

Wheelchair Handball Classification Manual



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WHEELCHAIR HANDBALL CLASSIFICATION TEAM

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ABBREVIATIONS AND GLOSSARY

Abbreviations

Abbreviations	Definition
WCH	Wheelchair Handball
IHF	International Handball Federation
EHF	European Handball Federation
WC	Wheelchair
CNS	Central Neurological System / Brain
CP	Cerebral Palsy
MEC	Minimal Eligibility Criteria
UL	Upper Limbs
LL	Lower Limbs
TBI	Traumatic Brain Injury
SCI	Spinal Cord Injury (Spinal traumatic/section Medullar Vertebral)
Stroke	Cerebral Vascular Disturb/Lesion
MRC of WCH	WCH Manual of Rules and Classification
ROM	Range of Motion
PROM	Passive Range of Motion
Abds	Abductors

Glossary of Terms Definition

Term	Definition
Sport Class	The given class to the player after classification process.
Status Class	The status of the outcome class.
Rules	The set of rules and policies that governing the classification and competition.
Activity limitation	Difficulties of the motor activity.
Player	Sportive person that participate on WCH.
Evaluation	The process that involve the evaluation of the player according the Manual of the WCH classification.
Classification	The structure to hold the competition, to ensure that the player is relevant to sports performance and ensure that it is on equal footing with the other players.
Evaluation period	Period between the player's assessment from medical evaluation to the technical and functional competition assessment.
Master List	The list of the classification outcome results.
Classification Panel	The binder classification group appointed by the IF or NF (EHF/IHF/FAP) to determine the sports class and Status according to the rules.
Classifier	The person authorized by the IF or NF (EHF/IHF/FAP) and appointed to do the

	evaluation of the player as a member of a classification Panel.
Competition	The set of events under the jurisdiction of the IF or NF (EHF/IHF/FAP).
Eligible	Means that the player has a framed in MEC.
Head of Classification	The classifier responsible for the direction, administration, coordination and implementation of the classification of the WCH.
Physical Impairment deficiency	Motor/physical problems in the structure or function of the body that cause difficulty or loss of function.
Triceps	Muscle that makes the length of the forearm.
Hemiplegia	When you have one side of the body affected.
Diplegia	When has the pelvic girdle and lower limbs more affected than the upper limbs on brain source.
Paraplegia	Has the pelvic girdle and the LL affected as a spinal cord in origin.
Medical Intervention	Any intervention such as surgery, medication or any other treatment that affects the eligibility of a player.
Artrodese	When a joint is fixed without mobility.
Not Eligible	A consequence of not having at least one MEC.
Dysmelia or Agenesis	Congenital Malformation of a limb or part of the body.

1. ELIGIBILITY

For different types of disabilities and/or repeated impairments can be considered as eligible for WCH:

Deficiency in muscle strength: the force generated by the muscle or muscle group, such as the muscles of one limb, one side of the body or the lower half of the body are reduced, as for example, Spinal Cord due to an injury, spina bifida, muscular dystrophy demyelinating disease or any neuromuscular problems and polio.

Deficiency in Passive Range of Motion: the range of motion in one or more joints is reduced or limited on a permanent basis. There is a degree of normal range of movement of a joint and these are diminished. The hypermobility and instability of joint (shoulder dislocation), as well as acute conditions like arthritis, are not included.

Loss or limb deficiency: there is total or partial absence of the bones or joints because of a trauma, an injury or other illness (traumatic amputation) or congenital (Dysmelia, Agenesis).

Difference in length of the legs: significant bone in a leg shortening due to congenital or trauma. The difference in length between the legs should be at least 7 cm. To measure it, the player should be lying supine, with the legs relaxed and fully extended. Measure the length from the anterior superior iliac spine to the medial malleolus in each leg and then compare the results.

Hypertonia: condition characterized by abnormal increase in muscle tone and spasticity (resistance to passive movement). It may be a result of an injury, an illness or conditions involving the lesion of the central nervous system. It might be caused by Cerebral Palsy (CP), but also a brain damage (stroke, Traumatic Brain Injury). Not to be confused with joint stiffness which is another entity clinic.

Ataxia: deficiency consisting in lack of coordination of movement and loss of balance. Sometimes it is barely visible in the absence of the movement but can be recognised in the articulation of words. Is more visible when a movement is required which can be exacerbated or become slower - slowing. When the injury occurs in children under 2 years of age it is CP, but can also be due to a brain damage (stroke, trauma) or multiple sclerosis or any other neurological or metabolic disorder.

Athetosis: motor dysfunction, characterized by inability to control a movement whether you are standing or to perform any task, involuntary movements and difficulty of maintaining symmetrical posture. When the injury occurs in children under 2 years of age it is CP, but can also be due to a brain damage (stroke, trauma).

Les Autres: all other deficiencies, including degenerative pathology osteoarthritis that might make the motor and suitable functionality in our classification system being analysed on a case by case basis.

1.1. Wheelchair Handball (WCH) Types of Disabilities who may be Eligible:

- Lack of muscle strength;
- Lack of amplitude of movements;
- Members with disabilities;
- Athetosis;
- Ataxia;
- Hypertonia/Spasticity;
- Les Autres.

1.2. Eligibility Criteria:

Impairment Type	Examples of health conditions likely to cause such impairments	Impairments
Hypertonia	Cerebral palsy, stroke, acquired brain injury, multiple sclerosis	High muscle tone Inclusions: Hypertonia / High muscle tone
Ataxia	Ataxia resulting from cerebral palsy, brain injury, Friedreich’s ataxia, multiple sclerosis, spinocerebellar ataxia	Control of voluntary movement Inclusions: Ataxia only Exclusions: Problems of control of voluntary movement that do not fit description of Ataxia
Athetosis	Cerebral Palsy, stroke, traumatic brain injury	Involuntary contractions of muscles Inclusions: Athetosis, chorea Exclusions: Sleep related movement disorders

Limb deficiency	Amputation resulting from trauma or congenital limb deficiency (dysmelia).	Total or partial absence of the bones or joints of the shoulder region, upper extremities, pelvic region or lower extremities.
Impaired Passive Range of Movement (PROM)	Arthrogryposis, ankylosis, post burns joint contractures	Impaired joint mobility Exclusions: Hypermobility of joints.
Impaired Muscle Power	Spinal cord injury, muscular dystrophy, brachial plexus injury, Erb's palsy, polio, spina bifida, Guillain-Barre syndrome	Muscle power
Leg Length Difference	Congenital or traumatic causes of bone shortening in one leg	Aberrant dimensions of bones of right lower limb OR left lower limb but not both. Inclusions: shortening of bones of one lower limb Exclusions: shortening of bones of both lower limbs; any increase in dimensions

1.3. Methods of Evaluation of Hypertonia/spasticity and Muscle Strength:

Evaluation of Spasticity/hypertonia Scale:

0	No change in muscle response in movements of flexion and extension.
1	Slight increase in the response of the muscle to the movement (flexion or extension) visible on palpation or relaxation, or just minimal resistance at the end of the arc of movement.
1+	Slight increase in muscle resistance to motion in flexion or extension followed by a minimal resistance throughout the rest of the range of motion (before half of the amplitude of the movement).
2	Notable increase in muscle strength during most of the joint range of motion, but the joint does not move easily.
3	Marked increase in muscle strength; the passive movement is difficult in flexion or extension.
4	The parties affected are rigid in flexion or extension when they move passively.

Modified Ashworth Scale (Bohannon & Smith (1987))

Muscle strength (muscle power) assessment scale:

0	Absent	Not observe signs of muscle contraction.
1	Minimal	Discrete signals contractility without joint movements.
2	Poor	Mobility in all senses, without overcome gravity.
3	Regular	Normal range of movements against the action of gravity.
4	Good	Full mobility against the action of gravity and with a certain degree of resistance.
5	Normal	Complete mobility and resistance against the action of gravity.

Daniels & Worthingan Scale (2002)

1.4. Minimum Eligibility Criteria for WCH:

- Midfoot amputation, ankle arthrodesis;
- May not contain any activity on foot/ankle or dorsi or plantar flexion ($\leq 10^\circ$);
- Sharp loss of muscle strength in LL;
- Visible deficiency on LL with loss of functionality;
- Loss of passive range of motion at the level of the LL (PROM). Any player who present a handicap on LL and not being able to practice on a regular basis, formal handball.

All abled players will be classified as class 5 and are also eligible to play in EHF WCH tournaments and matches.

1.5. Medical and Functional Profile of Sports Classes:

The teams may include combining all the shortcomings allowed in WCH practice covering the loss of motor skills (limbs, hands, feet, hips and trunk) for the practice of wheelchair handball. (it means that the players that compose de teams must have the minimal disability/impairment criteria's, allowed on WCH)

Players with functional capacity within the parameters of eligibility will be evaluated based on the fundamental skills for the practice of the sport such as the wheelchair (WC) control (handle, accelerate, brake, change direction, change the tempo, block his own chair and the opponent) and ability to manipulate the ball of handball (reception, pass, dribble, shoot, block, ability to defend the ball). In this way, in the same sport class may include players with different disabilities, but with similar performances/functionality at the level of practice.

The system includes five (5) different classes: **1, 2, 3, 4** and **5**, where class **1** corresponds to players who exhibit less functionality and **5** to those who have greater functional capacity and MEC.

The final ranking is the result of the combination of medical assessment and functional/technical assessment. The classification evaluates what the player can (is able to) do and not how well he/she can do it.

When there are any doubts regarding the final class (border line class), the classifier should give to the player a higher class instead of a lower class (please see point 2.3.).

2. A GUIDE TO WHEELCHAIR HANDBALL CLASSIFICATION

2.1. Functional Classification

Classification is a unique and integral part of sport for persons with disabilities. The purpose of classification is to ensure fair and equitable competition at all levels of sport and to allow players to compete at the highest level, regardless of individual differences in physical function.

Classification systems have been in use in sport for persons with disabilities since 1940. The early classification systems were based on medical diagnoses, such as spinal cord injury, and were not specific for the unique functional demands of each sport. However, more recent transitions from medical classification to sport-specific classification systems have resulted in functional classification, where class is based on a player's functional abilities specific to the physical demands of each unique sport.

Functional classification systems ensure that players with a combination of impaired or absent upper and lower limb movement have an opportunity to play the sport and that the strategies and skills of competing teams and players, rather than the amount of movement of the players, are the factors determining success in competition.

2.2. The EHF-WCH Functional Classification System

Wheelchair Handball has been created for persons with tetraplegia or tetra-equivalent, amputees, cerebral palsy function or any other players that cannot compete on regular handball with Minimal Disability/Impairment Criteria. The first classification system was medically based with ten (10) classes, largely determined by medical diagnosis and level of spinal cord injury or amputation, including, each team could have a player without disability. In 2013, the FAP invited IPC international classifiers to observe the games and the system was changed to a functional classification system unique to the sport of wheelchair handball. This was done for many reasons, including the need to have a system that would accommodate the growing number of players both with and without spinal cord injury (such as polio, cerebral palsy, muscular dystrophy, multiple sclerosis and amputations).

2.3. The Classification Process

Wheelchair handball players, because of the unique and varied nature of their muscle function, demonstrate combinations of varying upper and lower abdominals, back, trunk, chest, upper and lower limbs movement in performing the wheelchair handball skills of ball handling, such as passing, catching, shooting and dribbling; and wheelchair skills that include pushing, starting, stopping, directional changes, tackling and blocking.

To determine a player's class, classifiers observe players as they perform a variety of these movements. Firstly, classifiers test players' limbs for strength, flexibility, sensation, passive range of movements, muscle power and muscle tone; and players' trunks (upper and lower abdominals and back muscles) for balance, ability to bend over and rise up and the ability to rotate to both sides (in combination with hips and leg function, if present). The player is then observed performing both ball handling and wheelchair skills prior to game play and during game play, if necessary. In addition, the player's execution of ball and wheelchair handling skills are observed on court during technical assessment and actual game play (observation assessment).

Typically, a player is assigned a class following the completion of the bench test and the functional skills test prior to game play (observation of ball handling and wheelchair skills). The player's execution of ball and wheelchair handling skills are observed on court during actual play to make a final determination of the player's class.

Occasionally, a player presents characteristics of two classes (for instance, following bench and functional skills tests, the player appears to fall between two classes). Standard practice in classification is to assign the player the higher class to begin competition and leave them "in review" for observation during game play. Review status is indicated by the letter "R" following the player's class number (such as WCH1R). Observation of the player's function on court during actual game play would be the final determination of the player's class. The classification panel attempts to make these decisions as quickly as possible, however, it is dependent on having the opportunity to adequately observe the player during competition. If a player does not have an opportunity to play a sufficient amount of time during the game, the player may not get a final class determination. In some cases when a player does not get adequate playing time throughout the tournament, the player may conclude the tournament under review (in this case, following the tournament the player will still have a class number followed by an R, such as WCH1 R).

For example, a player appears to be between two classes following the bench and functional skills tests—based on the bench test and functional skills test the player functions in some areas like a WCH2 player while in others like a WCH1 player. In this example, the player would begin play as a WCH2R player, which indicates the player, maybe, has a WCH1 class, but is still under review. Observation of the player's function on court during actual game play would determine whether the "R" or review is removed and whether the player's final class was WCH1.

The classification of ambulant players who do not use the WC daily should be based on the motor skills functionality. The skills of using WC will not be judged. It rests with the players to learn and practice how to operate WH.

2.4. Player's Responsibilities

It is responsibility of both, players and coaches, to be educated about the classification process and the proper procedures. Players are responsible for arriving to the classification area at the assigned times with the complete equipment using during a match (playing chairs, gloves, straps etc.).

All players have to accept the rules and conditions of the tournament by signing the Consent Form (a consent form is a form/doc that the athletes must sign to be classified). It means that they allow the classifiers to do all the procedures, test and evaluations to give him/her a sport class. That's a doc that is include on the Manual). In case a player does not fully cooperate during the classification process, such behaviour may result in:

- not receiving a classification, thus be ineligible to play;
- disqualification from a tournament, thus be ineligible to play;
- change of their class at any time;
- lack of awarding with an international class.

In case a player enters the classification area under the influence of any performance altering substance, he/she will be asked to leave without receiving a classification and therefore will not be eligible to participate. It will be considered as a misrepresentation and punished according to the report of the Head of Classification and the decision of the EHF Legal Bodies.

2.5. Team Point Totals

There are five classes ranging from 1 to 5 (please see the point 1.5.) with functional characteristics identified for each players class.

In wheelchair handball with six (6) players, the total number of points allowed on court at any time is 24.

2.6. Class Profiles

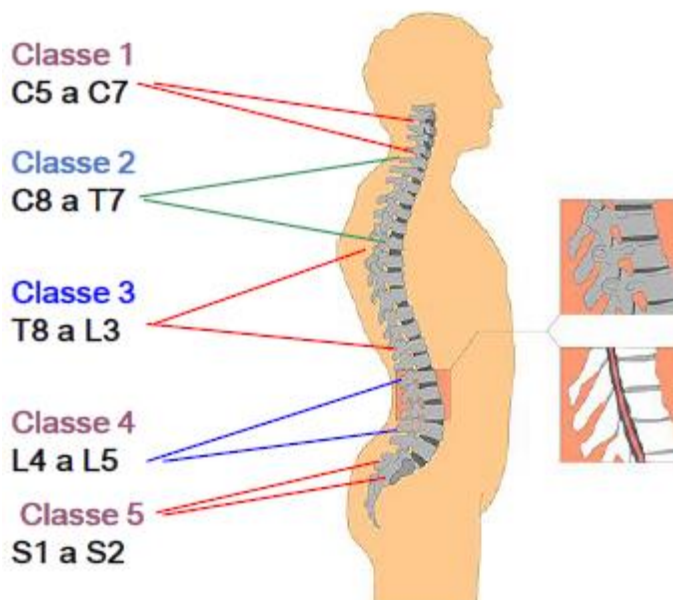
Wheelchair Handball is a sport originally developed for players with tetraplegia due to spinal cord injury, traumatic brain injury, cerebral palsy, lower limbs amputees and neuromuscular conditions such as poliomyelitis. Now, there are players participating in Wheelchair Handball with conditions other than spinal cord injury and poliomyelitis, such as muscular dystrophy and various types of central and peripheral nervous system conditions.

Also, players with conditions, such as multiple amputations, congenital limb defects and other similar musculoskeletal conditions are playing Wheelchair Handball. Players with conditions other than neurological impairments may be eligible if the impairment type and severity results in activity limitation that impacts sport performance in a similar way to that of a player with tetraplegia, paraplegia or diplegia.

Nevertheless, we do not want to exclude any players. The abled players will get the possibility to play Wheelchair Handball as well and will be classified as class 5.

The description of the classes presented below presents a very general profile of each class, which means that a player may display certain characteristics of higher or lower sport class.

SPINAL CORD INJURY LEVELS



3. CLASSES

3.1. Class 1

The player may present quadriplegia; severe ataxia, hemiplegia, athetosis and poor function of the hands, accented with muscular dystrophy muscle strength loss (1-2), without triceps. The trunk has very poor functionality.

An asymmetrical diplegia, which can still occur in this case, may give rise to confusion with hemiplegia, which is a more compatible situation in class 2. In this context, the movements of the trunk must be enhanced (front worth to back worth flexion, rotation and lateral flexion).

Upper Limbs: the UL is affected symmetrical or asymmetrical to the proximal and/or distal level, with muscle strength up to 3. Weak shoulder, sometimes weak hand; hardly appearance of an athetosis or ataxia without a component rigidity; hypertonia; spasticity in UL grade 2 with limitation of mobility, sometimes the full extent (at least in one of the arms) cannot be done.

Trunk: the trunk function is weak and static.

Lower abdominals: the lower abdominal muscle strength feature of 0-1, without any functionality.

Lower limbs: the spasticity will be of grade 4-3. The player may walk with support in short distances. Some severe hemiplegia's may submit a 4-3 grade spasticity in the affected side and present a good function in the side against side.

3.1.1. Feature:

Wheelchair: The player can control the wheelchair independently with difficulties; the changes of rhythm and direction are performed slowly.

Trunk: static, needs great support and fixation on wheelchair (back of WC high with fixing band).

Take ball: with both hands (exceptions are possible).

Reception: The player has great difficulties in receiving/catching the ball (the pass must be directed to the chest and at low speed so that the reception is done successfully). Catching the ball from the floor is very difficult.

Pass: chest pass (using both hands and two arms) the trunk remains static; the player can pass the ball only on short distances, long passes can't be made. Some players within this class can use the 'volleyball pass' (service type/paddle only).

Dribbling: The player can't dribble (some players can do 2 or 3 beats, but then lose control over the ball).

Shooting: The player can shoot only with both hands and the speed is in a low speed; in this technical gesture only uses the arms, because he/she has a static trunk. In this case a 'volleyball pass/shot' can be done as well.

In summary, the player uses both arms/hands to receive, pass and shoot the ball. The players classified in this sport class have functional limitations at the level of the shoulders, torso, arms and hands, due to his quadriplegia and/or neuromuscular dystrophy. Even the wheelchair is controlled with difficulties. To compare, a typical player grabs and passes the ball with both hands, or eventually manages to pass the ball through a similar 'volleyball-service' movement.

3.1.2. Functionality of class 1:

Chair skills/function

- do to an extensive proximal shoulder weakness and lack of triceps function, a forward head bob is present while pushing.
- due to a lack of triceps strength, the athlete holds the back part of the wheelchair to push himself, using the biceps by bending his/her elbow while pushing (called an "unopposed biceps push")
- Because of a wrist extensor weakness and lack of other wrist and hand function, players may use forearm on wheel for starts, turns and stops.

Ball skills/function

- Because of proximal shoulder, arm and wrist weakness, direct passes are trapped on lap or made only on short distances.
- Players make the 'volleyball-service' movement for longer range passes and use both hands for 'scoop pass' with the ball forward to the side for shorter range passes.

Typical role on court: blocker, not a major ball handler.

[CLASS 1.mp4](#)

3.2. Class 2

The player may present a severe hemiplegia; poor trunk - not functional (static); loss of fingers; Diplegia and incomplete spinal cord injury T2-T7 (attention to the functionality of the hand). A severe to moderate diplegia with good functionality of the range of motion of UL either in the trunk can arise as well and the bilateral joint contractures of the hips can be included in this class.

Upper limb: good function of UL muscle strength 4-5; good shoulders. The spasticity of the trunk can be of 2-1.

Trunk: weak or poor function of the upper trunk (static).

Lower Abs: lower Abdominals without functionality, Degree 2-3; No abductors, but some adductors are possible.

Lower limb: LL without any functionality. The LL spasticity feature degree is 3-4.

3.2.1. Feature:

Wheelchair: The player can control the wheelchair independently (low/moderate speed), having difficulties in making changes of pace.

Trunk: static in need of fixing. In situations requiring rapid response on the part of the player, the trunk becomes unstable (lateral movements are out of control).

Take ball: with one hand (right/left) but with greater ease of the dominant hand.

Reception: The player performs reception of the ball in static situations, dynamic situations cause some difficulties in this area. Catching the ball from the floor is possible only in static situations.

Pass: The player is able to make short/medium passes; however, the technical skills are still far from correct because of an arm with limited functionality.

Dribbling: dribbling, mostly unilateral, can be performed by dominant arm in static situations. The Player has difficulties in perform dribble on a movement.

Shot: The player performs shots with weak/moderate force, presents the technical still far from correct because still features an arm with limited functionality.

In summary, players included in this class feature a pelvic girdle that allows reception of the ball from the ground only in static situations. The limitations to the level of the hands and wrists make the control of WC difficult, as well as the field of ball securely, but do not render the realisation of these movements with one hand, which allows the use of other hand for fixation of the stem (hold in WC). These players have an asymmetrical arm (functional imbalance between both arms).

3.2.2. Functionality Class 2

Chair skills/function

- Because of a proximal shoulder weakness and triceps weakness, the player may have slight head bob when pushing the WC, but has a longer push on wheel (combination of push and pull on back part of wheel).
- Because of an increased strength in upper chest and shoulders, the player is able to start, stop and turn multidirectional (Is able to turn in all directions without stopping; easier and faster turning than Class1 player; but because of triceps and wrist weakness, Class2 player may still use forearm).

Ball skills/function

- Forearm or wrist catch
- Weak chest pass or forearm pass
- Can hold the ball with wrists firmly, but does not have good hand function

Typical role on court: good blocker, not a major ball handler.

[CLASS 2.mov](#)

3.3. Class 3

The Player may show incomplete spinal cord injury T8-L1; Complete L2-L4 lesion; unilateral hip disarticulation with changes in lower limb against the side; bilateral above knee amputation (1/3 proximal of the femur); any limitation in the articulation of the wrist and/or fingers can be submitted. We can still find players with mild hemiparesis and with good functionality in contralateral members.

Upper limb: good function of UL with muscular force 4 or 5; good shoulder and hand.

Trunk: upper trunk with good control, functional dynamic, sometimes accompanying the members in their movements.

Lower Abs: Abs functional and may present lower 3-4 degree of muscular strength.

Lower limbs: Flexors, extensors, adductors and abductors of hip degree 3; in spinal cord, may show muscle strength in LL 1-2 degree.

3.3.1. Feature:

Wheelchair: The player can control the wheelchair independently with moderate speed/fast and can easily perform changes of direction and pace using the trunk.

Trunk: top dynamic trunk.

Take ball: with ease using only one hand.

Reception: The player performs top and middle reception of the ball in static and dynamic situations of the game. Low reception may cause some difficulties. The player can get the ground ball in static situations, however in dynamic situations this might be difficult.

Pass: The player performs short/medium/long passes without any problem and can use only one hand.

Dribbling: run smoothly with good ball control, using the dominant side; in the side against side some difficulties may occur.

Shot: The player performs shots with moderate/strong force, using the trunk.

In summary, these players can handle well the WC and may have a good performance at the reception, pass and shot. They can use the trunk rotation to make a shot. Players act like fixed in a wheelchair with every movement of the trunk, posterior, anterior flexion present rotation and lateral flexion.

3.3.2. Functionality Class 3

Chair skills/function increased shoulder strength and stability allows more effective and efficient pushing ball handling skills.

- An excellent shoulder strength and stability allows good pushing speed on the court.
- The functional grip is used to take advantage of the push rim when challenged.
- Players may have some trunk control ensuring them better stability in the chair.

Ball skills/function

- Increased shoulder strength and stability allows for some distance and consistency to chest pass.
- Players have reasonably balanced finger flexion and extension without true grasp and release.
- An asymmetry in arms can be noticed. If so, players use the stronger arm for chair and ball skills predominantly.
- Effective shoulder passes with control over moderate distance are possible.
- Player dribbles the ball safely but cannot maintain the dribbling for a long time.
- Due to a finger flexion strength, player is capable of performing one handed overhead pass, but only with limited accuracy and distance because of an imbalance in finger strength.
- Safe catching of the ball with both hands is possible. Player may catch passes single handed as well.
- An improved ball security (compared to 2.0) hand due to improved ability to isolate wrist/finger function can be observed.
- Player may have an asymmetrical arm or hand function, noticeable with chair and ball handling skills.

Typical role on court: excellent blocker, increasing role on court as ball handler and occasional as ball handler.

[CLASS 3.mp4](#)

3.4. Class 4

Incomplete spinal cord injury class L4-L5; Complete lesion L5; bilateral below knee amputation proximal; unilateral amputation transfemoral, Middle-distal or without functional stump transtibial; disarticulation of a lower limb with lateral against unchanged; well positioned in the Chair and with very good mobility. Some players with mild hemiparesis, feature good functionality in the upper limbs, good capacity of reception, pass and shot. Players with incomplete spinal cord injury and 3 degree of muscle strength in the lower limbs are also included in the class 4.

Upper limb: good function of UL muscle strength Grade 4-5.

Trunk: good upper trunk and dynamic; good shoulders.

Lower Abs: Abs with muscular strength 3-4 degree; flexors, extensors, adductors and abductors of hip degree 3-4.

Lower limbs: asymmetrical amputees below the knee.

3.4.1. Feature:

Wheelchair: The player can control the wheelchair autonomously with dexterity, can change direction and pace with great speed, performs asymmetric drawn. The player sits in a high position, without the need for support from the hips or lower abdomen.

Trunk: dynamic, the athlete does not need any trunk support in the chair.

Take ball: The player can catch the ball well with just one hand (right/left).

Reception: The player easily performs high, medium and low reception of the ball in any type of game situation (static/dynamic). The player can get the ground ball with great ease (laterally or in front of the wheelchair). For some players it might be difficult to catch the ball from the ground because of the fixation of the backs.

Pass: The player can perform any type of pass with both hands.

Dribbling: runs bilateral and/or unilateral, high, medium or low in static situations.

3.4.2. Functionality Class 4

Chair skills/function

- Because of the balanced finger function, the player can grip wheelchair rim increasing the pushing speed.
- May have fair to good trunk control giving better stability in the chair.

Ball skills/function

- Because of a function in fingers, player can control the ball in varying planes of movement for passing, dribbling, catching and protecting ball during these activities.
- The player can dribble and pass the ball well with one hand.
- The player can dribble multiply with one handed fully controlling the ball.
- The player stabilizes with the opposite arm to allow greater reach, due to a fair to good trunk function.

Typical role on court: very good ball handler, fast playmaker.

[CLASS 4.mp4](#)

3.5. Class 5

In this class, the player have level spinal cord injury S1-S2; transtibial amputation medium/unilateral distal. Players with incomplete spinal cord injury and those who present 3-4 degree of muscle strength in the lower limbs are included in the class 5 as well.

Upper limb: good function of UL muscle strength grade 4-5.

Trunk: good upper trunk and dynamic; good shoulders.

Lower Abs: Abs with muscular strength 3-4 degree; flexors, extensors, adductors and abductors of hip degree 3-4.

Lower limbs: asymmetrical amputees below the knee.

3.5.1. Feature:

Wheelchair: The player can control the wheelchair independently, changes of pace and direction are carried out with great speed, asymmetric drawn can be performed.

Trunk: completely dynamic, no support in the chair needed.

Get the ball: player can catch the ball very well with just one hand (right/left).

Reception: The player performs very well top, middle and low reception of the ball in any type of game situation (static/dynamic). The player can get the ground ball with great ease (laterally or in front of the wheelchair).

Pass: The player can perform any type of pass with either hand in any game situation.

Dribbling: The player can perform unilateral/bilateral dribbling (high, medium, low) in static and/or dynamic situations without difficulties. The player dribbles with an asymmetric drawn.

Shot: Players of this class perform shots quite easily and with strength (static or dynamic), because they can make the trunk rotation and may potentiate the movement in another posterior plane (taking advantage of the cognitions of the joints shoulder/elbow/wrist).

3.5.2. Functionality Class 5

Chair skills/function: The player has a good trunk function, is very stable in wheelchair and able to use the trunk for ball and chair skills.

Ball skills/function

- Because of the combination of hand and trunk function, the player usually has an excellent ball control with controlled one hand passing for distance and excellent ball security during passing and receiving.

Feature: good stability and control over the chair with the movements of the torso and hips. Good stability of the hips. This class includes all players with the minimum eligibility criteria, as well as the abled players.

Typical role on court: major ball handler and very fast playmaker (often a primary ball handler and playmaker in the team).

[CLASS 5.mp4](#)

4. MEDICAL SPORTS SAFETY RULES

These rules which we consider fundamental are intended exclusively to protect the players and comply with the Manual of classification:

- The fixing of players with tracks to wheelchairs- this fixation is made at the level of the pelvic girdle, thighs, legs and feet;
- The player can lose the touch of the pelvic girdle with the wheelchair during the game;
- The trunk is at the discretion of the player and varies depending on the class of sports;
- The referees reserve the right to request fixing chairs for the safety of the players;
- Players cannot use the prostheses and orthoses during the match;
- The EHF Regulations regarding the protective equipment shall be adapted. The WC must have an alloy in front to protect the player's feet in case of collision and to prevent the ball turn WC, putting the player at risk of injury;
- Earrings, rings, wires, caps, piercing, etc. are not allowed;

It is recommended to place protection on the wheels of WC. For more detail regarding the WC please see the Rules of the Game.

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