

# Layperson's Guide to Paralympic Classification

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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 the below 10 eligible impairments:

Impairment	Explanation
Impaired muscle power	Reduced force generated by muscles or muscle groups, such as muscles of one limb or the lower half of the body, as caused, for example, by spinal cord injuries, spina bifida or polio.
Impaired passive range of movement	Range of movement in one or more joints is reduced permanently, for example due to arthrogryposis.
	Hypermobility of joints, joint instability, and acute conditions, such as arthritis, are not considered eligible impairments.
Limb deficiency	Total or partial absence of bones or joints as a consequence of trauma (e.g. traumatic amputation), illness (e.g. bone cancer) or congenital limb deficiency (e.g. dysmelia).
Leg length difference	Bone shortening in one leg due to congenital deficiency or trauma.
Short stature	Reduced standing height due to abnormal dimensions of bones of upper and lower limbs or trunk, for example due to achondroplasia or growth hormone dysfunction.
Hypertonia	Abnormal increase in muscle tension and a reduced ability of a muscle to stretch, which can result from injury or illness, such as cerebral palsy.



Ataxia	Lack of co-ordination of muscle movements due to a neurological condition, such as cerebral palsy, brain injury or multiple sclerosis.
Athetosis	Generally characterized by unbalanced, involuntary movements and a difficulty in maintaining a symmetrical posture, due to cerebral palsy, brain injury, multiple sclerosis or other conditions.
Visual impairment	Vision is impacted by either an impairment of the eye structure, optical nerve/ pathways or the visual cortex.
Intellectual Impairment	A limitation in intellectual functioning and adaptive behaviour as expressed in conceptual, social and practical adaptive skills, which originates before the age of 18.

# 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 with any of the 10 impairments.

IFs also decide how severe an impairment must 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 paraplegia and



double above knee amputation competing in the same sport class in IPC Athletics because their different impairments have a comparable effect on their 1,500m wheelchair racing performance.

In individual sports, athletes compete against athletes in their own sport class to ensure the impact of impairment is minimized. In Rowing, for example, athletes compete in three sport classes, depending on whether they use their arms only, their arms and trunk only, or their arms, trunk and legs to accelerate the boat.

In national events and smaller international competitions 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 replaced by coefficients to take the different levels of activity limitations into account.

Some Paralympic sports only have one Sport class, such as Powerlifting. To compete in these sports, the athletes only need to meet the minimal impairment criteria.

In team sports such as Wheelchair Rugby, the players are allocated points, which indicate their activity limitation. A lower score indicates a more severe activity limitation than a higher score. A team is not allowed to have more than a certain maximum sum of points on the field of play at the same time in order to ensure equal competition with the opposing team.

# 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 either are health professionals in a field relevant to the athlete's impairment or are technical experts in their sport. For athletes with physical impairment, the IF certifies classifiers with a background in physiotherapy or medicine, for example, and sport technical experts such as former coaches or sport scientists. Classifiers for athletes with visual impairment have a background in ophthalmology or optometry. Psychologists and sport experts are involved in 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 summer sports

# **Archery**

# Eligible impairment types:

Impaired muscle power

✓ Athetosis

✓ Impaired passive range of movement

Limb deficiency

✓ Ataxia

✓ Leg length difference

Intellectual impairment

✓ Visual Impairment

# **Sport Classes:**

Paralympic archers compete in three sport classes:

#### Sport Class ARW 1:

Archers in this sport class compete in a wheelchair because their impairment includes the loss of leg and trunk function. Also, their arms show a loss of muscle strength, co-ordination or range of movement. For example, one condition that might fit this sport class profile is tetraplegia.

#### Sport Class ARW 2:



Similar to archers in the sport class ARW1, archers in this sport class have a strong activity limitation in their trunk and legs and compete in a wheelchair. Their arms however, show normal function. This profile would likely apply to paraplegic archers.

# **Sport Class ARST:**

The sport class ARST includes athletes competing in a standing position and those who require some standing support because of poor balance. They either have a leg-length difference, limb deficiency or impairments that also affect their arms and trunk.

#### **Athletics**

# Eligible impairment types:

Impaired muscle power	✓	Athetosis	✓
Impaired passive range of movement	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Short stature	✓
Intellectual impairment	$\checkmark$	Visual Impairment	$\checkmark$

# **Sport Classes:**

In Athletics the sport class consists of a prefix "T" or "F" and a number. The prefix T stands for "Track" and F stands for "Field." It indicates for which events the sport class applies, either for track or for field events.

# Sport Classes T/F11-13: Visual impairment

The three sport classes 11, 12 and 13 are allocated to athletes with varying degrees of visual impairment, with sport class 11 including athletes with the lowest vision and sport class 13 including athletes with the best vision meeting the minimum disability criteria. All athletes in the T11 sport class run with a guide runner and are blindfolded. Athletes in sport class T12 may also chose to run with a guide.



# Sport Class T/F 20: Intellectual impairment

Athletes in this sport class have an intellectual impairment, which typically leads to the athletes having difficulties with regards to pattern recognition, sequencing, and memory, or have a slower reaction time, which impact on sport performance in general.

Moreover, the impairment of T/F20 athletes has been proven to have an impact on performance in the different disciplines. 1500m runners have difficulties in pacing, while in Long Jump the impairment makes the anticipation of the take-off board more difficult, for example.

# Sport Classes T32-38 and F31-38: Ataxia, athetosis and hypertonia

The 30s sport classes are allocated to athletes with athetosis, ataxia and/or hypertonia. The impairments typically affect the ability to control legs, trunk, arms and hands. The lower the number is, the more significant the activity limitation.

You will see athletes in the sport classes 31-34 compete in a seated position, e.g. in wheelchair racing or using a throwing chair. By contrast, athletes in the sport classes 35-38 show a better function in their legs and better trunk control and therefore compete standing, e.g. in running events, long jump or throwing events.

#### Sport Classes T/ F40-41:

Athletes with short stature compete in the sport classes T/ F40-41. Athletes in sport class T/F41 are taller than athletes in sport class T/F 40.

# Sport Classes T/F42-47:

These sport classes are designated for athletes with limb deficiencies, such as amputations. In the sport classes 42-44 the legs are affected by impairment and in the sport classes 45-47 the arms are affected, for example by above or below elbow amputations.

For example, a shot putter with a single above knee amputation competes in sport class F42.

All athletes in the 40s classes compete standing and do not use a wheelchair.

# Sport Classes T51-54 and F51-58:



In the 50s sport classes, all athletes compete in a seated position, either in wheelchair or on a throwing chair. Again, a lower number indicates a higher activity limitation.

Athletes competing in wheelchair racing events for T51-54 sport classes differ with regard to their arm and shoulder functions, which are pertinent for pushing a wheelchair. Athletes in classes T51-52 have activity limitations in both lower and upper limbs, for example, due to tetraplegia. Unlike athletes in the sport classes T51-53, athletes competing in T54 have partial trunk and leg function.

For field events, the group of wheelchair athletes competes in more differentiated classes.

Athletes in sport classes F51-53 have limited shoulder, arm and hand functions to different degrees and no trunk or leg function. This profile is for example seen with tetraplegic athletes. Athletes in the class F54 have normal function in their arms and hands.

Throughout the sport classes F55-58 the trunk and leg function increases, which is an advantage in throwing events. For example, an athlete with an amputation on one leg could also compete in the F58 sport class.

#### **Boccia**

# Eligible impairment types: Impaired muscle power ✓ Athetosis ✓ Impaired passive range of movement ✓ Hypertonia ✓ Limb deficiency ✓ Ataxia ✓ Leg length difference Short stature Intellectual impairment Visual Impairment



# **Sport Classes**

There are four sport classes in Boccia, BC1–4. All players compete in wheelchairs due to a loss of leg function and trunk stability, caused by a lack of muscle co-ordination and control.

# BC1:

Athletes in sport class BC1 have severe activity limitations affecting their legs, arms and trunk due to coordination impairments. They can grasp and throw the ball and do not use assistive devices. Athletes with some leg control are allowed to propel the ball with their foot.

# BC2:

Boccia players in sport class BC2 have better trunk control and arm function than the players in the BC1 and BC3 sport class. The abilities of their arms and hands often allow them to throw the ball overhand and underhand and with a variety of grasps.

#### **BC3**:

Athletes competing in sport class BC3 have a significantly limited function in their arms and legs and poor or no trunk control due to cerebral or non-cerebral origin. To help them propel the ball into the court, they use a ramp and other assistive devices to roll the ball.

#### BC4:

While the sport classes BC1-3 include athletes with hypertonia, athetosis or ataxia, sport class BC4 comprises athletes with impairments that have no cerebral origin. Among possible health conditions are multiple sclerosis, spina bifida or amputations affecting all four limbs. Players throw the ball usually with a pendulum swing, sometimes using both hands or arms. They may use a glove to sustain their grip of the ball.

#### Canoe

# Eligible impairment types:

Impaired muscle power ✓ Athetosis ✓



Impaired passive range of movement	$\checkmark$	Hypertonia	$\checkmark$
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Short stature	
Intellectual impairment		Visual Impairment	

# **Sport Classes**

Canoe will have its debut at the Rio 2016 Paralympic Games. The current Canoe classification system is under review and will be replaced with a new system based on scientific evidence for inclusion at the Rio 2016 Paralympic Games. Sport Class information will be shared here once available.

# **Cycling**

# Eligible impairment types:

Impaired muscle power	✓	Athetosis	✓
Impaired passive range of movement	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Short stature	
Intellectual impairment		Visual Impairment	✓

# **Sport Classes**

Athletes with physical impairments either compete on handcycles, tricycles or bicycles. Athletes with visual impairment compete on tandems with a sighted "pilot."

# Handcycle Sport Classes H1-4:

There are four different sport classes for handcycle racing and lower numbers indicate a more severe activity limitation.



Cyclists in the sport classes H1-3 compete in a reclined position. While athletes competing in the H1 class have a complete loss of trunk and leg function and have limited arm function, e.g. because of spinal-cord injuries, athletes in the H3 class have no leg function but good trunk and arm function.

Cyclists in the H4 sport class sit on their knees and can thus use their arms and trunk to accelerate the handcycle. Athletes in this sport class might have leg amputations, paraplegia or mild to moderate athetosis or ataxia.

# Tricycle T1-2:

Tricycle athletes are divided into two classes, T1 and T2. Due to impairments affecting their balance and coordination they ride a tricycle to increase stability. The sport class T1 is allocated to athletes with more significant coordination problems or loss of muscle power than athletes competing in sport class T2.

# Biclycle C1-5:

Athletes who are able to use a standard bicycle compete in the 5 sport classes C1-5. The sport class profiles include amputations, impaired muscle power or range of motion and also impairments affecting coordination, such as ataxia and athetosis. Sport class C1 is allocated to athletes with the most severe activity limitation, while the sport class C5 is allocated to athletes who meet the minimum disability criteria.

For example, cyclists with a double below-the-knee amputation who use a prosthesis are likely to compete in the sport class C3, while an athlete with a below knee amputation and a prosthesis on one leg would compete in the sport class C4.

# **Tandem TB:**

Cyclists with visual impairment race on a tandem with a sighted cycler sitting in front. Cyclists with visual impairment either have a low visual acuity or a visual field restricted to a diameter of 40 degrees.



# **Equestrian**

# Eligible impairment types:

Impaired muscle power	✓	Athetosis	✓
Impaired passive range of movement	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Short stature	✓
Intellectual impairment		Visual Impairment	$\checkmark$

# **Sport Classes**

In Equestrian Dressage riding there are five sport classes called grades for athletes with physical and visual impairments. Lower grades indicate more severe activity limitations and higher grades include athletes with less severe activity limitations.

# **Grade la: Physical impairments**

Athletes in Grade 1a have severe impairments of all limbs and poor trunk control, which usually necessitate the athlete to use a wheelchair in daily life.

# **Grade Ib:** Physical impairments

Athletes in Grade Ib have either severely reduced trunk control and minimally impaired upper limbs or moderate impairments of the upper and lower limbs and the trunk. Most riders in this class use a wheelchair in daily life.

# **Grade II: Physical impairments**

Athletes in Grade II have a very limited ability in both lower limbs and a good trunk balance, or milder limitations in upper and lower limbs with reduced trunk control. For example, an athlete with a severe impairment in one arm and one leg on opposite sides and good trunk and hip control is likely to compete in Grade II.

Some riders in this class use a wheelchair in daily life.



# **Grade III: Physical and visual impairment**

Athletes in Grade III are able to walk, but have a severe impairment in both arms or have no arms, a moderate impairment of all four limbs or short stature. This grade also includes athletes with no sight.

# Grade IV: Physical and visual impairment

Grade IV comprises athletes with impaired range of motion or muscle strength, deficiency on one limb or mild deficiency on two limbs. Moreover, riders with reduced vision or a restricted visual field compete in this grade.

#### Football 5-a-Side

# Eligible impairment types:

Impaired muscle power Athetosis

Impaired passive range of movement Hypertonia

Limb deficiency Ataxia

Leg length difference Short stature

Intellectual impairment Visual Impairment

# **Sport Classes**

There is only one sport class for Football 5-a-Side and all players are visually impaired. The players have a very low visual acuity or no light perception and during the game all players must wear eyeshades. With all players having the same activity limitation, a fair competition between two teams can be assured.

This classification applies to the visually impaired field players. In addition, each team has a sighted, able-bodied goalkeeper, who does not need to undergo classification.



#### Football 7-a-Side

# Eligible impairment types:

Impaired muscle power Athetosis

Impaired passive range of movement Hypertonia ✓

Limb deficiency Ataxia

Leg length difference Short stature

Intellectual impairment Visual Impairment

Athletes competing in Football 7-a-Side have ataxia, hypertonia or athetosis - three impairment types that are most commonly associated with individuals having neurological impairment, with a motor control impairment of a cerebral nature, causing a permanent and verifiable Activity Limitation.

# **Sport Classes**

As Football 7-a-Side is a team sport, classification aims at ensuring fairness with regard to the impact of impairment between both teams. To accomplish this, the players are firstly allocated one of four sport classes, which are described below.

# FT 5:

In this sport class, athletes have hypertonia or spasticity in both lower limbs and to some degree in both upper limbs. The players have difficulties when running, turning and stopping because of an activity limitation in the lower limbs.

# FT 6:

Athletes are affected by coordination and balance problems in all four limbs and trunk. FT6 players typically have difficulties in dribbling the ball when running, acceleration and stopping.



# FT7:

This sport class is designated to hemiplegic players, meaning that only one side of their body is affected, causing the players to walk and run with a limp. On the impaired side the athlete might have problems balancing, so that often the impaired leg is used to shoot the ball.

#### FT8:

This is this sport class describes the minimum impairment eligible for Football 7-a-Side. You may not see the impact of impairment when watching the athlete run or control the ball. However, involuntary muscle contractions and hesitation before explosive movements do constitute activity limitations in comparison to able-bodied players.

#### Fairness between two teams

In order to ensure a fair game between two teams, each team (seven players) has to have one FT5 or FT6 player on the field at all times and is not allowed to have more than one FT8 players on the field.

# Goalball

# Eligible impairment types:

Impaired muscle power Athetosis

Impaired passive range of movement Hypertonia

Limb deficiency Ataxia

Leg length difference Short stature

Intellectual impairment Visual Impairment

Athletes competing in Goalball all have varying degrees of visual impairment. Some are completely blind and have no light perception and some have a low visual acuity. Athletes with a visual field of a maximum diameter of less than 40 degrees are also eligible to compete in Goalball.



In order to ensure a fair competition between the teams, all players must wear eyeshades during the game.

#### Judo

# Eligible impairment types:

Impaired muscle power Athetosis

Impaired passive range of movement Hypertonia

Limb deficiency Ataxia

Leg length difference Short stature

Intellectual impairment Visual Impairment V

# **Sport Classes**

# B1:

Judoka in this sport class are diagnosed with visual impairment and 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.

# 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.

#### B3:

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



# **Powerlifting**

# Eligible impairment types:

Impaired muscle power	$\checkmark$	Athetosis	✓
Impaired passive range of movement	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Short stature	✓
Intellectual impairment		Visual Impairment	

There is only one sport class in Powerlifting. Powerlifting is open to athletes with all eight eligible physical impairments. All athletes have an impairment in their lower limbs or hips, which would prohibit them from competing in able-bodied (standing) weightlifting. In Powerlifting, they therefore compete in bench press. Athletes with leg amputations above the ankle or stiffness of the knee joint would, for example, be eligible to compete.

There is only one sport class in Powerlifting, but the athletes compete in different weight categories just like their able-bodied counterparts in weightlifting.

# Rowing

# Eligible impairment types:

Impaired muscle power	✓	Athetosis	✓
Impaired passive range of movement	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference		Short stature	
Intellectual impairment		Visual Impairment	

# **Sport Classes**

For athletes with physical impairment there are three different sport classes in place:



# **Sport Class AS:**

Athletes in sport class AS primarily use their arms and shoulders to accelerate the boat, as they have minimal or no leg and trunk function, which can be caused by spinal cord injuries, for example.

#### Sport Class TA:

Sport Class TA comprises athletes who can use their arms and trunk when rowing, but are not able to utilize the sliding seat when performing the strokes. These athletes typically have good trunk and arm function. For example, athletes with a double around the knee amputation would fit this sport class profile.

# **Sport Class LTA-PD:**

This sport class includes athletes, who can use their legs, trunk and arms to accelerate the boat and can use the sliding seat. Athletes who miss three fingers on one hand or have a foot amputation might be eligible to compete in this sport class.

Moreover, there are three sport classes for visual impairment:

#### LTA-VI B1, B2 and B3:

Rowers in this sport class have varying degrees of visual impairment. Athletes in sport class B1 are nearly or completely blind. Athletes in the B3 sport class have the least severe eligible visual impairment.

#### **Events**

There are four different events in Para-Rowing.

# LTA Mixed coxed four:

Two male and two female rowers from the sport classes LTA-PD and LTA-B1/2/3 form a team. Due to their physical strength, only two rowers in the team may have a visual



impairment and no more than one may have the sport class LTA-VI B3. All athletes with visual impairment are blindfolded during training and competition.

# TA Mixed double sculls:

One female and one male rower of sport class TA form a team.

AS Women's single sculls and AS Men's single sculls: In sport class AS there are separate events for men and women and the athletes compete in single boats.

# Sailing

# Eligible impairment types:

Impaired muscle power	$\checkmark$	Athetosis	✓
Impaired passive range of movement	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Short stature	✓
Intellectual impairment		Visual Impairment	✓

# **Sport Classes:**

The sport classes are different for the different competition formats in sailing. The sailors either compete in crews of three or two or compete in single boat.

# Three-Person Keelboat:

The sailors are classified with a sport class from 1 to 7, with 7 indicating the least severe and 1 indicating the most severe eligible impairment.

For example, a sailor with complete tetraplegia is likely to compete in sport class 1 and a sailor with a single above knee amputation is likely to compete in sport class 7.

Moreover, athletes with visual impairment are also classified with the same sport classes. Depending on their visual ability, they compete in sport class 3, 5 or 7, with 7 indicating the highest eligible visual ability.



To make sure that no crew has an advantage or disadvantage in competition due to impairment, each crew is only allowed a maximum of 14 points.

#### Two-Person Keelboat:

One sailor has to be allocated the sport class "TPA" and the other one has to be classified as "TPB."

The sport class TPA includes athletes with more severe impairments, which are equivalent to a sport class 1 or 2 on a Three-Person Keelboat. Athletes with complete tetraplegia or a double above-the-elbow amputation could, for example, compete in the TPA sport class.

The sport class TPB means that an athlete only has to meet the minimum disability criteria for sailing. Therefore, athletes of all seven sport classes of the Three-Person Keelboat could compete in the TPB sport class, including athletes with visual impairment.

# Single-Person Keelboat:

To sail on the Single-Person Keelboat athletes only have to pass the minimum disability criteria. Due to safety considerations, only athletes with relatively mild impairments will choose to sail in the Single-Person-Keelboat.

# **Shooting**

# Eligible impairment types:

Impaired muscle power ✓ Athetosis ✓
Impaired passive range of movement ✓ Hypertonia ✓
Limb deficiency ✓ Ataxia ✓
Leg length difference Short stature
Intellectual impairment Visual Impairment

# **Sport Classes:**

In Shooting, there are three different sport classes. These sport classes are specific to the event the athlete competes in — either Pistol or Rifle events.



# Sport Class SH1 (Pistol):

Athletes in this sport class have an impairment affecting one arm or the legs, for example resulting from amputations or spinal cord injuries. As the pistol is held with one hand only, SH1 athletes with impairment in one arm are not disadvantaged. Some shooters compete in a wheelchair, while others will compete in a standing position.

# Sport Class SH1 (Rifle):

This sport class is designated to rifle shooters with an impairment in their legs, for example with a stiff ankle or paraplegia. They support their rifle with both arms and hands. Some athletes will compete in a seated position.

# Sport Class SH2 (Rifle):

SH2 Rifle shooters have an impairment that affects their arms, which requires them to use a shooting stand to support the weight of the rifle. Athletes with shortened or amputated arm, for example, would require such a shooting stand. Some SH2 shooters also have a leg impairment, so that you will see many athletes sit during competing. Athletes with tetraplegia, which affects both arms and legs, would also compete in this sport class.

# Sitting Volleyball

# Eligible impairment types:

Impaired muscle power

Impaired passive range of movement

Limb deficiency

Leg length difference

✓ Ataxia

✓ Short stature

Intellectual impairment

✓ Visual Impairment

#### **Sport Classes**

There are two sport classes in Sitting Volleyball, called MD for "Minimally Disabled" and D for "Disabled". The impairment of athletes in sport class MD is generally less severe than the impairment of athletes competing in sport class D.



For example, with an amputation through the foot a player would be classified as MD, whereas athletes with above knee amputations would be allocated sport class D. Impairments can affect the lower and the upper limbs, for example causing stiffness of joints or shortening of extremities.

#### Fairness between two teams

To ensure a fair competition between two teams, a team may only have one MD player on the court. The other five players must have sport class D.

# **Swimming**

# Eligible impairment types:

Impaired muscle power	$\checkmark$	Athetosis	✓
Impaired passive range of movement	✓	Hypertonia	$\checkmark$
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Short stature	✓
Intellectual impairment	$\checkmark$	Visual Impairment	✓

# **Sport Classes**

The sport class names in Swimming consist of a prefix "S," "SM," or "SB" and a number. The prefixes stand for the strokes and the number indicates the sport classes.

The prefixes stand for:

- S: Freestyle, Butterfly and Backstroke events
- SB: Breaststroke
- SM: Individual Medley

# Sport Classes S1 - S10: Physical impairment

There are ten different sport classes for athletes with physical impairment, numbered 1-10. A lower number indicates a more severe activity limitation than a higher number.



Athletes with different impairments compete against each other, because sport classes are allocated based on the impairment has on swimming, rather than on the impairment itself.

To evaluate the impact of impairments on swimming, classifiers assess all functional body structures using a point system and ask the athlete complete a water assessment. The total number of points then determines the athlete's S and SB sport classes. Due to the different demands of S and SB events, swimmers are often allocated different S and SB sport classes. The SM sport class calculated from the S and SB sport class.

The following are general examples of impairments and resulting functional abilities described in each sport class profiles. The below combinations of S, SB and SM sport classes are the most common combinations, but it is possible that that athlete has another combination of sport classes, for example S7, SB7 and SM 7.

# **S1 SB1 SM1**

Swimmers in this sport class have a significant loss of muscle power or control in legs, arms and hands. Some athletes also have limited trunk control. This may be caused by tetraplegia, for example. Swimmers in this class usually use a wheelchair in daily life.

#### **S2 SB1 SM2**

Swimmers in this sport class mainly relay on their arms for swimming. Their hand, trunk and leg function is limited due to tretraplegia or coordination problems, for example.

# **S3 SB2 SM3**

This sport class includes athletes with amputations of both arms and legs. Swimmers with reasonable arm strokes but no use of their legs or trunk and swimmers with severe coordination problems in all limbs are also included in this sport class.

#### **S4 SB3 SM4**



Swimmers who can use their arms and have fair function in their hands, but who cannot use their trunk or legs would swim in this sport class. Athletes with amputations of three limbs could also swim in this sport class.

#### S5 SB4 SM5

Swimmers with short stature and an additional impairment, with loss of control over one side of their body (hemiplegia) or with paraplegia compete in this sport class.

# **S6 SB5 SM6**

This sport class includes swimmers with short stature or amputations of both arms, or moderate coordination problems on one side of their body, for example.

# S7 SB6 SM7

This sport class is designated to athletes with one leg and one arm amputation on opposite sides, or a paralysis of one arm and one leg on the same side.

Moreover, swimmers with full control over arms and trunk and some leg function can compete in this class.

#### **S8 SB7 SM8**

Swimmers who have an amputation of one arm are eligible to compete in this sport class. Also, athletes with significant restrictions across hip, knee and ankle joints could compete in this sport class.

#### **S9 SB8 SM9**

Athletes in this sport class, for example, swim with joint restrictions in one leg or double belowthe-knee amputations.

#### S10 SB9 SM10

This class describes minimal physical impairments of eligible swimmers. These include the loss of one hand or a movement restriction in one hip joint.



# Sport Classes 11-13: Visual Impairment

Swimmers with visual impairment compete in the sport classes 11-13, with 11 meaning a complete or nearly complete loss of sight and 13 describing a low visual acuity or a restricted visual field. Athletes in sport class 11 compete with blackened goggles.

# Sport Classes 14: Intellectual impairment

S14 swimmers have an intellectual impairment, which typically leads to the athletes having difficulties with regards to pattern recognition, sequencing, and memory, or have a slower reaction time, which impact on sport performance in general. Moreover, S14 swimmers show a higher number of strokes relative to their speed than able-bodied elite swimmers.

# **Table Tennis**

# Eligible impairment types:

Impaired muscle power	$\checkmark$	Athetosis	✓
Impaired passive range of movement	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Short stature	✓
Intellectual impairment	$\checkmark$	Visual Impairment	

# **Sport Classes**

In Table Tennis, players with physical impairments compete in sport classes 1-10 and athletes with an intellectual impairment compete in sport class 11.

Athletes in the sport classes 1-5 compete in a wheelchair and athletes in sport classes 6-10 compete standing. In more detail, the sport classes for athletes with physical impairment can be described as follows:

#### Sitting classes:



- <u>Sport Class 1:</u> Class 1 players have no sitting balance and a significantly affected playing arm, for example due to tetraplegia. Players would often support their sitting balance with the non-playing arm.
- Sport Class 2: Players in this sport class also have no sitting balance, and their playing arm is moderately affected. Like the players in sport class 1, they tape the racket to the hand to make up for limited grip function.
- Sport Class 3: Players in sport class three have full hand and arm function. With their good arm function, they can manoeuvre the wheelchair while maintaining good balance of their upper body. The athlete's impairment may result from spinal cord injuries or neurological conditions, such as cerebral palsy.
- Sport Class 4: Class 4 players have some sitting balance and fully functional arms and hands. They can move to the front to meet their opponent's serve.
- <u>Sport Class 5:</u> This sport class includes athletes who compete in a wheelchair, and have normal sitting balance, arm and hand function. With the good trunk function, they can stretch out to the sides to hit the ball. The sport class includes athletes with lower spinal cord injuries.

# **Standing Classes:**

- <u>Sport Class 6:</u> Class 6 players have impairments affecting both arms and legs, who play standing. The sport class includes, for example, athletes with the coordination ataxia, athetosis or hypertonia which affects the legs and the playing arm. These impairments impact on the balance and the quality of strokes.
- <u>Sport Class 7:</u> Class 7 players either have significant impairments of both legs or the playing arm, or impairments affecting arms and legs moderately. For example, a player with an amputation of both arms above the elbow could compete in this sport class.
- <u>Sport Class 8:</u> Athletes with moderate impairment of their legs or moderately affected playing arm compete in this sport class. An athlete with muscle weakness in one leg due to polio would for example compete in this sport class.
- Sport Class 9: Class 9 players have mild impairments affecting the legs or the playing arm. Athletes with a stiff knee or restricted elbow of the playing arm compete in this sport class. Also, athletes who have significant impairments in the non-playing arm compete in this sport class. This will impact on serving the ball.
- Sport Class 10: Players in this sport class have relatively mild impairments, such as a stiff ankle or wrist of the playing arm. Players with short stature may also play in sport class 10.



# Sport class 11 includes athletes with intellectual impairment

# **Triathlon**

# Eligible impairment types:

Impaired muscle power	$\checkmark$	Athetosis	✓
Impaired passive range of movement	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference		Short stature	
Intellectual impairment		Visual Impairment	$\checkmark$

# **Sport Classes**

Triathlon will have its debut at the Rio 2016 Paralympic Games. The current Triathlon Classification system is under review and will be replaced with a new system based on scientific-evidence for inclusion at the Rio 2016 Paralympic Games. Sport Class information will be shared here once available.

#### **Wheelchair Basketball**

# Eligible impairment types:

Impaired muscle power	<b>√</b>	Athetosis	✓
Impaired passive range of movement	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Short stature	
Intellectual impairment		Visual Impairment	

# **Sport Classes**

Wheelchair basketball players are allocated one of eight sport classes from 1.0 to 4.5. Sport class 1.0 describes the most significant activity limitation.



All athletes compete in a wheelchair and have an impairment affecting their legs or feet. Players, for example, have amputations or paraplegia. Not all the players are wheelchair users in daily life.

While most athletes have normal arm and hand function, the main differences between athletes of different sport classes are trunk control and sitting balance, which allows them to lean forward and sideways to catch and pass the ball:

# Sport Class 1.0:

Players in sport class 1.0 have no trunk control and thus cannot bent forward or sideways or rotate to catch and pass the ball. To keep a stable position, the backrest of the wheelchair is a bit higher and the athletes are strapped to the wheelchair.

# Sport Class 2.0:

These players can lean forward and rotate their body to some extent, allowing them to catch the ball within a larger radius. Like their team members in sport class 1.0, their wheelchairs have a higher backrest and strapping for trunk support.

# Sport Class 3.0:

This profile describes players who can fully rotate and lean forward, but cannot to lean to the sides. As they do not need sitting support, their wheelchair has a low backrest.

# Sport Class 4.0:

While 4.0 players can move forward and rotate like their team members in sport class 3.0, they can partially lean to the sides as well. Often players in this sport class can lean to one side only, for example, because an impairment in one leg would cause a loss of balance to the other side.

#### Sport Class 4.5:

Players in this sport class have the least eligible impairment and have no restriction in trunk rotation or leaning forward or sideways. Players with a foot amputation or a 6 cm leg length difference would be eligible for this sport class.



An athlete can also be allocated the sport classes 1.5, 2.5 or 3.5. The activity profile of these "half-pointers" fit in between the profiles of the lower and higher class.

#### Fairness between two teams

Each team of five players is only allowed to have 14 points on the field of play at the same time.

# **Wheelchair Dance**

Impaired muscle power	$\checkmark$	Athetosis	✓
Impaired passive range of movement	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Short stature	
Intellectual impairment		Visual Impairment	

# **Wheelchair Fencing**

# **Eligible impairment types:**

Impaired muscle power	$\checkmark$	Athetosis	✓
Impaired passive range of movement	✓	Hypertonia	✓
Limb deficiency	✓	Ataxia	✓
Leg length difference	✓	Short stature	
Intellectual impairment		Visual Impairment	

# **Sport Classes**

All wheelchair fencers have an impairment of their legs or feet that prohibits them from competing against standing, able-bodied fencers. They all compete in wheelchairs, and are allocated one of the below sport classes depending on their trunk function. This is because the wheelchairs cannot be moved during competition to get closer to the opponents or to avoid the opponent's attack, so that the athletes rely on moving their upper body while sitting in the chair.



# Category A:

Fencers in Category A have good trunk control, allowing them to bend forward and sideways explosively when attacking their opponent or dodging an attack. Also, their fencing arm is fully functional. Fencers in this sport class have lower limb deficiency or paraplegia, for example. Not all of fencers in this category use a wheelchair in their daily life.

# Category B:

Category B fencers have an impairment that impacts on their legs as well as their trunk or their fencing arm. Some of the fencers, for example, have incomplete tetraplegia. You will see them support their trunk movements with their non-fencing arm to effectively attack the opponent.

# **Wheelchair Rugby**

# Eligible impairment types:

Impaired muscle power
✓
Athetosis
✓

Impaired passive range of movement
✓
Hypertonia
✓

Limb deficiency
✓
Ataxia
✓

Leg length difference
Short stature

Intellectual impairment
Visual Impairment

# **Sport Classes**

The sport was originally designed for athletes with tetraplegia. Today, the team sport also includes players with other impairments that cause limited arm and leg function.

Athletes with eligible impairment are allocated a sport class based on their abilities in performing the wheelchair rugby skills of ball handling, such as passing, catching, carrying, and dribbling the ball; and wheelchair skills including pushing, starting, stopping, directional changes, tackling and blocking. Therefore, one sport class includes athletes with different eligible impairments, but the impairments lead to a similar activity limitation in Wheelchair Rugby.

There are seven different sport classes: 0.5, 1.0, 1.5, 2.0, 2.5, 3.0 and 3.5. The most significant activity limitation is described in the 0.5 sport class profile.



Below you will find a short description of four out of seven sport class profiles.

# Sport Class 0.5:

Players in sport class 0.5 have significantly limited function in their shoulder, arms and hands, for example due to tetraplegia. The player would typically catch the ball by tapping it into the lap and throw the ball with a scoop pass. Their main role on the court is as blocker.

# Sport Class 1.5:

Players in sport class 1.5 have fair arm function, which makes him or her an excellent blocker. 1.5 players will also handle the ball on occasion, but typically they show some instability in the wrist, which leads to limited ball security. Some athletes also have asymmetrical arm function, so that they mainly handle the ball with their strong arm only.

# Sport Class 2.5:

Players in this sport class have good shoulder stability and arm function. They might have some trunk control. Due to their ability to flex their fingers, they can perform overhead passes, catch the ball with two hands and manoeuvre the wheelchair effectively. In the team they are ball handlers and fairly fast playmakers.

#### Sport Class 3.5:

3.5 players have good arm and hand function, which makes him or her a major ball handler in the team. They have some trunk function, which help them to rapidly accelerate the wheelchair. They will typically have a high and upright sitting position. Also, an athlete with above knee amputations of both legs and with a loss of fingers and hand surface on both sides may play in this sport class. You will see 3.5 players perform controlled one hand, long-distance passes.

#### Fairness between two teams

Players with different sport classes play together in a team of four. The total number of points in a team on court for four players may not exceed 8 points. This way the impact of impairment on the game is balanced between the two teams.



#### **Wheelchair Tennis**

# Eligible impairment types:

Impaired muscle power ✓ Athetosis ✓
Impaired passive range of movement ✓ Hypertonia ✓
Limb deficiency ✓ Ataxia ✓
Leg length difference ✓ Short stature

Intellectual impairment Visual Impairment

# **Sport Classes**

There are two sport classes in Wheelchair Tennis and all players have in common that they have an impairment that affects their legs.

# Open Class:

This sport class is designated for athletes, who have a significant and permanent impairment of one or both legs and normal arm function. This profile may match with athletes with paraplegia or leg amputations, for example.

# **Quad Class:**

Players in this class have an impairment affecting their playing arm as well as their legs. This limits their ability to handle the racket and to move in the wheelchair. You will find that players may use tape to securely grip the racket.

# 7 Want to learn more?

If you would like to learn more about classification, please take a look at the following documents.



#### **IPC Classification Code**

This is the most important document governing the Paralympic Movement in regards to classification. It helps to support and co-ordinate the development and implementation of accurate, reliable and consistent sport focused classification systems. It was published in 2007 and is part of the IPC Handbook.

#### Available at:

http://www.paralympic.org/sites/default/files/document/120201084329386 2008 2 Classific ation Code6.pdf

# IPC Position Statement on Background and Scientific Rationale for Classification in Paralympic Sport

This position statement, which was written by Sean Tweedy and Yves Vanlandewijck, explains what evidence-based classification means and how classification systems can be based on scientific evidence. The IPC has officially committed to the aim of evidence based classification with the approval of this position statement by the Governing Board in 2009.

#### Available at:

http://www.paralympic.org/sites/default/files/document/120203171258165 Sec ii chapter 4. 4 Position Statement on Classification.pdf

# Introduction to the Paralympic Movement

If you want to learn more about the history of the Paralympic Movement and classification, from the beginnings in Stoke Mandeville to today's London 2012 Paralympic Games, then the article "Introduction to the Paralympic Movement" by Sean Tweedy and P. David Howe will be interesting for you.

The article is available in the following book:

Y.C. Vanlandewijck & W.R. Thompson (Eds.): The Paralympic Athlete. Wiley-Blackwell: IOC Handbook of Sports Medicine and Science.

#### **IPC Website**

For news and videos about the Paralympic Movement, information about the IPC structure and classification, please visit the IPC website: www.paralympic.org.

You may also find the Classification section on the website interesting: <a href="http://www.paralympic.org/Classification/Introduction.">http://www.paralympic.org/Classification/Introduction.</a>



The website also provides links to the Paralympic Sports' websites (<a href="http://www.paralympic.org/Sports">http://www.paralympic.org/Sports</a>), where you can learn more about classification for the different sports.