

International
Paralympic
Committee

Layman's Guide to Classification

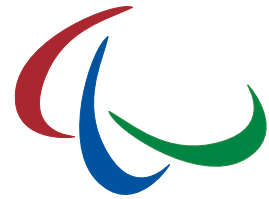
in Paralympic Winter Sports

15 November 2012

International Paralympic Committee

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1. What is Classification?

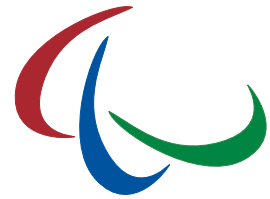
Classification provides a structure for competition. Athletes competing in Paralympic sports have an impairment that leads to a competitive disadvantage in sport. Consequently, a system has to be put in place to minimize the impact of impairments on sport performance and to ensure the success of an athlete is determined by skill, fitness, power, endurance, tactical ability and mental focus. This system is called classification.

Classification determines who is eligible to compete in a Paralympic sport and it groups the eligible athletes in sport classes according to their activity limitation in a certain sport.

2. Ten eligible impairments

The Paralympic Movement offers sport opportunities for athletes with physical, visual and intellectual impairments and these can be divided into 10 eligible impairment types.

- Impaired muscle power: With impairments in this category, the force generated by muscles, such as the muscles of one limb, one side of the body or the lower half of the body is reduced, e.g. due to spinal-cord injury, spina bifida or polio.
- Impaired passive range of movement: Range of movement in one or more joints is reduced in a systematic way. Acute conditions such as arthritis are not included.
- Loss of limb or limb deficiency: There is a total or partial absence of bones or joints as a consequence of amputation due to illness or trauma or congenital limb deficiency (e.g. dysmelia).
- Leg-length difference: Significant bone shortening occurs in one leg due to congenital deficiency or trauma.
- Hypertonia: Hypertonia is marked by an abnormal increase in muscle tension and reduced ability of a muscle to stretch. Hypertonia may result from injury, disease, or conditions which involve damage to the central nervous system (e.g. cerebral palsy).
- Ataxia: Ataxia is an impairment that consists of a lack of co-ordination of muscle movements (e.g. cerebral palsy, Friedreich's ataxia).
- Athetosis: Athetosis is generally characterized by unbalanced, involuntary movements and a difficulty maintaining a symmetrical posture (e.g. cerebral palsy, choreoathetosis).
- Short stature*: Standing height is reduced due to shortened legs, arms and trunk, which are due to a musculoskeletal deficit of bone or cartilage structures.



- Visual impairment: Visual Impairment occurs when there is damage to one or more of the components of the vision system, which can include impairment of the eye structure/receptors, impairment of the optic nerve/optic pathways and impairment of the visual cortex
- Intellectual Impairment*: Athletes with an intellectual impairment are limited in regards to intellectual functions and their adaptive behaviour, which is diagnosed before the age of 18 years.

* Athletes with short stature or intellectual impairment are currently only included in Paralympic Summer Sports, but not in Paralympic Winter Sports.

3. Classification Systems

Classification systems differ by sport and were developed by the International Federations (IF) governing the sport.

IFs decide which impairment types their sport will cater for. Some Paralympic sports are only designed for athletes with one impairment type. Goalball, for example, is only open for athletes with visual impairment. Other sports, such as Athletics and Swimming, are open to athletes in any of the 10 impairment groups. In Winter Sports, Alpine Skiing, for example, offers competition for athletes with physical impairments and visual impairment, while Ice Sledge Hockey only includes athletes with physical impairment.

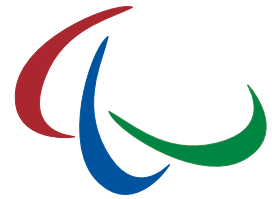
IFs also decide how severe an impairment has to be in order for an athlete to be eligible to compete in their sport. For an athlete to be eligible the impairment must be severe enough that it impacts his or her sport performance.

Since different sports require different abilities, each sport logically requires its own classification system. For example, an impairment of the arms affects performance in a running event in Athletics to a lesser extent than it affects performance in Swimming.

4. Sport Classes

A sport class is a category which groups athletes depending on how much their impairment impacts performance in their sport.

Therefore, a sport class is not necessarily comprised of one impairment type alone, but can be comprised of athletes with different impairments. However, these different impairments affect sport performance to a similar extent. For example, you will find athletes with some loss of



muscle power in one arm and athletes with an amputation below the elbow in one arm competing in the same sport class in IPC Nordic Skiing, because their different impairments have a comparable effect on their racing performance.

In Alpine Skiing and Nordic Skiing, athletes in different sport classes may compete together for one medal, because there are not enough athletes for each sport class to create a competitive event. In these cases, the different sport classes are allocated factors that the athletes' race times are multiplied with. That way the different levels of activity limitations are taken into account.

Some Paralympic sports only have one Sport class, such as Wheelchair Curling and Ice Sledge Hockey. To compete in these sports, the athletes only need to meet the minimal impairment criteria.

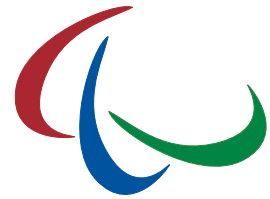
5. How is a sport class allocated to an athlete?

A sport class is allocated through athlete evaluation by classifiers. Each IF trains and certifies classifiers to conduct classification in its sport.

Classifiers assessing athletes with the various physical impairments listed above either have a (para-) medical background or are technical experts in their sport. Athletes with visual impairment are classified by classifiers with a background in ophthalmology or optometry. Psychologists and sport experts are involved with classification for athletes with intellectual impairment.

Classification takes place before competitions. Therefore, athletes who need to be classified arrive at the competition a few days earlier to undergo classification and to be allocated a sport class. During the evaluation process, classifiers follow the Classification Rules of the IF.

Depending on the impairment an athlete might undergo classification several times throughout his or her career. Some impairments change over time, e.g. visual acuity might decrease over time or hypertonia may increase. Also, junior athletes may not yet have reached skeletal maturity by the time of first classification (e.g. IPC Swimming). In these cases, classifiers can decide that the athlete has to be seen again at the next competition or later.



6. Classification systems of Paralympic Winter Sports

Alpine Skiing

IPC Alpine Skiing includes the disciplines Alpine Skiing and Para-Snowboard, which have different Sport Classes:

Alpine Skiing

Included impairment types:

Impaired muscle power	✓	Athetosis	✓
Impaired range of motion	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Visual Impairment	✓

Sport Classes LW 2-9: Standing Skiers

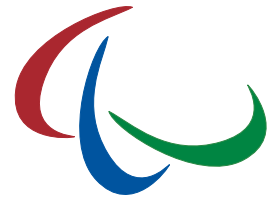
Skiers with leg impairments:

Sport Class LW 1: This Sport Class is allocated to Athletes with an impairment that strongly affects both legs, for example an above knee amputation of both legs or significant muscle weakness in both legs.

Sport Class LW 2: LW 2 Skiers have a significant impairment in one leg. Some skiers, for example, have an impaired leg from birth. You will see them ski with one ski only.

Sport Class LW 3: This Sport Class is for athletes who have a moderate impairment in both legs. They will ski with two skis and prosthesis. Some LW 3 skiers have mild coordination problems or muscle weakness in both legs, or a below knee amputation in both legs.

Sport Class LW 4: Similar to skiers in Sport Class LW 2, LW 4 skiers have an impairment in one leg only, but with less Activity Limitation. A typical example is a below knee amputation in one leg. They will use two skis during the race.



Skiers with arm impairments:

Sport Class LW 5/7: Athletes in this Sport Class ski with an impairment in both arms. Some athletes have amputations and others have limited muscle power or coordination problems. They will race down the slopes without ski poles.

Sport Class LW 6/8: LW 6/8 skiers have an impairment in one arm. Skiers will compete with one ski pole only.

Skiers with combined arm and leg impairments:

Sport Class LW 9: Skiers in this Sport Class have an impairment that affects arms and legs. Some skiers in this class have coordination problems, such as spasticity or some loss of control over one side of their body. Depending on their abilities, they will ski with one or two skis and one or two poles.

Sport Classes LW 10-12: Sit-Skiers

All sit-skiers have an impairment affecting their legs. They are allocated different sport classes depending on their sitting balance, which is very important for acceleration and balancing during the races.

Sport Class LW 10: Skiers in Sport Class LW 10 have no or minimal trunk stability, for example due to spinal cord injuries or spina bifida. They therefore rely mainly on their arms to manoeuvre the sit-ski.

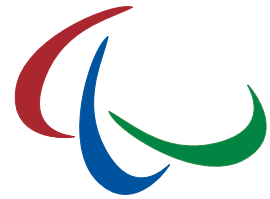
Sport Class LW 11: LW 11 skiers have good abilities in their upper trunk, but very limited control in their lower trunk and hips, as it would be the case for skiers with lower spinal cord injuries.

Sport Class LW 12: This sport class includes skiers with normal or only slightly decreased trunk function and leg impairments. Skiers with leg impairments in Sport Classes LW 1-4 often also fit this sport class, so that they can choose if they want to ski sitting or standing in the beginning of their career.

Sport Classes B1-3: Skiers with visual impairment

Sport Class B1:

Skiers in this sport class are either blind or have very low visual acuity. By way of explanation, their level of visual acuity is such that the athlete cannot recognize the letter



“E” (15x15cm in size) from a distance of 25cm. During the race they are required to wear eyeshades.

Sport Class B2:

The B2 sport class profile includes athletes with a higher visual acuity than athletes competing in the B1 class, but they are unable to recognize the letter “E” from a distance of 4m. Moreover, athletes with a visual field of less than 10 degrees diameter are eligible for this sport class.

Sport Class B3:

The B3 sport class profile describes the least severe visual impairment eligible for Alpine Skiing. Eligible athletes either have a restricted visual field of less than 40 degrees diameter or a low visual acuity.

In IPC Alpine Skiing, you will see athletes with visual impairment skiing with a guide. The guide skis in front of the athlete and verbally gives directions to the athlete.

Para-Snowboard

Included impairment types:

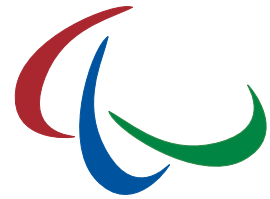
Impaired muscle power	✓	Athetosis	✓
Impaired range of motion	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Visual Impairment	

Sport Classes:

Paralympic Snowboard currently offers two Sport Classes, one for athletes with leg impairments and one for athletes with arm impairments. The sport is under development and with its growth the Classification system will be refined gradually.

Sport Class SB LL:

Snowboarders in the Sport Class SB LL have leg impairments, such as amputations above the ankle, stiffness of ankle or knee joint or muscle weakness. Athletes with amputations will use prosthesis during the races.



Sport Class SB UL:

Snowboarders in the SB UL Class have impairments of the upper limbs, which impacts on the ability to balance when racing down the slopes.

In the Sochi 2014 Paralympic Winter Games, however, only events for athletes in Sport Class SB-LL are offered.

Nordic Skiing

Included impairment types:

Impaired muscle power	✓	Athetosis	✓
Impaired range of motion	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Visual Impairment	✓

The skiers in Cross-Country and Biathlon compete in several different sport classes, depending on the activity limitation that their impairment causes.

Sport Classes LW 2-9: Standing Skiers

Skiers with leg impairments:

Sport Class LW 2: The skiers in Sport Class LW2 have an impairment affecting one leg, for example an amputation above the knee. They will use a prosthesis and ski with two skis.

Sport Class LW 3: This Sport Class includes skiers with an impairment in both legs, such as muscle weakness in both legs.

Sport Class LW 4: Skiers in this Sport Class include those with impairments in the lower parts of one leg, but with less impact on skiing compared to LW 2. Typical examples are amputations above the ankle or loss of muscle control in one leg.



Skiers with arm impairments:

Sport Class LW 5/7: This sport class is designated for athletes with impairments in both arms that prohibit them to use ski poles. Skiers, for example, have no hands or cannot grip firmly. Therefore, you will see them skiing without poles.

Sport Class LW 6: Athletes competing in the LW 6 Sport Class have a significant impairment in one arm, for example a missing arm above the elbow. The impaired arm is fixed to their body and may not be used during the races. With the other hand they will use a ski pole.

Sport Class LW 8: Skiers in this Sport Class have moderate impairments affecting one arm. Athletes, for example, cannot flex the elbow or fingers on one side or they have a below elbow amputation. They will use one ski pole only.

Skiers with combined impairments in arms and legs:

Sport Class LW 9: This sport class is designed for skiers who have an impairment in arms and legs. Some of the LW9 skiers have mild coordination problems in all extremities. Others have amputations affecting at one arm and one leg. Depending on their abilities, they will ski with one or two ski poles.

Sport Classes LW 10-12: Sit-Skiers

All sit-skiers have an impairment affecting their legs. They are allocated different sport classes depending on their trunk control, which is very important for acceleration and balancing during the races.

Sport Class LW 10: LW10 skiers have an impairment that limits their leg and trunk function. They would be unable to sit without supporting himself or herself with the arms, for example due to paraplegia.

Sport Class LW 10.5: Skiers in this sport class also have limited trunk control, but they can keep their sitting balance when not moving sideways.

Sport Class LW 11: LW 11 Skiers have a leg impairment and fair trunk control, which enables them to balance even when moving sideways.

Sport Class LW 11.5: Skiers in this sport class have near to normal trunk control.

Sport Class LW 12: Skiers in this sport class have impairments similar to those described for the sport classes LW 2-4: They have a leg impairment, but normal trunk control. They



are eligible to compete standing or sitting and can chose their preferred way of skiing at their first Classification.

Sport Classes B1-3: Skiers with visual impairment

Sport Class B1:

Skiers in this sport class are either blind or have very low visual acuity. By way of explanation, their level of visual acuity is such that the athlete cannot recognize the letter “E” (15x15cm in size) from a distance of 25cm. During the race they wear eyeshades.

Sport Class B2:

The B2 sport class profile includes athletes with a higher visual acuity than athletes competing in the B1 class, but they are unable to recognize the letter “E” from a distance of 4m. Moreover, athletes with a visual field of less than 10 degrees diameter are eligible for this sport class.

Sport Class B3:

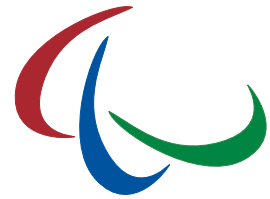
The B3 sport class profile describes the least severe visual impairment eligible for Nordic Skiing. Eligible athletes either have a restricted visual field of less than 40 degrees diameter or a low visual acuity.

For B1 skiers a guide is obligatory and B2 and B3 skiers may choose to ski with a guide. The guide skis immediately ahead of the athlete and verbally informs the athlete of course specifics such as corners, inclines, and declines. In Biathlon, athletes with visual impairment shoot at the target by following sound signals.

Wheelchair Curling

Included impairment types:

Impaired muscle power	✓	Athetosis	✓
Impaired range of motion	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference		Visual Impairment	



Sport Classes:

All wheelchair curlers compete in one sport class only. They all have an impairment affecting their legs, but usually not affecting their arms. Some have a muscle weakness in their legs due to spinal cord injuries and others have a lack of muscle control due to cerebral palsy. Because of they have a significant leg impairment, wheelchair curlers mostly use a wheelchair in daily life.

Ice Sledge Hockey

Included impairment types:

Impaired muscle power	✓	Athetosis	✓
Impaired range of motion	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Visual Impairment	

Sport Classes:

In Ice Sledge Hockey there is only one Sport Class. Athletes have to have an impairment in the lower part of their body that would prevent them from competing in able-bodies Ice Hockey. Players, for example, have amputations affecting their legs, stiffness of the ankle or knee joint, or a leg length difference of at least 7cm. Some players also have muscle weakness in their legs, for example due to Paraplegia.

All players of a team must meet the impairment criteria to compete in Ice Sledge Hockey, so that the impact of impairment on the competition outcome is minimized.