To be FIS approved there will be a FIS sticker on the back of your athlete's helmet.

Rain Gear

SkiCatalogue.Com is a Canadian on-line site where equipment can be sourced. You can also try ReliableRacing.com / WordCupRacingSupply.com / Artechski.com

TUNING EQUIPMENT NEEDS

For ALL Ski Tuning / Waxing equipment needs please visit HUB CYCLE in Truro N.S.

They are located at 33 INGLIS PLACE and on the web at: www.hubcycle.ca

TRAINING & RACING Club Rules

To mitigate risk to our athletes the WSRC rule is that athletes have a minimum of three days of training (gates & drills etc) before they are permitted to race in any discipline.

It is up to the Coaches discretion in the end whether an athlete has done enough training to compete as safely as possible. Slalom, Giant Slalom AND Speed.

U14/U16 athletes need a minimum of three days of SG training to compete safely. U18 Athletes need a minimum of 2 full days of SG training to compete safely.

NUTRITION



A well-fueled ski racer will have the nutrients and energy they need to perform in ski race or training. Coaches and parents should continue to educate and reinforce with their ski racers the

positive benefits of healthy eating habits including refuelling and maintaining hydration before, during and after training and competition. Ski racers should learn the essential tips for sport nutrition so they can eat like a champion and fuel themselves properly to become a performance ski racer.

- Eat meals as a family as often as possible and use [Canada's Food Guide](#) to help you plan healthy meals that the family can eat together.
- Plan meals ahead of time help to ensure you have all the required ingredients to prepare a healthy meal in your allotted time frame.
- Plan and pack healthy meals and snacks to take to the ski hill to eat during and after training.
- Ski racers are encouraged to have a full water bottle of water with them at all times. Cold weather is dehydrating. Encouraging ski racers to sip on a warm, water - light electrolyte drink or tea will help to maintain hydration throughout a day on the slopes.
- Trust that your ski racer knows how much they need to eat. Listen and respond to signals of hunger and fullness.

Encourage ski racers to learn [how to read nutrition labels](#) along with learning how to prepare basic meals on their own.

RELATIVE ENERGY DEFICIENCY IN SPORT (RED-S)



Figure from: Mountjoy et al. (2014)

Relative Energy Deficiency in Sport (RED-S) is a condition that can affect skiers of any age and sex. RED-S occurs when an imbalance in energy intake and energy output has detrimental

known effects on bone health, menstrual function (female), metabolic rate, immune function, cardiovascular health, and psychological health. (Mountjoy et al., 2014).

Sport performance lags when available energy stores are low. For ski racers during this stage of development, it's vital to assess intake needs and adjusting intake to meet the energy needs of training and competition.

Decreased energy intake can promote the development of osteoporosis resulting in reduced bone growth, weakened bones, reduced peak bone mass, increased susceptibility to stress fractures and premature osteoporosis. Stress fractures can lead to the loss of participation in on-snow training and competition for long periods.

Ski racers with RED-S are at an increased risk for injury, decreased endurance, and reduced muscle strength, along with reduced coordination, impaired judgement, irritability and depression (Mountjoy et al., 2014).

In female ski racers, poor and inadequate energy intake can also lead to delayed menarche and other irregularities due to the decrease in estrogen. Parents and coaches must be on the watch for girls who are now more susceptible to low moods, which can lead to depression, eating disorders, and low self-esteem. Iron levels should be checked by a medical professional and monitored if required.

SUPPLEMENTS

At the end of this stage, ski racers should be educated about the use of performance enhancement substances and their possible side effects. Research supports a balanced diet as a legitimate means to top performance.

The Canadian Centre for Ethics in Sports (CCES) does not promote the use of supplements but recognizes that athletes often use them. [Read the CCES supplement message](#) to protect your ski racer against an anti-doping rule violation if they are using nutritional supplements.

In the spring of 2014, the [CCES](#) conducted a study of youth between the ages of 10 and 18 to determine the attitudinal drivers that set youth on the path to using performance-enhancing substances to assess associations between beliefs and drug use.

They found the strongest associations were observed in three category areas: steroid acceptance, social technology and self-image.

Common triggers to use performance-enhancing substances include; "If a close friend offered me a drug that would make me do better in sports, I would try it" or "It is okay to try steroids once."

WHILE MANY YOUTH ARE UNSURE OF THE SIDE EFFECTS OF MOST LISTED SUBSTANCES, THEY ARE CONFIDENT THAT ENERGY DRINKS, CAFFEINE, AND ALCOHOL HAVE SIDE EFFECTS (CCES, 2018)

A quarter of Canadian youth stated that in the past 12 months they had taken vitamin and mineral supplements to help them do better in sports. Energy drinks, protein supplements, and caffeine were also popular substances. Most commonly, Canadian youth do not think that vitamin and mineral supplements, protein supplements, caffeine, and asthma inhalers will not hurt them if used. They are more wary of creatine supplements, narcotics, thermogenics, nitric oxide boosters, cannabinoids, and alcohol.

Among those youth who say they have used steroids to perform better at sports or change the way they look. There are a variety of sources of the drug; for those looking to perform better, friends, the internet, teammates and even parents are familiar sources and for those who want to change the way they look, friends of a friend or teammates are most common, followed by coaches and close friends. (CCES, 2014)

SLEEP & REGENERATION

SLEEP

It's crucial at this stage to ensure that ski racers do not overtrain because their bodies can be more susceptible to injury. The establishment of a sleep routine is essential; these routines carry over into the demanding [Race to Win stage](#) and will assist in managing the added stress of travel fatigue and jet lag.

A ski racers total sleep requirement is the key to the foundation of post-exercise recovery and regeneration (PERR).

Changes in mood, concentration, motivation, endurance and recovery this can hurt performance and put the ski racer at risk for overtraining/under-recovery and can a result of a lack of sleep or cumulative sleep debt.

DURATION

- 8 to 10 hours per day.
- +30-minute nap between 2 pm and 4 pm

QUALITY

- Ensure a comfortable sleep environment at home, when travelling and competing.
- Monitor for competition stress and anxiety which can result in insomnia
- Initiate a regular napping strategy.
- Monitor for excessive sleepiness & fatigue.
- Observe for sleep disorders.

PHASE

- Maintain a regular sleep/nap routine.
- Get early morning light exposure for 30 minutes daily.
- Monitor for a delayed sleep phase indicating difficulty falling asleep and waking up for school.
- Maintain regular nutrition routines; breakfast is the most important meal of the day. Remember to "break" the "fast."

KEY POINTS

- Reinforce the importance of a sleep routine.
- Avoid technology (screen time) before bed.
- Monitor cumulative sleep duration. Be aware that sleep debt equals <9 hours per night or <56 hours per week.
- Strategies for getting enough sleep include napping.
- Monitor caffeine intake.
- If the ski racers sleep is poor, seek help.

Sleep logs can be used to determine current behaviours and evaluated with the intent to develop training and recovery routines to match the sleep requirement.

DO NOT TRAIN WITH AN UNRESTED MIND AND BODY!

REGENERATION

In the Train to Race stage, recovery and restoration time becomes a formal part of the periodized training plan. As ski racers seek to improve their performance, modifications in training frequency, duration, and intensity are required. Adjustments can occur at various times and are dependent on the phase of training, i.e., competition phase or prep phase, to ensure that the ski racer has time to recover and adapt to the training load. Appropriate daily load and fatigue monitoring can aid in the detection of adaptation to the training program by the ski racer and minimize the risk of developing non-functional overreaching, illness and possible injury (Halson, 2014).

At this stage, the number of variables monitored increases in coordination with their increased participation in sport. Coaches and ski racers should maintain a daily record of activities including the estimated workload, duration and intensity. Coaches should review daily training loads and adjust the loads to fit the individual ski racer to ensure the ski racer is being provided with the correct stimulus to create positive adaptations while ensuring there is ample time for rest and regeneration.

Ski racers should also complete a simple questionnaire at the beginning of each day as part of their daily routine. Monitoring questions should measure the level of enjoyment, level of energy expenditure, nutrition, hydration, soreness, stress levels, self-esteem, quality of sleep, illness and

injury. Coaches should check in with their ski racers at the start of each training session to ensure their ski racers are well-rested, hydrated and fueled for the training and competition bout scheduled.

Ski racers are encouraged to understand the impact of their choices outside of the training and competitive arena. Ski racers are educated on proper regeneration strategies and restoration strategies including stress management techniques and should be encouraged and held accountable to follow the best approach that works for them individually to ensure they are physically and mentally prepared for the next training bout or competition.

Ski racers should have a light snack and water available at the end of the training session to refuel. In this stage, ski racers should be taking more responsibility for their refuelling and regeneration as part of becoming an athlete.

Creation of post-ski day routines can aid ski racers in the development of a relaxation and regeneration routine in preparation for a good nights sleep. The recovery routine should include a short, active recovery exercise along with some light stretching.

INJURY PREVENTION

Ski racers can prevent most injuries by being physically fit and literate, and by wearing the appropriate and adequately adjusted equipment for the activity including ski racing and training. A ski racer's most important tool is his/her body, doing what they can to defend it against injury is vital! Ski racers should seek to maximize their results without putting themselves at risk of injury by following a few simple steps:

- Spend time completing a proper warm-up.
- Adapt and set up equipment to match the needs of the ski racer.
- Stay hydrated, it's crucial to replace lost fluids and minerals.
- Ski racers should listen to what their bodies are telling them; go hard when there is energy!
- Recovery is as important as preparation

RISK FACTORS FOR INJURY INCLUDE:

- Physical fitness, ski racers need to be fit enough for the challenges presented during training and competition.
- Are the ski racers coming back from injury?

- Properly fitted and adjusted ski equipment. Poorly functioning, poorly fitting, or improperly adjusted equipment can cause more harm than good.
- Protective equipment including properly fitted helmets can prevent head injuries.
- Skiing while fatigued and not taking enough breaks for rest or stopping when tired. Often only a short break at the top of a course that includes a short warm-up routine is all that is needed.
- Skiing outside of the skill level and comfort zone of the skier. The level of challenge is dependent on the skier's current technical and physical capabilities or inabilities. Proper course setting to match the experience level of the ski racer correctly is vital. Exposing skiers to activities significantly higher than their abilities can result in frustration, failure, a decline in motivation along with increasing the chance of injury.
- Skiers should be well rested, hydrated and fueled before arriving at training. Proper hydration and nutrition throughout the day will decrease the risk of injury.
- Changing snow conditions can affect ski racers depending on their ability level. Check in to see how they feel about the terrain and snow conditions.

INJURIES CAN BE PREVENTED THROUGH THE CREATION OF WELL-PLANNED TRAINING SESSIONS LED BY PROFESSIONAL COACHES.

Planned training sessions should include the following activities:

- A proper introduction to the activity and skills ahead of the training session.
- A warm-up that includes supervised physical fitness movement preparation.
- Well, planned skill progression is matching the skill and development age of the ski racer.
- Course and terrain inspection.
- A proper cool down.
- Conclusion.
- Debrief with the ski racers to gain feedback on the session in preparation for the next training or competition bout.

In a study conducted by Müller, et al. on long term athletic development in ski racing they found no single fitness parameter responsible for determining the risk of injuries, a comprehensive fitness regimen starting at a young age is crucial for coping with the physical requirements of alpine ski racing and minimizing the rate of both traumatic and overuse injuries (Müller et al. 2017).

Possible injury prevention measures should concentrate on core strength, neuromuscular control, reactive strength training and limb (a)symmetry (Steidl-Müller et. al. 2019, Müller, et. al. 2017).