



The following guidelines have been built by the coaches of the WMSC based on the international, national, and provincial rules of alpine ski racing. The purpose of this guide is to provide parents and athletes with the information necessary to acquire the best equipment, on an individual basis, for success.

The most important pieces of equipment for a ski racer are **boots** and **skis**. Both must be proportional to the height, weight, and ability level of the skier. Skis vary in **length** (cm), **radius** (m) and **flex** (every brand has a different scale for measuring stiffness). Boots vary in **sole length** (mm), **flex** (number or equivalent symbol of 0 – 170), **cuff length/height** (short to long from U14 to U18). An example of how boots and skis work together: A long stiff ski for an 75kg U16 athlete will not work effectively with an 80 flex boot.

Find your profile in the following guide and consult with your coach before making any decisions.

Note: New skis are not set-up/ready to go right out of the plastic. They need an initial set (side edge, base edge, sidewall). If you require assistance please contact your coach to set-up an educational/tuning session, or take them to a shop.



## U12 (born in 2010 & 2011)

Contact your coach Mat Leduc [mat@wmsc.info](mailto:mat@wmsc.info) before buying any equipment.

### SKIS

U12 athletes should have a pair of skis for each discipline:

EVENT	SKI LENGTH	RADIUS
Slalom (SL)	[130cm, 145cm]	-
Giant Slalom (GS)	[144cm, 158cm]	<21m

There are exceptions when it comes to athletes with uncommon heights and weights for their age, if you are stuck between sizes generally it is a better call to size up. As always, contact your coach before buying new equipment.

### BOOTS

It is important that boots be “gentle” in this age category. We highly recommend that a softer flex boot (no stiffer than 80) be your first point of interest. All-mountain or Freeride boots will generally meet the flex recommendations, but we encourage you to invest in a pair of Race boots if possible. Most ski shops will have a professional boot fitter on staff to make sure your new boots fit comfortably and functionally.

### Other equipment

**Poles** should have straps or clip in system.

**Slalom (SL) protection equipment** is not mandatory, but important for practicing proper SL technique.

U12 athletes **do not** need a speed/downhill suit, and coaches do not encourage them at this age.

**Helmets** are mandatory and need to fit properly. Soft-ear helmets are **not** allowed in ski racing at this age. In U14 athletes will need helmets approved by FIS. FIS-legal helmets are clearly marked with the following sticker on the back:



Have proper **goggles** that fit with your helmet. Extra lenses and/or spare goggles are very handy when the weather turns foul or your goggles are damaged.



## U14 (born in 2008 & 2009)

Contact your coach Henry Yeigh [henry@wmsc.info](mailto:henry@wmsc.info) before buying any equipment.

### SKIS

All U14 athletes should have a pair of skis for each discipline:

EVENT	SKI LENGTH	RADIUS
SL	[135cm -150cm]	-
GS	[150cm -175cm]	>17m

There are exceptions when it comes to athletes with uncommon heights and weights for their age, if you are stuck between sizes generally it is better to size up. As always, contact your coach before buying new equipment.

### BOOTS

Boots for U14 athletes should be racing boots and the flex should not be lower than 65 or higher than 90. It is strongly recommended that you communicate with your coach prior to buying new boots. Stores can point you in the right direction according to weight and foot size, but they have never seen you ski which is the biggest factor in deciding which boots actually fit you best.

### Other equipment

**Speed/Downhill suits** are encouraged but optional.

**Helmets** are mandatory and need to fit properly. Soft-ear helmets are only allowed for slalom. In U14 athletes need helmets approved by FIS. FIS-legal helmets are clearly marked with the following sticker on the back:



Have proper **goggles** that fit with your helmet. Extra lenses and/or spare goggles are very handy when the weather turns foul or your goggles are damaged.

**Shin guards, pole guards, training shorts and a helmet face bar** are considered basic equipment for slalom training at this age.



## U16 (born in 2006 & 2007)

Contact your coach Drew Hetherington [drew@wmsc.info](mailto:drew@wmsc.info) before buying any equipment.

### SKIS

All U16 athletes must have a pair of skis for each discipline (SL, GS, SG):

EVENT	SKI LENGTH (1 <sup>st</sup> year)	SKI LENGTH (2 <sup>nd</sup> year)	RADIUS
SL Ladies	[150cm, 157cm]	150cm, 157cm	-
GS Ladies	[170cm, 188cm]	182cm, 188cm	>25m
SG Ladies	[183cm, 195cm]	188cm, 195cm	>30m
SL Men	[157cm, 165cm]	165cm	>13m
GS Men	[182cm, 188cm]	185cm, 193cm	>25m
SG Men	[183cm, 200cm]	188cm, 205cm	>30m

It is strongly recommended that **second year U16** athletes train and race with skis conforming to the minimum length and radius of FIS (U18+). You will find the specifications below in the FIS guidance. The transition from U16 to U18 is the most extreme and being prepared makes a big difference. Contact your coach to discuss which skis are best for long-term development.

### BOOTS

All U16 athletes are recommended to use a boot with a **minimum flex of 90**. In this age category athletes grow quickly. If possible, it is recommended that athletes use a proper **race boot** with a regular cuff length (as opposed to a shorter junior cuff length). It is strongly recommended that you communicate with your coach prior to buying new boots. Stores can point you in the right direction according to weight and foot size, but they have never seen you ski which is the biggest factor in deciding which boots actually fit you best.

### Other equipment

**Speed/Downhill suits** are strongly recommended.

**Helmets** are mandatory and need to fit properly. Soft-ear helmets are only allowed for slalom. In U16 athletes need helmets approved by FIS. FIS-legal helmets are clearly marked with the following sticker on the back:



Have proper **goggles** that fit with your helmet. Extra lenses and/or spare goggles are very handy when the weather turns foul or your goggles are damaged.

**Shin guards, pole guards, training shorts and a helmet face bar** are considered basic equipment for slalom training at this age.



## U18 & U21 (born in 2001 and 2005)

Contact [info@wmsc.info](mailto:info@wmsc.info) before buying any equipment.

All U18/U21 athletes must have a pair of skis for each discipline (SL, GS):

EVENT	SKI LENGTH	RADIUS
SL Ladies	$\geq 155\text{cm}$	-
SL Men	$\geq 165\text{cm}$ (-10cm tolerance 1 <sup>st</sup> year FIS)	-
GS Ladies	188cm (-5cm tolerance for FIS races)	30m
GS Men	193cm (-5cm tolerance for FIS races)	30m
SG Ladies	205cm (-5cm tolerance for FIS races)	40m
SG Men	210cm (-5cm tolerance for FIS races)	45m
DH Ladies	210cm (-5cm tolerance for FIS races)	50m
DH Men	218 (-5cm tolerance for FIS races)	50m

## BOOTS

All U18/U21 athletes are strongly recommended to have proper **race boots** with a regular cuff length (as opposed to a shorter junior cuff length), and a **minimum flex of 110**. U18/U21 skis are longer and stiffer than junior skis, so the boots must be stiff enough to bend the skis. It is strongly recommended that you communicate with your coach prior to buying new boots. Stores can point you in the right direction according to weight and foot size, but they have never seen you ski which is the biggest factor in deciding which boots actually fit you best.

Regarding canting and alignment, if you do not already know your ideal setup it is recommended that your boots be zeroed (set up straight at 90 degrees) prior to your first day skiing so any observations can be made from neutral starting point.

## Other equipment

**Speed/Downhill suits** are strongly recommended.

**Helmets** are mandatory and need to fit properly. Soft-ear helmets are only allowed for slalom. In U18/U21 athletes need helmets approved by FIS. FIS-legal helmets are clearly marked with the following sticker on the back:



Have proper **goggles** that fit with your helmet. Extra lenses and/or spare goggles are very handy when the weather turns foul or your goggles are damaged.

**Shin guards, pole guards, training shorts and a helmet face bar** are considered basic equipment for slalom training at this age.