



# **CLASSIFICATION HANDBOOK**

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## **INTRODUCTION**

This first edition of a combined IPC Athletics Classification Rule Book contains four chapters which cover the areas needed to understand the classification of athletes in Athletics. It is a developing document, and this first edition will remain in use for 2006, and may be amended from time to time. It will be further amended to ensure full compliance with the IPC Classification Code.

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# CHAPTER 1: THE CLASSIFICATION SYSTEM

## 1. INTRODUCTION

The IPC Athletics Classification System offers track and field events for ambulant and wheelchair athletes.

1.1. The wheelchair athlete group consists of two subgroups.

1.1.1. Athletes with

- spinal cord injuries or spinal cord conditions,
- athletes with amputations,
- athletes with other musculoskeletal impairments, congenital anomalies and nerve lesions who meet the sport specific minimum impairment levels.

1.1.2. Athletes with cerebral palsy, traumatic brain injury or stroke.

1.2. The ambulant athlete group consists of four subgroups.

1.2.1. Athletes with

- amputations,
- athletes with spinal cord injuries or spinal cord conditions.
- athletes with other musculoskeletal impairments, congenital anomalies and nerve lesions who meet the sport specific minimum impairment levels.

1.2.2. Athletes with cerebral palsy, traumatic brain injury or stroke.

1.2.3. Athletes who are visually impaired

1.2.4. Athletes who are intellectually disabled.

## 2. MINIMAL IMPAIRMENT

The minimal impairment varies from sub-group to sub-group e.g. cerebral palsy versus visually impaired versus intellectually disabled. If an athlete does not meet the conditions for minimal impairment, that athlete is not eligible to compete in International Competitions held under the Rules and Regulations of IPC Athletics.

The minimum impairment levels include references to muscle power, joint range of movement, spinal deformity, amputation level and congenital limb shortening, spasticity and tendon reflex changes, vision and visual fields, and limb length differences.

An Athlete, who has more than one impairment either of which does not meet the minimum level, may be eligible to compete. The impairments must impact on the Athlete's ability to compete fairly in able-bodied competition.

The Athlete will undergo a rigorous assessment process including physical and pre competition testing.

See Appendix 1 for detail.

### **3. IPC ATHLETICS CLASSIFIER – HOW TO QUALIFY**

- 3.1.** The preferred pathway is to have a basic qualification in classification. It is then necessary to attend at least one international competition organised by IPC Athletics as a classifier before an individual has the potential to be accepted as an IPC Athletics classifier. Candidates should not expect that attendance at a seminar or Games is sufficient to be recognised as a classifier.
- 3.2.** Attendance means involvement in the anatomical, functional and Games assessment of an athlete. An ideal panel to carry out an evaluation would include one person who is a doctor, another who is a coach, technical expert or a former athlete and the third person a physiotherapist. No classifier is expected to be an expert in all four subgroups but they should have a sound basic knowledge of each.
- 3.3.** A competent classifier has a basic knowledge of anatomy, examination techniques and track and field events. A competent classifier has the ability to listen, is willing to learn, is confident about expressing ideas and opinions and is a hard worker. Most importantly a classifier must recognise that the person they are examining is an athlete and not a patient. Being able to admit that you are not infallible and being able to work when you are tired are important attributes.
- 3.4.** In the longer term it is the aim of IPC Athletics to train classifiers from the beginning of the classification pathway to the stage of international involvement.

### **4. CLASSES & DEFINITIONS**

#### **4.1. Wheelchair:**

4.1.1. Track – classes T51, T52, T53, T54 including the old classes of LAT1 and LAT2.

Field – classes F51, F52, F53, F54, F55, F56, F57, F 58 including the old classes of LAF1, LAF2 and LAF3

4.1.2. Track - T32, T33 and T34 and

Field - F32, F33 and F34

#### **4.2. Ambulant:**

4.2.1.Track – Classes T42, T43, T44, T45, T46 including the old classes of LAT3 and LAT4

Field – Classes F40, F42, F43, F44, F45, F46 including the old classes of LAF4, LAF5 and LAF6 as well as the standing F58 class.

4.2.2.Track - T35, T36, T37, T38.

Field - F35, F36, F37, F38.

4.2.3.Track - T11, T12, T13.

Field – F11, F12, F13.

4.2.4.Track - T20

Field – F20.

## **5. HOW TO EXAMINE – WHEELCHAIR SUBGROUP 4.1**

### **5.1. History**

It is important to ascertain the level of spinal injury, including the actual fracture level if appropriate, and the actual spinal cord injury level. It is important to note whether the athlete is complete or incomplete and the sensory and motor levels. It is important to note the level of amputation and any associated impairments. The testing will include attention to the following areas of examination.

Manual muscle charting.

Sensory testing (light touch and pin prick).

Range of movement of the spine and limb joints.

Muscle tone assessment.

Tendon reflex assessment.

Pathological reflexes (Babinski-Hoffmann).

Proprioception testing.

Limb length measurement.

### **5.2. Physical Examination**

Physical examination can be performed by either carrying out a total examination of the athlete or acceptance of what is normal and only examining the area of the injury. When there is available time a complete examination of all athletes is indicated. It is always necessary to carry out a full examination when assessing an athlete with an incomplete spinal cord injury.

Measurement of stump lengths is indicated in athletes competing in field events.

### **5.3. Tests**

Functional tests on the examination couch can be helpful in deciding whether certain muscle groups are present. Examples are the testing of abdominals, adductors and quadriceps.

## **6. HOW TO CARRY OUT PRE-COMPETITION TESTING**

It is important at the time of pre-competition testing that there is appropriate equipment and facilities available to carry out specific tasks. These include the athlete's track chair or field chair, a track with an appropriate surface and a throwing circle with appropriate tie-downs and correct implement weights. It is important to take time to perform the pre-competition testing. It is important to have a list of the qualifying performances of all athletes who are being classified.

## **7. HOW TO OBSERVE**

**7.1.** Important factors are being in an appropriate position to see clearly and have the use of assistive devices such as binoculars and video to assist with the process.

**7.2.** All actions undertaken by an athlete should be observed e.g.

- the undressing that occurs prior to going into the throwing circle
- the transfer on to the throwing chair
- what assistance the athlete offers with the tie-downs both at the beginning and the end
- the transfer back into the day chair
- the adjustment of clothing which may occur at the conclusion of the exercise

It must be remembered that if an athlete has only three throws, the actual duration of performance is very short. This is one area where athletics differs from other sports.

## **8. FACTS TO CONSIDER WHEN OBSERVING TRACK AND FIELD ATHLETES PRIOR TO COMPETITION AND IN COMPETITION**

### **8.1. Track**

8.1.1. The type of glove used.

8.1.2. The starting position of the hands/gloves.

8.1.3. The point of contact of the gloves on the push rim.

8.1.4. What happens to the trunk when the gloves make contact with the push rim?

8.1.5. What trunk movements occur at other times during the cycle of movement?

8.1.6. What happens to the head during the cycle of movement?

8.1.7. How far do the shoulders extend during the cycle of movement?

8.1.8. What happens to the trunk when the athlete stops pushing?

## **8.2. Field**

8.2.1. The grip on the throwing implement

8.2.2. The grip of the non-throwing arm that may include assessment of the manner of gripping of the holding bar.

8.2.3. The starting position, release position, and finishing position of the throwing arm.

8.2.4. The functional use of the non-throwing arm. Is there active elbow movement and/or is the arm used to control trunk movement after release of the implement?

8.2.5. Trunk movements.

- Off the back of the chair upward.
- Forwards and backwards.
- Rotation.
- Side to side.

8.2.6. Pelvic stability.

8.2.7. Leg movements.

8.2.8. The position of the chair in the throwing circle.

8.2.9. The attachments to assist throwing including strapping, hand grip etc.

## **9. SPINAL ASSESSMENT**

The following factors are important in the assessment of an athlete who has a spinal curvature or fusion.

**9.1.** Aetiology (cause of disability).

**9.2.** The type of spinal curvature present

- scoliosis
- kyphosis, or
- kypho-scoliosis.

- 9.3. Where the apex of the curve is and where the actual curve appears to start from and where it appears to finish, i.e. from what level to what level.
- 9.4. The relationship between the rib cage and the pelvis, i.e. is the rib cage free of contact with the pelvis or is it in contact, or is the rib cage inside the pelvis on one side?
- 9.5. The muscle power of the upper and lower abdominals and upper and lower spinal extensors. Is the loss in muscle strength symmetrical? If it is asymmetrical the muscle power is usually greater on the concave side of the curve.
- 9.6. Where there is scoliosis there should be asymmetry of muscle power in the abdominals and spinal extensors. If there is asymmetry in the abdominal muscles and spinal extensors then there may also be asymmetry in the lower limb muscles. In general the muscle power should be greater on the concave side of the curve. There is a loss of spinal movements with a scoliosis, particularly rotation and lateral flexion. The loss of movements is usually asymmetrical and increases as the curve size increases. As the size of the curve increases, the spinal muscle power becomes less effective.
- 9.7. The fracture level and in relation to spina bifida, the neurological level.
- 9.8. In high spina bifida athletes the presence of pelvic tilt needs to be recorded.

## **10. THE PRESENCE OF A SPINAL FUSION**

- 10.1. It is important to note how long the fusion appears to be. In general the fusion for a fracture level is over fewer vertebral segments than for a scoliosis. The muscle power of the upper and lower abdominals and the upper and lower spinal extensors are important. The effect of surgery on spinal extensor function has to be noted. Functional tests take into account the muscle power an athlete has and also whether the movement has been affected by scoliosis, spinal fusion or spasticity.
- 10.2. The longer the spinal fusion is, the greater the effect on movement and muscle power. If there is contact between the rib cage and the pelvis, spinal movements will be reduced. Trunk mobility should be assessed where possible both above and below the spinal fusion.
- 10.3. Remember that any treatment of the spine may reduce the effectiveness of the spinal extensor muscles and also the abdominal muscles. It may reduce the lateral flexion and rotational ability as well as the flexion/extension movements. On the other hand it may give the athlete greater height and some spinal stability particularly when throwing.



- 10.4. Functional tests demonstrate flexion (forwards movement of the spine) and extension (backwards movement of the spine) or rotation (turning movements in either direction) and tests to determine how far an athlete can lift off his or her lap in the sitting position are helpful. Functional tests for wheelchair athletes in their day chair include asking them to push up a hill and assessing the pattern of spinal movement i.e. is the spinal curve normal or is there a tendency to lordose the spine. If there is a tendency to lordose the spine, then what level is this occurring?
- 10.5. Another functional test is to ask the athlete to push their track chair on grass. The added resistance helps not only assess the abdominal function but may also help assess the spinal movement. The next assessment requires the athlete to be observed prior to competition either using their track chair on the actual track or field chair in the field.
- 10.6. As with all sports, the ultimate demonstration of movement potential occurs when the athlete is in the competition.

## **11. HOW TO EXAMINE ATHLETES WITH POLIO**

- 11.1. Please always remember classifiers are evaluating an athlete many years after the maximum effect of the spinal insult. The muscles that are functioning in either the upper or lower limbs may have initially been affected and the muscle power that you test today as a 5 may only be a 4+. It is beneficial to compare the muscle bulk of the upper limbs to the trunk and to the lower limbs. A decrease in bulk or even apparent absence of a muscle does not always mean a total loss of functional muscle power.
- 11.2. Polio athletes who are tetraplegic are most likely to have had the involvement of all muscle groups. The muscles you assume to have Grade 5 power in the upper limbs may have been involved in the process. This may explain the small number athletes with polio who compete in longer distance events in the tetraplegic classes (800 metres and above). Involvement of the diaphragm and other respiratory muscles in such severe polio may also be a limiting factor in aerobic activity.
- 11.3. Polio athletes may have skip lesions i.e. they can have normal trunk function and weakness in the lower limbs and then have one upper limb which is totally normal and the other upper limb may have weakness of one muscle group e.g. the triceps muscle.
- 11.4. If an athlete has had polio at a young age and when you examine them you find a scoliosis you will find that they also have asymmetry of trunk muscle function. The effect of the scoliosis will be that they will have asymmetry of movement as has already been mentioned.

- 11.5.** It is important when examining the lower limbs to note muscle bulk. If an athlete has asymmetry of muscle bulk and is not moving either lower limb then it is most likely that they have function of one leg and limited function in the other. The classification can proceed according to where the muscle bulk is, even though the athlete is not showing any movement in the area. The only time a classifier has to be careful in relation to assessing muscle bulk of the lower limbs like this is when an athlete is overweight.
- 11.6.** There have been various arguments about polio athletes having the advantage of intact sensation. There are people on either side but essentially if you cannot move a joint then having sensation in the joint may not be very helpful. In time there may also be a fall-off of the sensory appreciation coming from that joint because of the lack of use.
- 11.7.** The post-polio syndrome has to be considered. There are many theories as to why this occurs. Classifiers must be aware of this syndrome and in particular of PPS athletes showing unexplained muscle fatigue and weakness.
- 11.8.** Finally if a classifier suspects an athlete with polio is not cooperating, size and symmetry of muscle bulk can be used to assist in making your determination. Please note that a class should not be assigned based only on muscle bulk - athletes **MUST** attempt muscle grade tests to the best of their ability in order to assign a class. If the athlete continues not to do this, the classification panel should remind the athlete that if they do not cooperate they will be assigned the class intentional misrepresentation of abilities (IM) which carries a maximum penalty of two years suspension from the sport. Furthermore, they will not be permitted to compete at the competition.

## **12. HOW TO EXAMINE ATHLETES WITH SPINA BIFIDA**

- 12.1.** The higher the spinal cord level the greater the problems.
- 12.1.1. Cerebral – (UMN-upper motor neurone) – coordination of upper limb movements;
  - 12.1.2. Spinal curvature and pelvic tilt noting relationship of the rib cage and pelvis;
  - 12.1.3. Hip contractures as well as hip subluxation and dislocation;
  - 12.1.4. The effect of surgery on the hip.
- 12.2.** Athletes with spina bifida produce a significant challenge in the examination particularly those who have their involvement at a higher spinal cord level. The higher the spinal cord level, the greater the

disability and the greater the impairment. The higher the spinal cord level the less likely they are to reach elite championship level.

- 12.3.** The higher the spinal cord level, the more likely that the athlete will have upper limb coordination problems. This needs to be taken into account when classification is carried out for it may be necessary to give the athlete a more involved class than initially thought when assessing muscle function. The assessment of the athlete's upper limb function is by using examination techniques employed when assessing athletes with cerebral palsy. A clue to whether there may be upper limb coordination problems of CNS origin (e.g., Athetosis or Ataxia) is that the athlete has had hydrocephalus and associated drainage operations. However it must be emphasised that this is not always so. The incoordination raises the potential for these athletes to compete in the Cerebral Palsy classes.
- 12.4.** The higher the spinal level the more likely there will be significant spinal deformity either in the form of shortening of the spine due to scoliosis or kypho-scoliosis. The higher the spinal level the more likely that the athlete will have pelvic tilting which does impact on muscle power that the athlete may have in the trunk and also in the lower limbs. The higher the spinal level the more likely that one side of the rib cage and the pelvic rim will come into contact. This potentially will restrict trunk rotation and will impact on the athlete's ability in field events.
- 12.5.** If there is hip muscle imbalance the hip flexors and adductors are present and the abductors and extensors are absent there will either be subluxation or dislocation of the hips. This will impact on muscle strength. Sometime surgery will have been carried out to correct this tendency and this will also impact on the remaining muscle strength.
- 12.6.** Some athletes with spina bifida will have an ileal conduit i.e. a urinary collection system in which part of the bowel is used as the bladder, and which has an exit point through the abdominal wall. This may interfere with abdominal muscle strength.
- 12.7.** Sometimes the higher the level the more likely the athlete will have had a spinal fusion which impacts on trunk function and also may make any remaining abdominal and leg muscle power less functional.
- 12.8.** The lower limbs themselves may be spastic or flaccid or have a mixed pattern.
- 12.9.** An L4 athlete with spina bifida classically has power in hip flexors, adductors, knee extensors and the medial knee flexors (hamstrings). When the athlete is tested in the sitting position the medial knee flexors (hamstrings) may register moderate power. There should be an absence of lateral knee flexors (hamstrings).
- 12.10.** An L5 athlete with spina bifida classically has hip flexors, adductors, and abductors, knee extensors and flexors, and ankle dorsi-flexors.

**12.11.** An S1 athlete with spina bifida will have hip flexors, abductors, adductors and some extensor function, knee flexors and extensors, ankle dorsi-flexors with some ankle plantar flexion function.

**12.12.** Often athletes with spina bifida will have had surgery on their feet in the form of fusion operations. This has been carried out because of foot deformities and is usually due to muscle imbalance. Ankle fusion surgery will impact on muscle function below the knees.

### **13. HOW TO EXAMINE ATHLETES WITH INCOMPLETE SPINAL CORD INJURY**

**13.1.** A classifier should

- assess the motor and sensory function in all areas
- note the location of the increase in tone i.e. upper limbs, abdominals, lower limbs
- when assessing incomplete athletes the three areas that need to be considered include the arms, the trunk and the legs.

**13.2.** When an incomplete tetraplegic athlete is assessed, accurate assessment of the three areas will assist in determining the classification of the athlete. It must be noted that spasticity is rarely helpful in athletic performance. It varies so much e.g. temperature, emotion and there is no active control of the level of spasticity. Athletes do try to reinforce any spasticity that is useful, but should never be penalized for doing so.

**13.3.** Those athletes who have F52 in the arms some F55 function (3s to 4s) in the trunk will probably be classified as F53 athletes. F52 athletes who have full F55 function (4s to 5s) will most likely be classified as F54 athletes.

**13.4.** Incomplete paraplegics are usually assessed depending on the level of muscle power in the lower limbs.

**13.5.** Those athletes who have grade 1s and 2s in most muscle groups in the lower limbs will generally fit into the F56 class.

**13.6.** Those athletes who have grade 2s and 3s in most muscle groups in the lower limbs will generally fit into the F57 class.

**13.7.** Those athletes who have grade 3s and 4s in most muscle groups in the lower limbs will generally fit into the F58 class.

**13.8.** It is important to note where the athlete has significant muscle power when assessing their movement potential for field events, e.g. if an athlete has 1s and 2s in most muscle groups but then has 4s in the

hip abductors and extensors, then this will influence the classification of the athlete for these muscle groups are important when throwing from the sitting position.

## **14. AMPUTEE WHEELCHAIR FIELD ATHLETES**

The following is the classification system for above knee amputees.

### **14.1.** It is important to examine and measure the stump.

14.1.1. Muscle charting of the stump is essential and includes testing flexion, extension, abduction and adduction. It is important to test the strength of hip extension from the 90° flexed position i.e. the sitting position.

14.1.2. The second area is to chart the range of movement of the hip joint and the purpose of doing this is to assess whether there are contractures at the hip joint level. If an athlete is sitting for long periods he may develop a flexion contracture. Another factor that may contribute to contractures is an imbalance of muscle action at the level of the hip joint e.g. abductors versus adductors, or extensors versus flexors.

14.1.3. Measurement of the length of the stump is important and can be carried out by the athlete having an x-rays of the stump, which records the stump length or it could be achieved by direct measurement. Of the two methods the x-ray method is more accurate for often there is a lot of soft tissue between the bony part of the stump and the skin at the end of the stump. However direct measurement is more practical and should be used routinely. X-rays may be used in borderline cases. Using a tape measuring from the tip of the greater trochanter to the approximate end of the femur is the measurement that is made. The next measurement is the distance from the point of the elbow to the tip of the middle finger in which the wrist, hand and middle finger should be in a straight line during measurement. The reason for doing this measurement is that the distance from the point of the elbow to the tip of the middle finger is the same as from the tip of the greater trochanter to the level of the knee joint.

The significance of stump length is that as the leg length increases the leverage factor comes in to play as well as more muscles becoming active i.e. if the amputation is high e.g. just below the lesser trochanter then the athlete will have less leverage and muscles acting. There will be strong activity in hip abduction and flexion but less effective extension and adduction. As the stump length increases the leverage factor increases and extension

becomes stronger, and as further increase in length occurs, hip abduction comes into play.

- 14.1.4. The fourth area to record is which hand the athlete uses during field events. The purpose for doing this is to check whether the side of the amputation is at the same side as the throwing arm.

By assessing the above four factors and then carrying out pre-competition assessment, classification can be made.

- 14.1.5. The following is a guide to the classification of wheelchair amputees.

**F55 Bilateral hip disarticulation.**

**F56 –Bilateral high above knee amputees.**

The femoral length will be less than half the distance measured between the point of the elbow and the tip of the middle finger.

**F57 -Bilateral above knee amputees or single hip disarticulation.**

The femoral length will be greater than half of the length measured between the point of the elbow and the tip of the middle finger.

**F58 – Single above knee amputees or bilateral below knee amputees.**

## 15. THE DIFFICULT ATHLETE

15.1. An athlete may be difficult to classify because of their underlying pathology, because of their lack of cooperation at the time of assessment or because of other factors influencing their disability. It is important to record a history and carry out a physical examination. If the athlete is uncooperative, gently explain that you feel they have better function than they are showing and ask them to go away and come back either that day or the next. Gently remind them that if they fail to cooperate then they will be assigned the class intentional misrepresentation of abilities (IM) which carries a maximum penalty of two years suspension from the sport. Furthermore, they will not be permitted to compete at the competition. A calm approach is necessary in these circumstances.

15.2. If an athlete is not cooperating then functional tests may be used to assist the classification. These include tests for the abdominals, adductors, and the quadriceps muscles. If the athlete continues to be uncooperative the classification panel should remind the athlete that if they do not cooperate they will be assigned the class intentional misrepresentation of abilities (IM) which carries a maximum

penalty of two years suspension from the sport. Furthermore, they will not be permitted to compete at the competition.

**15.3.** If an athlete has polio then as previously mentioned, the asymmetry of muscle bulk may assist in classification.

**15.4.** If an athlete is deemed not to be eligible, it is important to listen to their story, listen to the treatment they have received and carefully examine them. It is important to inform the athlete and their representative that they are not eligible. You do not need to tell them what the diagnosis is or what the treatment should be. You merely need to inform them that they don't meet the minimal impairment for IPC Athletics.

## **16. WHEELCHAIR ATHLETES -SUB-GROUP 1.1.1**

The following is a description of the muscle power that an athlete may have in each of the track and field groups for subgroup 1.1.1. The system has been designed by defining what the maximum function an athlete may have in a particular class. If an athlete has a different cause for their impairment then it is important to try to match this impairment with the descriptions provided in relation to the track and field classes.

### **16.1. Track**

**16.1.1. T51:**

These athletes will usually have a decrease of shoulder function, elbow flexion and wrist dorsi-flexion to grade 5 power, and triceps function to grade 0-3.

**16.1.2. T52:**

The maximum functions that these athletes will have is normal shoulder function, normal elbow and wrist function, poor to normal function of the finger flexions and extensions with there being wasting of the intrinsic muscles of the hands.

**16.1.3. T53:**

These athletes will have normal upper limb function with no abdominal or lower spinal function.

**16.1.4. T54:**

Athletes will have normal upper limb function with a range of trunk function extending from partial trunk function to normal trunk function. There may be significant function in the lower limbs in athletes who compete in this group.

### **16.2. Field**

**16.2.1. F51:**

These athletes will usually have a decrease of shoulder function, elbow flexion and wrist dorsi-flexion to grade 5 power, and triceps function grade 0-3.

- 16.2.2. **F52:**  
These athletes will have good shoulder function, almost normal elbow function, good wrist function but finger flexor and extension function will be at a maximum grade 3 power.
- 16.2.3. **F53:**  
The maximum function that these athletes will have is normal shoulder function, normal elbow and wrist function, good or normal function of the finger flexors and extensors with there being wasting of the intrinsic muscles of the hands.
- 16.2.4. **F54:**  
These athletes will have normal upper limb function with no abdominal or lower spinal function.
- 16.2.5. **F55:**  
These athletes will have normal upper limb function. They may have partial or completely normal trunk function. They may have a flicker in their hip flexors. Bilateral hip disarticulations.
- 16.2.6. **F56:**  
These athletes will have normal upper limb and trunk function. They will have hip flexion and adduction function, knee extension function, and up to grade 3 power in the medial hamstring (knee flexor). Bilateral high above knee amputees.
- 16.2.7. **F57:**  
These athletes will have normal upper limb and trunk function. They will have hip flexion and adduction function, hip abduction function, knee flexion and extension function and some function of the ankle dorsi-flexors and plantar flexors. Bilateral above knee amputees with the amputation level being through the lower half of the femur or single hip disarticulation.
- 16.2.8. **F58:**  
These athletes will have normal function of the upper limbs and trunk with hip flexion, extension, abduction and adduction function. There will be knee flexion and extensor function and ankle dorsi-flexion and plantar flexor function. They should meet criteria for minimal disability. Lower single above knee amputees or bilateral below knee amputees.



## **17. WHEELCHAIR ATHLETES WITH CEREBRAL PALSY, TRAUMATIC BRAIN INJURY OR STROKE - SUBGROUP 1.1.2**

### **17.1. Functional Profile – Class T/F31**

- 17.1.1. Quadriplegic (Tetraplegic) - Severe involvement. Spasticity Grade 4 to 3+, with or without athetosis or with poor functional range of movement and poor functional strength in all extremities and trunk OR the severe athetoid with or without spasticity with poor functional strength and control. Dependent on a power wheelchair or assistance for mobility. Unable to functionally propel a wheelchair. Lower extremities-considered non-functional in relation to any sport due to limitation in range of movement strength and/or control. Minimal or involuntary movement would not change this person's class.
- 17.1.2. Trunk control-static and dynamic trunk control very poor or non-existent. Severe difficulty adjusting back to mid-line or upright position when performing sports movements. Upper extremities-severe limitation in functional range of movement or severe athetosis are the major factors in all sports and reduced throwing motion with poor follow through is evident. Opposition of thumb and one finger may be possible allowing athlete to grip.
- 17.1.3. Field class F31 determined clearly by the very poor hand function in handling club, shot or discus, in conjunction with throwing motion. A person could have adequate hand function statically but may have less function when throwing due to athetoid involvement or spasticity.

### **17.2. Functional Profile – Class T/F32**

- 17.2.1. Quadriplegic (Tetraplegic)-Severe to moderate involvement. Spasticity Grade 3+ to 3 with or without athetosis. Severe athetoid or tetraplegic with more function in less affected side. Poor functional strength in all extremities and trunk but able to propel a wheelchair.
- 17.2.2. Lower Extremities-A demonstrable degree of function in one or both lower limbs allowing propulsion of the wheelchair automatically qualifies individual as a Class 2 lower. If the classification team determines that the upper limb function is more appropriate for a higher class then the athlete does not qualify as Class 2. Class 2 athletes (upper or lower) can sometimes ambulate but never run functionally.

- 17.2.3. Static trunk control is fair. Dynamic trunk control is poor as demonstrated by the obligatory use of upper extremities and/or head to assist in returning to the mid-line (upright position).
- 17.2.4. Upper extremities. Hand severe to moderate involvement. Spasticity Grade 3. If hand and arm function is as described in Class 1 then lower extremity will determine whether Class 2 is more appropriate.
- 17.2.5. A Class 2 upper athlete often has a cylindrical or spherical grasp, and can demonstrate sufficient dexterity to manipulate and throw a ball, but will exhibit poor grasp and release. Throwing motions must be tested for effects on hand function. Wheelchair propulsion with upper extremities is also demonstrable. Active range of movement is moderately to severely impaired, thus hand function is the key.
- 17.2.6. Upper extremity athletes with athetosis may demonstrate fair rotation during throwing with unreliable release. For athletes with spasticity or athetosis the trunk makes a very limited contribution to propulsion of the implement.

### **17.3. Functional Profile – Class T/F33**

- 17.3.1. Quadriplegic (Tetraplegic). Triplegic, severe hemiplegic – Moderate (asymmetric or symmetric) quadriplegic or severe hemiplegic in a wheelchair with almost full functional strength in dominant upper extremity. It is rare for an athlete with athetosis to be included within this class unless he/she presents with a predominantly hemiplegic or triplegic profile with almost full function in the dominant upper limb. Can propel a wheelchair independently.
- 17.3.2. Lower extremities-spasticity Grade 4 to 3-some demonstrable function can be observed during transfer. May be able to ambulate with assistance or assistive devices but only for short distances.
- 17.3.3. Trunk control-fair trunk control is shown when pushing chair, but forward trunk movement is often limited to extensor tone during forceful pushing. Some trunk movement can be noted also in throwing for postural correction, but throwing motions are mostly from the arm. This is a major factor in non-ambulatory capability – rotation is limited. Spasticity Grade 2+.

- 17.3.4. Upper extremities-moderate limitation spasticity Grade 2+ in dominant arm shown as limitation in extension and follow through.
- 17.3.5. Hand function-dominant hand may demonstrate cylindrical and spherical grasp, with poor finger dexterity demonstrable in release of shot and discus.
- 17.3.6. Track (T33). In order to differentiate between Class 3 and 4, trunk mobility in propulsion of the chair, and hand function are important. If an athlete demonstrates a very poor ability to use rapid trunk movements in the pushing motion, or significant asymmetry in the arm action or grasp and release which impedes the development of forward momentum, he/she is a Class 3. An athlete using only one arm for wheelchair propulsion may have long strokes and rapid grasp and release in the dominant arm and still be Class 3.
- 17.3.7. Field (F33). Sometimes a hemiplegic athlete with spasticity Grade 4 to 3 in non-dominant arm and near normal function in the dominant arm, or a Class 3 asymmetric diplegic athlete is more appropriate in Class 4. However, a close look should be given to the trunk movement, as it is often the determining factor. In all cases movement, follow through and release are ultimate considerations. Split classes can sometimes occur in these cases.

#### **17.4. FUNCTIONAL PROFILE – Class T/F34**

- 17.4.1. Diplegic – Moderate to Severe involvement
- 17.4.2. Good functional strength with minimal limitation or control problems noted in upper limbs and trunk.
- 17.4.3. Lower Extremities-Moderate to severe involvement in both legs Spasticity Grade 4 to 3 usually rendering them non-functional for ambulation over long distances without the use of assistive devices. A wheelchair is usually the choice for sport.
- 17.4.4. Trunk-spasticity Grade 2 to 1. Minimal limitation of trunk movements when wheeling and throwing. In some athletes fatigue can increase spasticity which can be overcome with proper positioning. When standing, poor balance is obvious even using assistive devices.
- 17.4.5. Upper extremities – the upper limbs often show normal functional strength.

- 17.4.6. Minimal limitation of range of movement may be present but close to normal follow through and propulsion is observed when throwing or wheeling.
- 17.4.7. Hand function-normal cylindrical/spherical opposition and prehensive grasp is seen in all sports. Limitation if any is usually apparent only during rapid fine motor tasks. It should be remembered that diplegia implies that there is more spasticity in the lower than the upper extremities. Some involvement spasticity Grade 2+ to 1 can be seen particularly in functional movements of the hands, arms and trunk.
- 17.4.8. Track (T34). The athlete is able to perform long and forceful strokes, with rapid grasp and release, although fine movements of the hands may be affected. During propulsion these fine movements are not essential. Strong trunk movements in forward and backward direction support the arm strokes. If these movements do not occur the trunk is well balanced and forms a stable base for the arm movements. When the wheelchair makes a curve, the trunk follows the wheelchair without disturbance of balance.
- 17.4.9. Field (F34). In throwing events the trunk has to make a complicated, forceful and rapid movement. This movement is complicated because it requires co-ordination of rotation, forward and sideways bending (more complicated than required for propulsion). Because of the slight spasticity in trunk muscles and the negative influence of the spastic legs, some disturbances may be seen when force and speed are required. Slight weakness in fine movements may present problems during the release of a discus and to a lesser extent a javelin. There is even less of a problem with shot.
- 17.4.10. Split classification between Class 4 and Class 5 in FIELD is considered a matter of preference for athletes if they are eligible functionally. The hemiplegic in a wheelchair with one functional arm and a free moving trunk is a Class 4 for field events (see also Class 3 Field).

## **18. AMBULANT ATHLETES -SUBGROUP 1.2.1**

### **18.1. Class 40:**

This class is for athletes who are dwarfs due to achondroplasia or a variant of this.

#### **18.1.1. Track & Field F40 (Dwarf Class):**

The athletes must have either achondroplasia or a variation of it and must also be 18yrs of age or older. The age of the athlete will be taken as the first day of

competition where the first day of competition is the day of the opening ceremony, first day of classification or first day the athlete competes, whichever is sooner. . There is a height restriction: for males the limit is 145cm and for females 140cm. Any athlete who has undergone intervention either in the form of leg lengthening or hormone treatment to increase height is still eligible to compete.

18.1.2. Notes on Medical Terms:

- Achondroplasia – is a failure of normal development of cartilage resulting in dwarfism.
- Dwarfism – normally results from inherited genes, which leads to abnormal growth and development of bone and cartilage. The condition is not related to the pituitary gland. The eligible athletes usually have normal spinal length with shortening of the limbs. Athletes with pituitary dwarfism have shortening of the spine and limbs.
- The pituitary gland produces a secretion that can affect body physique and body functions.

**18.2. Class 42:**

This includes the old classes A2 and A9 as well as LAF4, LAF5 and the standing F58 class.

**18.3. Class 43:**

This includes the old classes A3, A9 and LAF4 and LAF5 and the standing F58 class.

**18.4. Class 44:**

This includes the old classes A4 and A9 as well as LAF4, LAF5 and LAT3 and the standing F58 class.

**18.5. Class 45:**

This includes the old classes A5 and A7 as well as LAF6 and LAT4.

**18.6. Class 46:**

This includes the old classes of A6 and A8 as well as LAF6 and LAT4.

**18.7. Track & Field 42:**

Single above knee amputees and athletes with other impairments that are equivalent to an amputation that is above knee.

**18.8. Track & Field 43:**

Double below knee amputees and other athletes with impairments that are equivalent to a double below knee amputation.

**18.9. Track & Field 44:**

Single below knee amputees and other athletes with impairments that are equivalent to single below knee amputee.

**18.10.**

**Track & Field 45:**

Double arm amputation (either above or below the elbow) and athletes with other impairments that have an equivalent to a double arm amputation.

**18.11.**

**Track & Field F46:**

Single arm amputation (either above or below the elbow) and athletes with impairments that are equivalent to a single arm amputation.

## **19. DEFINITION OF LEG LENGTHS:**

The following rules apply to the length of prostheses used by athletes.

**19.1.** Athletes with either an **above knee or below knee amputation** on one side can use a prosthesis for competition purposes which will result in the amputated side being longer or shorter than the functional length of the non-amputated side when measured from the anterior superior iliac spine to the heel of the running shoe worn by the athlete in a standing position.

**19.2.** Athletes with **bilateral below knee amputations** will be limited by the following formula as to the overall length of their lower extremities (including prostheses) for competition purposes:

The overall length of the leg including the prosthesis equals or is less than (the length of the thigh minus 13) divided by 0.4 plus 5% (in centimetres). The length of the thigh is measured from the anterior superior iliac spine to the inferior pole of the kneecap or to the lower point of the medial femoral condyle if there is no patella. This measurement is carried out with the athlete supine. As previously mentioned the overall length of the leg will be measured from the anterior superior iliac spine to the heel of the competition shoe placed on the prosthesis with the athlete standing.

**19.3.** Definitions of leg lengths in athletes who have **bilateral above knee amputations**.

19.3.1. The first step is to measure the height by using following two approved methods. Method 1: Forearm length. Measure between the point of the elbow and the midpoint of the prominent bone of the wrist (left side if possible). The height in metres is determined from a chart based on the ulna length as measured in centimeters. Method 2: Demi-span. Demi-span is

measured as the distance from the middle of the sternal notch to the tip of the middle finger in the coronal plane. Height is then calculated from the following formulae.

19.3.2.

**Ulna lengths**

- 32 31.5 31 30.5 30 29.5 29 28.5 28  
cms.
- **Male**
- 1.94 1.93 1.91 1.89 1.87 1.85 1.84 1.82  
1.80 mts.
  
- 27.5 27 26.5 26 25.5 25 24.5 24  
23.5 cms.
- **Male**
- 1.76 1.75 1.73 1.71 1.69 1.67 1.66 1.64 mts.
  
- 30 29.5 29 28.5 28 27.5 27 26.5 26  
cms
- **Female**
- 1.79 1.77 1.76 1.75 1.73 1.72 1.70 1.69  
1.68 mts
  
- 25.5 25 24.5 24 23.5 23 22.5 22 21.5  
21 cms
- **Female**
- 1.66 1.65 1.63 1.62 1.61 1.59 1.58 1.56 1.55  
1.54 mts

19.3.3.

Females

Height in cm. = (1.35 x demi-span (cm)) +60.1

Males

Height in cm. = (1.40 x demi-span (cm)) +57.8

The height measurements are averaged. The overall height of the athlete with prostheses equals or is less than this averaged result plus 2.5% (in centimetres). The athlete's height is measured in the standing position by using a vertical line from the top of the skull to a line connecting the base of the heels of both running shoes. If there is any doubt the measurement can be taken with the athlete standing on 2 sets of scales (equal weight) with the height being the vertical distance between the top of the skull and a line joining the base of both running shoe heels. Where possible a metal tape measure should be used for measuring.

19.3.4.

IPC Athletics reserves the right to measure the athlete either before the competition starts, or in the call up

room prior to the event or after the event the athlete has competed in.

## **20. AMBULANT ATHLETES WITH CEREBRAL PALSY, TRUAMATIC BRAIN INJURY OR STROKE – SUBGROUP 1.2.2**

### **20.1. Functional Profile – Class T/F35**

#### 20.1.1. Diplegic – Moderate involvement

This individual may require the use of assistive devices in walking but not necessarily when standing or throwing. A shift of centre of gravity may lead to loss of balance. A Triplegic may appear in this Class.

#### 20.1.2. Lower extremities-spasticity Grade 3 to 2. Involvement of one or both legs which may require assistive devices for walking. A Class 5 athlete may have sufficient function to run on the track. If function is insufficient Class 4 may be more appropriate. Balance - usually has normal static balance but exhibits problems in dynamic balance e.g. attempting a spin or throwing forcefully.

#### 20.1.3. Upper extremities. This is an area where variation occurs. Some moderate to minimal limitation in upper extremities can often be seen particularly when throwing, but strength is within normal limits. Hand function – normal cylindrical/spherical, opposition and prehensive grasp and release in the dominant hand is seen in all sports.

#### 20.1.4. Field (F35). The major problem is dynamic balance and function when standing in sport with or without assistive devices. Class 5 athletes may use a run up in field events.

### **20.2. Functional Profile – Class T/T36**

#### 20.2.1. Athetoid or Ataxic – Moderate involvement

The athlete ambulates without assistive devices. Athetosis is the most prevalent factor, although some ambulant spastic quadriplegics (i.e. more arm involvement than in ambulant diplegics), may fit this Class. Athetosis means unsteady (writhing), not having the capability to remain still. All four limbs will usually show functional involvement in sports movements. Class 6 athletes have more control problems in upper limbs than Class 5 athletes, although the former usually have better function in lower limbs particularly when running.



- 20.2.2. Lower extremities. Function can vary considerably depending on the sports skill involved, from poor, laboured, slow walking to a running gait, which often shows better mechanics. There can be a marked contrast between the walking athetoid with uncoordinated gait and the smooth even paced co-ordinated running/cycling action. Cyclical movements however are much better performed like cycling, running and free-style swimming.
- 20.2.3. Balance. May have good dynamic balance compared with static balance. Spasticity is common in Class 6 athletes and should not be a reason for placement in Class 5.
- 20.2.4. Upper extremities and hand control-grasp and release can be significantly affected when throwing in the moderate to severe athetoid athlete. The more spasticity present the greater the limits on follow through and maintenance of balance after throwing.
- 20.2.5. Track (T36). A consequence is that starting may present difficulties (e.g. false starts). Explosive movements also are difficult to perform. This is demonstrated in the long jump where an athlete may have good speed but the height from the board is poor and subsequently the distance covered is rather limited.
- 20.2.6. Field (F36). Throwing events require explosive movement. For the same reason as in track, athetoid athletes have difficulty demonstrating explosive power. This is particularly obvious in shot-put. Athletes with ataxia may demonstrate these problems to a lesser extent as intention tremor is stabilised with the weight of the implement. A run up in the javelin is possible.

### **20.3. Profile Class T35/F36**

- 20.3.1. Quadriplegic - athetoid or ataxic with spasticity. Moderate involvement.
- 20.3.2. Lower extremities - spasticity Grade 3 or 2. Involvement of both legs and with sufficient function to run on the track. Usually has good static balance but exhibits problems in dynamic balance activities.
- 20.3.3. Upper extremities - athetosis is the most prevalent factor and athlete demonstrates significantly more control problems than the T/F35 athlete. Hand control, grasp and release is affected when throwing.

- 20.3.4. By splitting classes athletes who fit this profile are able to run with T35 track athletes and throw with F36 athletes.

#### **20.4. Functional Profile – Class T/F37**

20.4.1. Hemiplegic

This Class is for the true ambulant hemiplegic athlete. A Class 7 athlete has Spasticity Grade 3 or 2 in one half of the body. They walk without assistive devices but often with a limp due to spasticity in the lower limb. Good functional ability in dominant side of the body.

- 20.4.2. Lower extremities – hemiplegia spasticity Grade 3 to 2. Dominant side has better development and good follow through movement in walking and running. Athlete has difficulty walking on his heels and has significant difficulty with hopping on the impaired leg. Side stepping towards the impaired side is also affected. Athletes with moderate minimal athetosis do not fit into this Class.

- 20.4.3. Upper extremities – arm and hand control is only affected in the non-dominant side. There is good functional control on the dominant side.

- 20.4.4. Track (T37). In walking the Class 7 athlete demonstrates a limp on the affected side. While running the limp may disappear almost totally. The reason is that in walking the leg support during stance phase begins with a heel strike. This is the most difficult action for persons with a spastic paresis. In running only the forefoot hits the ground, providing support and push off. The tight calf muscle in the Class 7 athletes facilitates the push off, and heel strike is not necessary. Thus a more normal looking running pattern.

- 20.4.5. The Class 7 athlete demonstrates a weakness in knee pick up in sprinting and an asymmetrical stride length due to lack of full forward pelvic rotation and hamstring spasticity decelerating the lower leg too rapidly on the involved side.

- 20.4.6. Field (F37). In throwing events the hemiplegic athlete often demonstrates hip flexion on the affected side instead of hyperextension. Trunk rotation during a throwing action also indicates a loss of fluency. In javelin throwing the transfer from run up to throwing phase demonstrates these difficulties clearly.

## 20.5. Functional Profile – Class T/F38

### 20.5.1. Minimal involvement

This class is for the minimally affected diplegic Spasticity Grade 1: hemiplegic Spasticity Grade 1: monoplegic, minimal athetoid/ataxic athlete.

### 20.5.2. An athlete must have an obvious impairment of function evident during classification. This athlete may appear to have near normal function when running but the athlete must demonstrate a limitation in function to classifiers based on evidence of spasticity (increased tone), ataxic, athetoid or dystonic movements while performing on the field of play or in training.

Clear evidence must include at least one major and one minor sign from the list below

#### Major

Clear uni or bilateral Babinski

Clear uni or bilateral clonus

Noticeably brisk reflexes or clear difference in reflexes left vs. right

Clear evidence of athetosis or ataxia

#### Minor

Stiffness or rigidity in one or more limbs

Mild atrophy or shortening of a limb

## 21. VISUALLY IMPAIRED ATHLETES – SUBGROUP 1.2.3

**21.1. Track/Field 11:** From no light perception in either eye to light perception, but inability to recognise the shape of a hand at any distance or in any direction.

**21.2. Track/Field 12:** From ability to recognise the shape of a hand to a visual acuity of 2/60 and/or visual field of less than 5 degrees.

**21.3. Track/Field 13:** From visual acuity above 2/60 to visual acuity of 6/60 and/or visual field of more than 5 degrees and less than 20 degrees.

**21.4. NE:** Not eligible - visual acuity over 6/60 and/or visual field of more than 20 degrees.

## **CHAPTER 2: THE CLASSIFICATION PROCESS**

### **1. Application**

This classification process applies to all IPC Athletics recognized Competitions including Paralympic Games and IPC World Athletics Championships.

### **2. Classification Team/Panels**

- 2.1 The IPC Athletics Section will appoint a Team of Classifiers who will be eligible to be nominated to act on its behalf at all IPC Athletics recognized Competitions. IPC Athletics will appoint one of the members of the Team of Classifiers to be Chairperson.
- 2.2 When IPC Athletics sanctions a competition it will appoint a Team of Classifiers for that Competition and nominate one member of the Team to be Chairperson for the duration of that Competition. The Chairperson is responsible for the selection of the Panels of classifiers from the Team.
- 2.3 When classifying athletes in classes 32 to 58, the Panel will consist of two or three classifiers. Each panel should comprise two types of classifiers - a medical (doctor, physiotherapist, occupational therapist or other approved health professional) and a technical (Physical education teacher, sports scientist, athlete, coach).

### **3. Principles of classification**

- 3.1 Classification is an integrated procedure.  
It will be carried out by Panels of Classifiers who have expertise in the examination of the disabilities and impairments of athletes entered for each type of competition. The nature of the athletes' particular disability will be taken into account in the appointment of the Panel for each classification.
- 3.2 Classification is a three stage process:
  - 3.2.1 Examination – Assessment of impairment and novel motor tasks.
  - 3.2.2 Pre-competition assessment – Observation and Assessment of sports specific motor tasks.
  - 3.2.3 Review in competition – Observation and Assessment of sports specific motor tasks in the competitive environment

### **4. Initial Classification.**

- 4.1 As part of the entry process, the Organising Committee (OC) of the competition will send a list of all athletes entered for the competition to IPC Athletics (i.e. Entry List). The Entry List will then be checked

against the IPC Athletics Classification Master List of registered and licensed athletes.

4.2 The checked Entry List will be returned to the IPC Athletics Technical Delegate for the recognized Competition with each athlete classified according to the following notations.

(N) - New = New athlete - An athlete who does not have an international classification.

(R) - Review = Athletes whose classification is under review, either because their disability or impairment is progressive or because there is a concern about the correct classification of the athlete.

(C) - Confirmed = Athletes who have been seen by an international classification panel and the panel has determined the athletes sport class will not change.

## **5. Protests prior to the competition.**

5.1 Protests may be lodged by either the National Paralympic Committee (NPC) representative of an athlete or a representative of another NPC relating to an athlete who has a (C) classification. The Chairperson of the Panel of Classifiers must receive this protest for that Competition at least three months prior to the commencement of the competition. A protest at this time will carry a protest fee, which will be the same fee as that for technical protests.

5.2 The Chairperson will arrange for a Protest Panel to re-assess that athlete at the Classification venue prior to the competition and the decision of the Protest Panel will be final for the period of the Competition (except in circumstances where the Chairperson of the Team of Classifiers initiates protest proceedings during the competition).

5.3 The NPC representative of the athlete or the representative of the protesting NPC will be entitled to appeal the Protest Panel decision to the Board of Arbitration of Classification (BAC). The procedure and appeal fee will be that laid down by the BAC.

## **6 Classification at the Competition venue prior to competition.**

6.1 In all classes for athletes classified (N) or (R) the Team of Classifiers will carry out the examination and pre-competition observation, classify each athlete and prepare a Classification Report for the Competition Management Group responsible for the event schedule. A report will normally be prepared at the end of each classification session.

## **7 Protests prior to competition.**

- 7.1 A protest may be made by either the NPC representative of an athlete being classified at the Classification venue or by the representative of another NPC relating to an athlete being classified at the Classification venue within six hours of the publication of the relevant Classification Report. The protest is to be made to the Chairperson of the Team of Classifiers. A protest at this time will carry a protest fee, which will be the same fee as that for technical protests.
- 7.2 A Protest Panel will re-assess the athlete. The decision of the Protest Panel will be final for the period of the Competition (except in circumstances where the Chairperson of the Classification lodges a protest during competition).
- 7.3 The NPC representative of the athlete or the representative of the protesting NPC will be entitled to appeal the Protest Panel decision to the Board of Arbitration of Classification (BAC). The procedure and appeal fee will be that laid down by the BAC.

## **8 Protests during competition.**

The primary aim is for all classification issues to be settled before the competition commences and protests during the competition can only be made in the following circumstances.

- 8.1 For athletes classified (N) or (R) prior to the recognized Competition (and who were not subject to protest during that process) a protest may be made by either the NPC representative of an athlete or by the representative of another NPC relating to an athlete after the athlete's first event within thirty minutes of the announcement of the provisional result. A protest at this time will carry a protest fee, which will be the same fee as that for technical protests. The athlete will be re-assessed by a Protest Panel. If the athlete is re-classified it will take place immediately and the result of the event will be amended to take account of the decision of the Protest Panel.
- 8.2 The Chairperson of the Classification Team may also initiate protest proceedings after an athlete's first event in accordance with the previous clause. No protest fee is payable in these circumstances.
- 8.3 If the Chairperson of the Classification Team considers more function has been shown by an athlete at any other time during competition than was shown during the pre-competition classification process (including prior protest proceedings) or in his/her first event, the Chairperson may initiate protest proceedings and the athlete's NPC representative will be notified. A Protest Panel will be appointed to re-assess the athlete. If the protest is upheld, the athlete will be disqualified from competition and all results achieved expunged from the record and medals returned. No protest fee is payable in these circumstances.

The following will apply for athletes classified (C) prior to the recognized competition.

- 8.4 For athletes classified (C) prior to the recognized Competition if the Chairperson of the Classification Team considers more function has been shown by the athlete at any time during the competition, which exceeds his/her classification class, the Chairperson may initiate protest proceedings and the athlete's NPC representative will be notified. A Protest Panel will be appointed to re-assess the athlete. If the athlete is re-classified it will take effect immediately. No protest fee is payable in these circumstances. For athletes classified (C) prior to the recognized Competition if the Chairperson of the Classification Team considers less function has been shown by the athlete at any time during the competition, the Chairperson may initiate protest proceedings and the athlete's NPC will be notified. A Protest Panel will be appointed to re-assess the athlete. If the athlete is re-classified it will take effect immediately. No protest fee is payable in these circumstances.
- 8.5 The NPC representative of the athlete or the representative of the protesting NPC as the case may be will be entitled to appeal the Protest Panel decision to the Board of Arbitration of Classification (BAC). The procedure and appeal fee will be that laid down by the BAC.

## **9 Protests after completion of competition.**

- 9.1 For athletes classified (C) a protest may be made by either the NPC representative of the athlete or by the representative of another NPC relating to an athlete for determination after the end of that athlete's events for that recognized Competition. A protest of this nature will carry a protest fee, which will be the same fee as that for technical protests. A Protest Panel will be appointed to re-assess the athlete after the completion of that athlete's events. If the protest is upheld, the athlete's re-classification will take effect for the next Competition at which the athlete competes.
- 9.2 The NPC representative of the athlete or the representative of the protesting NPC will be entitled to appeal the Protest Panel decision to the Board of Arbitration of Classification (BAC). The procedure and appeal fee will be that laid down by the BAC.

## **10 Protest Procedures.**

- 10.1 In all cases, the protest must be made on the correct form, provided by the Organising Committee of the recognized Competition and where applicable, accompanied by the appropriate fee. Protests made on behalf of a NPC may only be made by the authorised NPC representative. If the protest is upheld, the fee is returned. If the protest is not upheld, the fee will be forfeited and becomes the property of the IPC Athletics Section.

- 10.2 All protests will be heard as soon as possible, depending on the needs of the competition schedule and always within twenty-four hours of receipt of the protest. Final results for the relevant event will not be announced until after publication of the Protest Panel's decision. Athletes will not carry results forward from a competition event from which they were re-classified.
- 10.3 A Protest Panel will consist of three classifiers. Where possible the Protest Panel will not include a member of the previous Panel of Classifiers for that athlete. For athletes in classes 11 to 13 and 32 to 58, the Protest Panel will undertake a Medical and Functional re-assessment.
- 10.4 If a Protest Panel as part of its deliberations unanimously determines that an athlete is not co-operating or has not co-operated during the re-assessment or the earlier assessment as part of the classification process, the Protest Panel will not proceed with the re-assessment process or review and will declare the athlete ineligible to compete.



# CHAPTER 3: GENERAL GUIDELINES

## GENERAL GUIDELINES FOR CLASSIFICATION AT RECOGNIZED EVENTS

### 1. Introduction:

- 1.1 This document outlines the specific requirements for the classification of athletes at the venue of a recognized competition and should be applied in conjunction with the document entitled “IPC Athletics Classification Process”.
- 1.2 The Codes of Conduct for athletes, athlete representatives and classifiers during the classification process should also be applied in conjunction with this document.
- 1.3 The specific requirements acknowledge the rights of the athlete to a fair, proper and respectful process for classification in accordance with the level of his/her disability.

### 2. Support Staff

The organizing committee will provide administrative and volunteer staff who will assist in the process of classification. The Chairperson of the Classification Team will have control of these staff together with the Organising Committee (OC).

### 3. Classification Area and Rooms:

- 3.1 The classification area and rooms at the venue must be located in a private setting. Ideally the rooms and waiting area will be closed off with one point of entry.
- 3.2 The Chairperson of the Classification Team or his/her nominated representative will be the sole person to decide which persons may enter the classification area.
- 3.3 There should be a waiting area for athletes and athlete representatives. From the waiting area a corridor leads to four rooms with a desk at the entrance to be used by classification administration staff. Each room should contain an examination couch, desk and at least four chairs. The examination couch should be of the variety that can be adjusted in height by the use of electricity or by the use of a foot pedal. Three of the rooms will be of equal size and one room will be much larger to allow functional testing to take place. Sheets and pillows will be provided to allow examination of the athletes in a dignified manner.
- 3.4 The larger classification room should be approximately 10 X 20 metres. The floor surface should be appropriate for activities such

as wheeling, running, jumping, hopping, stretching and sprinting on the spot and other appropriate gross motor activities.

- 3.5 Equipment required for the examination process includes reflex hammers, pins to test sensation, tape measures, goniometers and one blood pressure measuring machine. In one of the smaller rooms, a height measurement system should be attached to the wall.
- 3.6 Indoor throwing equipment is required. This should include indoor shot and discus medicine balls, boccia balls, football and any other throwing equipment specifically requested.
- 3.7 The equipment required for classification of athletes who are visually impaired will be detailed at the end of this document.
- 3.8 A facility where the classifiers can wash their hands (in between examining athletes) with appropriate soap and towels should also be in the classification area. A facility containing a refrigerator and access to drinking water (bottled) and coffee or tea for the classifiers should be provided in the classification area.

#### **4. Pre-Competition Observation:**

- 4.1 Some athletes will need to be taken to an athletics venue to enable the classifiers to observe performance on the track or in field. It is necessary to have access to an athletics venue at set times during each classification session (morning and afternoon). Access to throwing equipment is required at the athletics venue for athletes to be observed using the implements they use in competition.
- 4.2 At the athletics venue it will be necessary to have the appropriate tie-downs for athletes who are being observed for field events.
- 4.3 If the athletics venue is some distance from the classification rooms, it will be necessary to provide transport both for the classifiers and also for the athlete and the athlete's representative. The athlete's track chair or field chair may also need to be transported as required.

#### **5. Administration:**

- 5.1 The official Entry List of the athletes involved in the competition will be held by the Chairperson of the Classification Team. The Chairperson of the Classification Team or his/her nominated representative will report the classification results to the Organising Committee (OC) on two occasions each day to allow publication of results of the classification process. The Entry List as well as the Master List of athletes will be updated on a daily basis according to the published results.

- 5.2 Prior to the competition the Chairperson of the team of classifiers will provide the Organising Committee (OC) with the list of athletes who needed to be classified. The Organising Committee (OC) will make a schedule for the classification after taking in to account the arrival times of the countries, and will notify the countries whose athletes are involved as to the schedule.

## **6. During Competition:**

- 6.1 At the athletic track venue there will be an examination room with appropriate facilities near to the 100 metres finish area. There will be a secure area where classifiers can leave their hand luggage while they observe athletes during events. Most of the observation of athletes in events will take place from outside the arena but occasionally it is necessary for a classifier to go onto the central arena. Permission from both the Technical Delegate and the Chairperson of the Classification Team is necessary before a classifier may go into the central arena.
- 6.2 The Technical Delegate and the Chairperson of the Classification Team will liaise with the Competition Manager in relation to each request for a classifier to go onto the central arena.
- 6.3 It is important, at the athletics venue, that classifiers have access to the T.V./Video system being utilised. This allows classifiers the opportunity to review the movements of athletes during their events and to also observe a specific athlete over more than one trial or event without interfering with his/her performance potential.
- 6.4 Approval for access to the T.V./Video system is to given by the Chairperson of the Classification Team after consultation with the Competition Manager.

## **7. Observers and Teaching:**

- 7.1 At Paralympic Games no formal teaching will take place during the initial classification process. There will however be restricted spaces available for appropriate persons who wish to observe the classification process with the permission of the Chairperson of the IPC Athletics Classification Team.
- 7.2 Approved observers will be allocated a specific time and location where they can observe the classification process. A code of conduct for observers will be outlined prior to entry to the classification area.
- 7.3 At other IPC Athletics recognized competitions teaching sessions for appropriate persons may take place during the initial classification process. IPC Athletics may also hold classification seminars independently.

7.4 Instruction or teaching on how to observe athletes during competition is permitted during events.

## **8. Visually Impaired classification:**

This is the description of the equipment required by the classifiers performing the classification of visually impaired athletes.

1 - One Autorefract keratometer: Allowing an objective refraction of the athlete.

2 - Box of glasses with frame. - For subjective refraction.

3 - Frontofocometer - To allow an accurate measurement of the power of the glasses.

4 - Slit lamp - To examine the anterior segment of the eye.

5 - Retinometer (optional) - To confirm in some specific cases the subjective eyesight with acuity charts.

6 - Ophthalmoscope (direct and indirect)

7 - Goldmann's visual field perimeter or Automated static perimetry:

8 - Esterman Test: To measure and determine with a paper document the visual field.

B - Acuity Charts : E.T.D.R.S (Light House, New York)

THE SOSH Vision Chart designed by the student optometric service to humanity third edition 1990.

The Chronister Pocket Acuity Chart

IBSA Medical Procedures 7

The Feinbloom Distance Test Chart (Designs for Vision Inc., Ronkonkoma, NY)

Any Special Low vision acuity charts

In order to measure visual acuity accurately, the acuity chart must be placed at a distance of between one and six metres from the athlete.

Classifiers must be able to control the luminosity (brightness of the light source) in the room being used for classification. It is extremely important that there is no great variation in luminosity between the waiting area and the classification area.

Visual acuity must be measured at least five times at different distances and using tests of varying sizes.

# CHAPTER 4: CODES OF CONDUCT

## 1. Introduction:

- 1.1 This document outlines the specific requirements of **Athletes, Athlete Representatives, Classifiers** and **Observers** during the classification process and applies in conjunction with the **IPC Athletics Classification Process** document and the **General Guidelines for IPC Athletic Classification at Recognized Competitions** document.
- 1.2 The specific requirements acknowledge the rights of the athlete to a fair, proper and respectful process for classification in accordance with the level of his/her disability.
- 1.3 The **Codes of Conduct** are intended to recognise that the process should be carried out in a friendly, efficient, non-confrontational atmosphere and should be as least intrusive as possible to the athlete's preparation. Privacy is essential and the results of the examination process are confidential.

## 2. Athletes Code of Conduct:

- 2.1 The athlete must be honest in his or her presentation of the history of their impairment, and in response to questions from members of **Classification Panels**.
- 2.2 The athlete must acknowledge that he/she has signed the **Classification Release** as part of his/her entry to the competition.
- 2.3 The athlete must co-operate in the examination process and also in the pre-competition observation phase of classification.
- 2.4 The athlete must arrange for his/her track chair or field chair to be present at the site of the pre-competition testing prior to the given time for the testing. Where possible, the athlete will have carried out an appropriate warm-up so that the Classifiers can come directly to the athlete and carry out the pre-competition observation. If the athlete has not had time to warm-up then, time must be allowed.
- 2.5 The athlete must be aware of the consequences of an evaluation where they either are uncooperative or believed to have better function than they are showing. On the first evaluation they will be asked to go away and come back either that day or the next. If during the subsequent evaluation they fail to cooperate then they will be assigned the class intentional misrepresentation of abilities (IM) which carries a maximum penalty of two years suspension from the sport. Furthermore, they will not be allowed to compete at the competition.

- 2.6 The athlete should present for classification in clothes suitable for the examination process both from the point of view of the examination process and pre-competition observation.

### 3. Athlete Representatives Code of Conduct:

- 3.1 Two representatives are permitted. One is the official representative and the other may be an interpreter/team official.
- 3.2 At appropriate times representatives may be involved in discussions with **members of the Classification Panel**. These discussions may include the history of the athlete's impairment. At the end of the physical examination representatives may raise issues in relation to the athlete's impairment. After the pre-competition testing phase representatives may also contribute to discussions.
- 3.3 Athlete representatives should conduct themselves in an appropriate manner at all times. Aggressive behaviour is never acceptable and will not be tolerated.

### 4. Classifiers Code of Conduct:

- 4.1 Classifiers will wear appropriate identification at all times, particularly in the **Classification Area** and at the **Competition Venue**.
- 4.2 Within the examination rooms, classifiers will wear either the uniform provided or the IPC Athletics uniform. It is not permissible to wear national uniforms of any country. When in the central arena, the only dress allowed is the uniform provided.
- 4.3 When permitted into the central arena, classifiers must be discreet and must not communicate with competing athletes. Classifiers should ensure that there is no interference with spectators viewing of an event.
- 4.4 **Classification Panels** will be provided with specific documents in each of the three classification rooms. Classifiers will record the name of the athlete, the three classifiers who carried out the initial classification, and the class of the athlete.
- 4.5 Photocopies will be made for all classifiers. They will then examine the daily athletics programme to enable them to observe the athletes they have classified, particularly in their first event and in subsequent events where necessary.
- 4.6 The three classifiers who carry out the initial classification are not permitted to talk to other classifiers about an athlete until a confirmed (C) class is given.
- 4.7 Only in exceptional circumstances will a classifier be permitted to examine an athlete from his/her county.

- 4.8 The **classification process** should be efficient and the examinations should be respectful and carried out discreetly. The examination will be carried out with removal of the minimum amount of clothing. Sheets will be used for privacy during the examination process.
- 4.9 In general, female classifiers will examine female athletes. In certain circumstances male classifiers will examine the areas under consideration in relation to a specific classification level.
- 4.10 The examination of male athletes will take into account of religious and cultural backgrounds; e.g., the presence of female classifiers may not be appropriate.
- 4.11 The approved classification cards will be filled out after the classification of each athlete, and the athlete and the athlete's representative will be informed of the result.
- 4.12 The information gathered at the time of classification will be passed onto the Chief Classifier. Games officials will also have access to this information. The list of classifications from each session (of classification) will be published in a manner that has been already announced to the **Chef de Missions** of all teams at the **Competition**, so as to allow other countries to make protests.
- 4.13 The photocopying of classification cards for each NPC will be carried out once the athlete has been awarded a confirmed (C) class.

## 5. Observers Code of Conduct:

- 5.1 Discreet behaviour is essential.
- 5.2 During the classification procedure, an observer should not communicate with the **Panel of Classifiers** carrying out the classification or with the athlete or the Athlete's Representatives. Communication between observers should be minimal and conducted unobtrusively. Discussions with the **Panel** should occur after the completion of the classification process and after the athlete has left the room.

# APPENDIX 1

## Minimum Disability Criteria (MDC)

At the time the 2006 IPC Athletics Classification Manual was written, eligibility and MDC were determined by referring to the manuals from CPISRA (2004-8), ISOD and ISMWSF. The relevant MDC from these documents has been collated in this Memorandum and will be inserted as an appendix in the IPC Athletics Classification Handbook (edition 2009/2010) so that the handbook can be read and understood without cross-reference to other classification manuals, and to avoid that IPC Athletics Classification is subject to changes in any of the above classification manuals.

The following conditions related to Minimum Disability Criteria will apply:

1. To be eligible for events recognized by IPC Athletics up to and including London 2012, athletes with impairment(s) listed must meet one or more of the MDC, listed in Appendix 1.
2. When the 2006 IPC Athletics Classification Handbook is silent on the methods that apply for assessment of the athlete, the provisions that will be in place from September 2012 onwards will apply. These are available from the document entitled [IPC Athletics Classification Project for Physical Impairments: Final Report - Stage 1.](#), which is posted on the IPC Athletics website. For example, the 2006 Handbook does not specify which method for assessing muscle power should be used, creating the possibility of inconsistent outcomes. However the Final report – Stage 1 specifies that the ‘Daniels and Worthingham Method (2002)’ should be used, and this should be used by all IPC Athletics Classifiers from now onwards.

## Class T/F32

The 2006 IPC Athletics Classification Handbook provides profiles for class 31 and 32, and further subdivides class 32 into class 32 Upper and class 32 Lower. As a matter of clarification, the following applies:

1. Track: Up to the London 2012 Paralympic Games there will be a sport class T32U (where U = uppers, indicating the chair is propelled with upper limbs) and a sport class T32L (where L = lowers, indicating the chair is propelled with lower limbs). After the London 2012 Paralympic Games, the sport class T32U will become sport class T32 and sport class T32L will become sport class T31. Note that there is no sport class T31 up to the London 2012 Paralympic Games.
2. Field: Up to the London 2012 Paralympic Games, there are two classes F31 and F32 (there is no upper and lower division in field events). These classes remain unchanged for the period post-London 2012 Paralympic Games.



**Appendix 1 - Minimum Disability Criteria applicable 2009 onwards until and including the London 2012 Paralympic Games**

Impairment	Criteria
<p><b>MDC - Hypertonia / ataxia / athetosis</b>            Note: Applies to all five of the identified impairment groups</p>	<p>Minimally affected diplegic, spasticity grade 1; hemiplegic, spasticity grade 1; monoplegic; minimal athetoid / ataxic athlete. Must have an obvious impairment of function evident during classification. This means clear evidence of spasticity, involuntary movement and / or ataxia. As a guide, clear evidence should include at least 1 major sign and 1 minor sign from the list below:</p> <p><b>Major</b></p> <ol style="list-style-type: none"> <li>1. Clear uni or bilateral Babinski</li> <li>2. Clear uni or bilateral clonus (e.g., 5 beats)</li> <li>3. Noticeably brisk reflexes or clear difference in reflexes between right and left</li> <li>4. Clear evidence of athetosis or ataxia</li> </ol> <p><b>Minor:</b></p> <ol style="list-style-type: none"> <li>1. Stiffness or rigidity in 1 or more limbs;</li> <li>2. Mild atrophy or shortening of a limb</li> </ol> <p>Impairment must be judged to have an impact on sport</p>
<p><b>MDC - Muscle power lower limb (T54 / F58 / T44).</b></p>	<p>Score muscle power from 0-5 for following LEG movements,</p> <ul style="list-style-type: none"> <li>• Hip abduction, adduction, flexion and extension</li> <li>• Knee: Flexion and extension</li> <li>• Ankle: plantar and dorsiflexion</li> </ul> <p>Maximum points (unimpaired muscle power) = 80 (40 on left and 40 on right)            Eligible impairment of muscle power is a loss of <math>\geq 10</math> points out of a possible 80. In assessing, all muscle grade points are tallied, including grades one and two.</p>
<p><b>MDC - Muscle power upper limb (T/F46).</b></p>	<p>Scores muscle power from 0-5 for following ARM movements,</p> <ul style="list-style-type: none"> <li>• Shoulder: abduction, adduction, flexion and extension</li> <li>• Elbow: Flexion and extension</li> <li>• Wrist: plantar flexion, dorsiflexion;</li> <li>• Fingers (2-5): Flexion and extension at proximal interphalangeal joint;</li> <li>• Thumb: Opposition and extension</li> </ul> <p>Maximum points (unimpaired muscle power) = 60 (L) + 60 (R). Eligible impairment of muscle power is a loss of <math>\geq 20</math> points out of a possible 60 in one arm. In assessing, all muscle grade points are tallied, including grades one and two.</p>
<p><b>MDC - Amputation upper limb (T/F46).</b></p>	<p>Amputation through or above the WRIST joint</p>

<b>MDC - Amputation lower limb (T/F44).</b>	Amputation through or above the ANKLE joint
<b>MDC - Range of Movement upper limb (T/F46).</b>	One or more of the joints identified is restricted as described: <ul style="list-style-type: none"> <li>•Shoulder: arm can be elevated to 135 degrees only, or ankylosis in any position;</li> <li>•Elbow: extension defect of 45 degrees or ankylosis in any position</li> <li>•Wrist: Ankylosis</li> </ul>
<b>MDC - Range of Movement lower limb (T/F44).</b>	One or more of the joints identified is restricted as described: <ul style="list-style-type: none"> <li>•Hips: decrease in flexion-extension of 60 degrees or ankylosis;</li> <li>•Knee: extension defect of 30 degrees or ankylosis in any position;</li> <li>•Ankle: Ankylosis;</li> <li>•Back and Torso: Severely reduced mobility of a permanent nature and/or as in (sic) scoliosis measuring over 60 degrees curve as measured by the Cobb method. X-ray proof is necessary.</li> </ul>
<b>MDC - Leg length difference (T/F44)</b>	At least 7cm difference between left and right leg. Measurements to be taken from anterior superior iliac spine to tip of medial malleolus on same side
<b>MDC - Short stature</b>	Standing height as indicated below PLUS evidence of achondroplasia, a genetic condition causing abnormal growth and development of bone and cartilage and resulting in disproportionately short limbs. People with short stature resulting from dysfunction of the pituitary gland are not eligible. Athletes must be $\geq$ 18ys old.. Males: $\leq$ 145cm, Females: $\leq$ 140cm

## Appendix 2 – Medical Review

Many athletes have interventions that will materially and permanently alter measures of impairment in order to assist with daily functioning. Note that the intervention received may increase or decrease the sports impact of an impairment and re-classification may therefore be to a higher or lower class. This rule thus applies to athletes with any classification status – New, Review or Confirmed.

In instances when an athlete receives such an intervention AFTER they have been classified (e.g., botox to reduce hypertonia; tendon releases; Harrington rods or joint fixations to assist posture/stability; corrective eye surgery), the athlete is obliged to notify their NPC, who must notify IPC Athletics by completing the Medical Review Form and submit it to the address indicated.

The Medical Review Form should be received by IPC Athletics within 6 months of the intervention or before the athlete's next competition, whichever is the sooner. There may be exceptions to this timeframe as some interventions will take longer from which to recover e.g. 12 months before training or competition is allowed after the procedure being completed, Failure to correctly notify IPC Athletics within the timeframe indicated may be considered a case of intentional misrepresentation see above comment regarding time frame of skills and/or abilities as defined under the IPC Classification Code (section 11).

Once this Medical Review Form is submitted it will be assessed by the IPC and the NPC will be notified whether the request is accepted or not

### Note:

1. If accepted the athlete sport class status will be changed into 'REVIEW' with immediate effect.
2. the requirement for reclassification does not guarantee that the sports class of the athlete will necessarily change. The re-classification process will be conducted and a sport class will be allocated on the basis of the assessments conducted and in accordance with the IPC Athletics Classification rules

Subject to completing and submitting the Medical Review Form to IPC Athletics within the required timeframe the date of the intervention will be used for official purposes.