

BWSC U12 Equipment Guidelines



Proper fit, function and condition of equipment is a critical component to success. Equipment below is **listed in priority**.

1. SKI BOOTS

The right boot and proper fit is the most important piece of equipment in order to develop skills.

Footbeds – the critical component

Every ski racer needs decent footbeds. All our local ski shops have excellent boot fitters who can point you in the right direction for a basic semi-custom footbed or a full custom. The cheaper semi-custom versions are still 100 times better than the stock footbed that comes in the liner of a new ski boot.

Kids needing more advanced foot support should talk to the foot doctors at Okaped (www.okaped.com). Okaped has locations on Ambrosi St, Pandosy St, and in West Kelowna. Okaped owners Andrew, Paul, and Jeff were all ski racing parents who are also pediatricists. They understand what ski racers require and of course are extremely knowledgeable.

Four buckle front-entry race boot

Considerations and terminology for race boots:

- FIT
 - as snug as possible without compromising room for the toes.
 - A ski boot should be snug while wearing a thin sock and not allow excessive heel movement up and down. We don't recommend thick socks in ski boots.
 - look for current foot size, not next year or for room to grow. You are better off buying a used or new pair that fits now than a new pair that is slightly too big. Boots that are too big is not good.
- FLEX
 - Most ski boots have a flex between 60 and 140. U12s should be on 60, 70, 80 range. If they are heavy for their age sometimes up to a 90. Flex is determined by weight as much as ski ability. For example, a lighter skier who bends, moves, and pushes on the ski needs a stiffer boot than a heavier skier that doesn't bend their legs (yet) or push on the front cuff. Once they learn how to "push", they will of course need a stiffer boot cuff/shell.
- FORWARD LEAN AND RAMP ANGLE
 - more forward ramp angle or heel lifts do not automatically put a skier's weight further forward so be cautious lifting the heel more than the amount the boot already puts it in.
 - Ramp angle should only be increased more than the stock amount if the racer has a very low ankle forward range of movement. Pretty unusual though.
- CUFF HEIGHT AND CUFF FIT
 - The upper cuff should match the leg and come up a little past halfway between the heel and knee
 - no extra room around the shin. Buckles should be in mid range when cuff is tight around shin. Look for a snug fitting shin to boot tongue. A gap between the shin and the boot tongue when they stand up straight is not good. The tongue and entire upper section of the ski boot should move with their lower leg throughout their range of motion.

- LATERAL ALIGNMENT OF UPPER AND LOWER CUFF
 - Generally known as cuff alignment. We are talking about inside vs outside angle of the upper cuff of the boot compared to the lower cuff. 95% of skiers need the top cuff to be as upright (pushed inboard) as possible. Look for a junior ski boot that has cuff adjustability (some boots have a fixed rivet joint on both inside and outside of the ankle).
 - A cuff alignment test should be performed to see if they are neutral inside to outside. To perform this, wear the boots without liners BUT still have the footbeds inside the shells. Wear the boots, with buckles done up, standing on a hard flat surface. Ankles bent forward so shin is same angle as the boot fore/aft. While the skier is looking ahead, the boot fitter looks to see if the lower leg is equally in the middle of the upper cuff inside to outside. A lower leg too close to the inside of the cuff means the cuff needs to come up/pushed inboard (on the outside cuff adjustment)

- ORTHOTICS (FOOTBEDS)
 - See notes at top of the ski boot section. Most important element for racers at any age. There are full custom and semi-custom. Decent footbeds are in the \$75-\$100 range. A substantial investment, but good footbeds are an important piece of equipment.

All the usual manufacturers make decent junior race boots, but it is worth noting that historically the Lange (Rossignol is also Lange) race boot works for 90% of all racers.

2. SKIS & BINDINGS

As with boots, all aspects of skis and bindings must be well suited to the athlete.

The biggest myth about race skis length is that athlete height determines ski length. It does not. Instead, ski length is decided by skill level/skiing ability/leg activity followed by how much the athlete weighs. Think of the force pushed on the ski. A lighter skier that pushes hard on the outside ski could bend a ski more than a heavier skier who hasn't yet begun to push hard.

Slalom skis are needed in U12, while GS skis are optional but enhance GS training. The bindings should have the appropriate DIN range. For most U12s that means a 3 to 10 DIN range.

Considerations and terminology for slalom skis and bindings:

- LENGTH
 - all manufacturers have slightly different lengths for each basic size (139cm/142cm could all be considered 140cm skis)
 - Most U12s use 135cm or 140cm slalom skis. Super active or much heavier U12s would be better on 145cm SL skis

- RADIUS (SIDE CUT)
 - junior slalom skis are built with a suitable metre radius for the lengths. Most U12 slalom skis are between 8m and 10m. GS around 17m.

- SKI CONSTRUCTION
 - Junior race skis are a step up from the child models, but are still less material in the construction (usually an extra layer of metal just under the top sheet) than adult models. This keeps the flex of junior skis matched with weights of small racers. It also helps to keep the skis light weight.

- BINDING PLATES
 - Junior skis come with the proper plate to allow some boot height off the ski but it is just a lightweight plastic riser to keep the weight down and should not add to ski stiffness

- BINDING OVERALL HEIGHT
 - the junior plate/binding set ups are designed to stay under the rule of 50cm total height (ski edge to boot sole)

- BINDING POSITION (FORE/AFT)
 - this is not usually an issue anymore but something to consider if the skier has unusually large or small boots. Always try to have the point

where the boot meets the binding toe piece over the centre of the ski.

AGE	SIZE	WEIGHT (LBS)	Slalom	GS (optional)
U12	XS	55-65	130cm	140-145cm
	S	65-75	135cm	145-150cm
	M	75-85	140cm	150-155cm
	L	85-100	145cm	155-160cm
	XL	100-110	145-150cm	155cm/160cm

Below is a basic size chart going only by weight. A more active/athletic skier (leg movement/joint bending could go longer and vice versa)

Below are the exact 2026 models and lengths of three common manufacturers. Green, blue, and purple lengths are the common small, medium and large size ranges for U12s:

SKI BRAND	SL MODEL NAME	SL LENGTHS	GS MODEL NAME	GS LENGTH
Rossignol	Hero Athlete JR SL Pro	128/135/142	Hero Athlete JR GS Pro	143/150/158
Fischer	RC4 WC Noize JR SL	130/135/140/145	RC4 WC Noize JR GS	143/148/153/158
Atomic	Redster JR S9 J-RP SL	131/138/145	Redster JR G9 J-RP GS	145/152/159

3. POLES

Poles are not nearly as important as a proper fitting boot or the right flex and length ski, but poles do need to be the right height. See below for sizing guidelines. There is a big trend to use the click in systems instead of traditional straps. Click-in systems such as Leki work well but sometimes a lot of fiddling around trying to click in happens, especially if they are well used. A pole with a rubber grip with a regular buckle strap (that is done up the proper way so the strap is not folded over) and a smallish basket. They do not need to be bent for aerodynamics/tuck position, or for GS skiing. Even on the World Cup, some athletes use straight poles and some slightly bent for GS.

- Sternum height. 90 degree arm bend when holding pole upside down under basket. Account for extra ski, binding riser plate, and boot height.
- Pole hand guards are for tall slalom gate training only. Second year U12s should consider getting some as the U12s do begin to train with full size gates near the end of the season. Once in U14 all slalom gates are full size and pole hand guards are needed.
- Poles must have baskets
- Higher grade alloy is best (race poles stronger than some regular poles that bend easily)
- Composite/carbon fibre poles are very light, but cost substantially more.

4. HELMET & GOGGLES



Shin guard on a “stubby” gate



“tall” gate

- U12 and older rules require the use of a hard-eared helmet, but a FIS approved sticker is not required for U12s. Once in U14, the rules require an official FIS sticker on the outside of the helmet. All recently manufactured hard ear helmets have this sticker.

- Take care of your goggle lenses by storing them in a soft bag and never wipe the lenses, especially the inside with tissue paper. **A cotton tee-shirt is easier on goggle lenses than a paper napkin**

5. CHIN, SHIN, & POLE GUARDS

- U12's begin training with "tall" (180cm long) and "short" (152cm long) slalom gates so they will need both a chin guards and a pair of shin guards ready. Most U12s do not get close to the gates right away, but they all get on the gates eventually, so it is good to have a chin guard that fits their helmet and a pair of shin guards ready to use when they are called for. The U12 Head Coach will let your racer know.
- Please note this racing rule: Chin guards must be removed for a GS race for all age levels including U12. Chin guards are mandatory for U14 and U16. To keep it slightly more simple... chin guards are slalom only.
- New for 2025/2026, U12s will race "short" gates. "Short" gates are the same diameter as tall gates except they are 152cm in length above the snow level compared to a standard gate which is 180cm. Seeing as U12s begin to use with these gates, they should have shin guards ready as well.
- Shin guards are used for slalom skiing only when the course is a single pole style course. Note - U12 slalom races use "stubbie" gates or "paneled" gates (2 full size poles connected with a cloth panel such as a GS gate). Only wear shin guards for "stubbie" gate SL races. Shin guards will also be needed for training single pole tall SL gates. Paneled
- The technique of using the outside hand to clear a slalom gate becomes the norm in U14, but u12s begin practicing this technique in training. It is recommended to have pole guards ready for this purpose, especially for 2nd year U12s.

AGE	DISCIPLINE	TRAIN IT	RACE IT	GUARDS			HELMET	
				SHI N	CHIN	POLE	HARD EAR	FIS STICKER
U12	DH	YES	YES	NO	NO	NO	YES	NO
U12	SG	NO	NO	N/A	N/A	N/A	N/A	N/A

U12	GS	YES	YES	NO	NO	NO	YES	NO
U12	SL tall (180cm)	YES	NO	YES	YES	when ready	NO	NO
U12	SL short (152cm)	YES	YES	YES	YES	when ready	NO	NO
U12	SL stubbie	YES	YES	YES	NO	NO	NO	NO
U12	SL paneled	YES	YES	NO	NO	NO	NO	NO
U12	Parallel	YES	YES	NO	NO	NO	YES	NO

Here is a chart for the additional pieces of equipment needed for training and racing the different types of courses and gates:

6. UNIFORM & CLOTHING

- Everyone needs their yellow team jacket of course, but we are talking about clothing for training underneath their team jackets (which are usually taken off once athletes are warmed up and ready to train)
- speed suits can be worn for all training days, **but not mandatory**. Even if they are free-skiing with full outerwear (team jacket and snow pants), a speed suit is a great base/mid layer.
- training shorts and a vest is a great way to add race simulation to training
- think of dressing to be doing an outdoor winter workout. Racers need to stay warm, but also be able to move as an athlete.

tall gate slalom training



BWSC U12 EQUIPMENT CHECKLIST

On-snow items needed:

- TEAM JACKET
- SKI BOOTS
- SLALOM SKIS
- HELMET
- POLES
- SL SHIN GUARDS
- GOGGLES
- SKI GLOVES – (mitts for extreme cold)

Optional items:

- EARLY SEASON “ROCK” skis – slalom preferred but any old pair of skis will do
- GS SKIS
- SPEED SUIT
- TRAINING VEST
- TRAINING SHORTS
- CHIN GUARD – for slalom tall gate training (U12s race stubbies and panels)
- POLE GUARDS – not needed right away but eventually they will be

Other items:

- WAX AND TUNING KIT – see separate item list
- DRYLAND CLOTHES

□ RUNNING SHOES

□ WATER BOTTLE