


World Para Athletics

# Classification Rules and Regulations

February 2018

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# World Para Athletics Classification Rules and Regulations

January 2018



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# Part One: General Provisions

## 1 Scope and Application

### Adoption

1.1 These Classification Rules and Regulations are referred to throughout this document as the 'Classification Rules'. They have been prepared by World Para Athletics to implement the requirements of the 2015 IPC Athlete Classification Code and International Standards.

1.2 The Classification Rules have been adopted by World Para Athletics on 01 January 2018.

1.3 These Classification Rules refer to a number of Appendices. These Appendices form an integral part of the Classification Rules.

1.4 These Classification Rules form part of the World Para Athletics Rules and Regulations.

1.5 The Classification Rules are supplemented by a number of Classification forms that have been prepared to assist Athlete Evaluation. These forms are available from World Para Athletics, and may be amended by World Para Athletics from time to time.

### Classification

1.6 Classification is undertaken to:

1.6.1 define who is eligible to compete in Para sport and consequently who has the opportunity to reach the goal of becoming a Paralympic Athlete; and

1.6.2 group Athletes into Sport Classes which aim to ensure that the impact of Impairment is minimised and sporting excellence determines which Athlete or team is ultimately victorious.

### Application

1.7 These Classification Rules apply to all Athletes and Athlete Support Personnel who are registered and/or licensed with World Para Athletics, and/or participate in any Events or Competitions organised, authorised or recognised by World Para Athletics.

1.8 These Classification Rules must be read and applied in conjunction with all other applicable rules of World Para Athletics, including but not limited to the World Para Athletics Rules and Regulations. In the event of any conflict between these Classification Rules and any other rules, the Classification Rules shall prevail.



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## International Classification

1.9 World Para Athletics will only permit an Athlete to compete in an IPC Games, IPC Competitions or a World Para Athletics Sanctioned Competitions if that Athlete has been allocated a Sport Class (other than Sport Class Not Eligible) and designated with a Sport Class Status in accordance with these Classification Rules.

1.10 World Para Athletics will provide opportunities for Athletes to be allocated a Sport Class and designated with a Sport Class Status in accordance with these Classification Rules at World Para Athletic Recognised Competitions (or other such locations as defined by World Para Athletics). World Para Athletics will advise Athletes, National Bodies and National Paralympic Committees in advance as to such World Para Athletics Competitions (or other such locations).

## Interpretation and Relationship to Code

1.11 References to an 'Article' mean an Article of these Classification Rules, references to an 'Appendix' mean an Appendix to these Classification Rules, a 'Section' means a section of an Appendix and Capitalised terms used in these Classification Rules have the meaning given to them in the Glossary to these Classification Rules.

1.12 References to a 'sport' in these Classification Rules refer to both a sport and an individual discipline within a sport (e.g. 100m or Discus Throw).

1.13 The Appendices to these Classification Rules are part of these Classification Rules both of which may be amended, supplemented and/or replaced by the World Para Athletics from time to time.

1.14 Headings used in these Classification Rules are used for convenience only and have no meaning that is separate from the Article or Articles to which they refer.

1.15 All references to the words "he", "his" or "him" in these Classification Rules also mean the words "she", "hers" or "her".

1.16 These Classification Rules are to be applied and interpreted as an independent text but in a manner that is consistent with the 2015 IPC Athlete Classification Code and the accompanying International Standards. In the event of any conflict between these Classification Rules and the Code or International Standards, the Code and International Standards shall prevail.



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## Governance

1.17 The IPC acts as the International Federation and governs the sport of Para athletics. It carries out these responsibilities under the name "World Para Athletics" and the term "World Para Athletics" must be read in these Rules as the IPC and vice versa.

1.18 The IPC Handbook is an integral part of the governance of the sport of Para athletics.

Printing of the Rules

1.19 These Classification Rules are the copyright property of the IPC and have been published for the benefit of Athletes, Athlete Support Personnel, National Bodies, National Paralympic Committees and others who are engaged in an official capacity with World Para Athletics. These Classification Rules may be reprinted or translated by any organisation with a legitimate need to do so, subject to IPC's continuing ability to assert its copyright in the Classification Rules, including the right to insist on an assignment to the IPC of the copyright in any translated version of these Classification Rules. Any other organisation must obtain the permission of the IPC prior to reprinting, translating or publishing these Classification Rules.

1.20 The English version of these Classification Rules shall be accepted as the authoritative version for the purpose of interpretation.

## Amendments to the Rules

1.21 After the conclusion of each Paralympic Games, the IPC shall undertake a review of these Classification Rules, in consultation with National Bodies, National Paralympic Committees and any relevant International Organisations of Sports for the Disabled, in accordance with the IPC Handbook (located on the IPC website). All amendments shall be implemented prior to the start of the second year following the relevant Paralympic Games.

1.22 These Classification Rules also may be amended at any time by the IPC as a result, for example, of changes in the World Para Athletics Rules and Regulations or where World Para Athletics otherwise considers it necessary to do so.



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# 2 Roles and Responsibilities

2.1 It is the personal responsibility of Athletes, Athlete Support Personnel, and Classification Personnel to familiarise themselves with all the requirements of these Classification Rules.

**Athlete Responsibilities**

2.2 The roles and responsibilities of Athletes include to:

a) be knowledgeable of and comply with all applicable policies, rules and processes established by these Classification Rules;

b) participate in Athlete Evaluation in good faith;

c) ensure that adequate information related to Underlying Health Conditions and Eligible Impairments is provided and/or made available to World Para Athletics;

d) cooperate with any investigations concerning violations of these Classification Rules; and

e) actively participate in the process of education, awareness, and Classification research, through exchanging personal experiences and expertise.

**Athlete Support Personnel Responsibilities**

2.3 The roles and responsibilities of Athlete Support Personnel include to:

a) be knowledgeable of and comply with all applicable policies, rules and processes established by these Classification Rules;

b) use their influence on Athlete values and behaviour to foster a positive and collaborative Classification attitude and communication;

c) assist in the development, management and implementation of Classification Systems; and

d) cooperate with any investigations concerning violations of these Classification Rules.

**Classification Personnel Responsibilities**

2.4 The roles and responsibilities of Classification Personnel include to:

a) have a complete working knowledge of all applicable policies, rules and processes established by these Classification Rules;



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b) use their influence to foster a positive and collaborative Classification attitude and communication;

c) assist in the development, management and implementation of Classification Systems, including participation in education and research; and

d) cooperate with any investigations concerning violations of these Classification Rules.



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# Part Two: Classification Personnel

## 3 Classification Personnel

3.1 Classification Personnel are fundamental to the effective implementation of these Classification Rules. World Para Athletics will appoint a number of Classification Personnel, each of whom will have a key role in the organisation, implementation and administration of Classification for World Para Athletics.

### Head of Classification

3.2 World Para Athletics must appoint a Head of Classification. The Head of Classification is a person responsible for the direction, administration, co-ordination and implementation of Classification matters for World Para Athletics.

3.3 If a Head of Classification cannot be appointed, World Para Athletics may appoint another person, or group of persons collectively (provided such person or group of persons agrees to comply with the Classifier Code of Conduct), to act as the Head of Classification.

3.4 The Head of Classification is not required to be a certified Classifier.

3.5 The Head of Classification may delegate specific responsibilities and/or the transfer specific tasks to designated Classifiers, or other persons authorised by World Para Athletics.

3.6 Nothing in these Classification Rules prevents the Head of Classification (if certified as a Classifier) from also being appointed as a Classifier and/or Chief Classifier.

### Classifiers

3.7 A Classifier is a person authorised as an official and certified by the World Para Athletics to conduct some or all components of Athlete Evaluation as a member of a Classification Panel.

### Chief Classifiers

3.8 A Chief Classifier is a Classifier appointed to direct, administer, co-ordinate and implement Classification matters for a specific Competition or at such other location as defined by World Para Athletics. In particular, a Chief Classifier may be required by World Para Athletics to do the following:



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3.8.1 identify those Athletes who will be required to attend an Evaluation Session;

3.8.2 supervise Classifiers to ensure that these Classification Rules are properly applied during Classification;

3.8.3 manage Protests in consultation with World Para Athletics; and

3.8.4 liaise with the relevant Competition organisers to ensure that all travel, accommodation and other logistics are arranged in order that Classifiers may carry out their duties at the Competition.

3.9 A Chief Classifier may delegate specific responsibilities and/or transfer specific tasks to other appropriately qualified Classifiers, or other appropriately qualified World Para Athletics officers or representatives, and/or appropriately qualified persons in the local organising committee of a Competition.

**Trainee Classifiers**

3.10 A Trainee Classifier is a person who is in the process of formal training by World Para Athletics.

3.11 World Para Athletics may appoint Trainee Classifiers to participate in some or all components of Athlete Evaluation under the supervision of a Classification Panel, to develop Classifier Competencies.

# 4 Classifier Competencies, Training and Certification

4.1 A Classifier will be authorised to act as a Classifier if that Classifier has been certified by World Para Athletics as having the relevant Classifier Competencies.

4.2 World Para Athletics must provide training and education to Classifiers to ensure Classifiers obtain and/or maintain Classifier Competencies.

4.3 World Para Athletics must specify and publish Classifier Competencies in a manner that is transparent and accessible. The Classifier Competencies must include that a Classifier has:

4.3.1 a thorough understanding of these Classification Rules;

4.3.2 an understanding of Para athletics, including an understanding of the World Para Athletics Rules and Regulations;

4.3.3 an understanding of the Code and the International Standards; and



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4.3.4 a professional qualification(s), level of experience, skills and/or competencies in order to act as a Classifier for World Para Athletics. These include that Classifiers must either:

a) be a certified health professional in a field relevant to the Eligible Impairment category which World Para Athletics at its sole discretion deems acceptable, such as a physician or physiotherapist for Athletes with a Physical Impairment; ophthalmologist or optometrist for Athletes with a Vision Impairment; and/or a psychologist for Athletes with an Intellectual Impairment; or

b) have an extensive coaching or other relevant background in Para athletics; or a recognised and reputable academic qualification which encompasses a requisite level of anatomical, biomechanical and sport-specific expertise, which World Para Athletics in its sole discretion deems to be acceptable.

4.4 World Para Athletics must establish a process of Classifier Certification by which Classifier Competencies are assessed. This process includes:

4.4.1 a process for the certification of Trainee Classifiers;

4.4.2 quality assessment for the period of certification;

4.4.3 a process for handling substandard performance, including options for remediation and/or withdrawal of certification; and

4.4.4 a process for Re-certification of Classifiers.

4.5 World Para Athletics must specify Entry-Level Criteria applicable to persons who wish to become Trainee Classifiers. World Para Athletics will provide Entry-Level Education to Trainee Classifiers.

4.6 World Para Athletics must provide Continuing Education to Classifiers for the purposes of Certification and Re-certification.

4.7 World Para Athletics may provide that a Classifier is subject to certain limitations, including (but not limited to):

4.7.1 a limitation on the Impairment type for which a Classifier is certified to act as a Classifier;

4.7.2 a limitation on the components of Athlete Evaluation that a Classifier is certified to conduct;



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4.7.3 a limitation on the level of Competition or Event that a Classifier is authorised to act as a Classifier;

4.7.4 the maximum period of time that a Classifier Certification is valid;

4.7.5 that Classifier Certification is subject to review within a specific time frame by reference to the Classifier Competencies;

4.7.6 that a Classifier may lose Classifier Certification if World Para Athletics is not satisfied that the Classifier possesses the required Classifier Competencies; and/or

4.7.7 that a Classifier may regain Classifier Certification if World Para Athletics is satisfied that the Classifier possesses the required Classifier Competencies.

Further information about the World Para Athletics Pathways and Education Programmes can be found here: **https://www.paralympic.org/athletics/education.**

# 5 Classifier Code of Conduct

5.1 The integrity of Classification in World Para Athletics depends on the conduct of Classification Personnel. World Para Athletics has therefore adopted a set of professional conduct standards referred to as the 'Classifier Code of Conduct'.

5.2 All Classification Personnel must comply with the Classifier Code of Conduct.

5.3 Any person who believes that any Classification Personnel may have acted in a manner that contravenes the Classifier Code of Conduct must report this to World Para Athletics.

5.4 If World Para Athletics receives such a report it will investigate the report and, if appropriate, take disciplinary measures.

5.5 World Para Athletics has discretion to determine whether or not a Classifier has an actual, perceived and/or potential conflict of interest.



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# Part Three: Athlete Evaluation

## 6 General Provisions

6.1 World Para Athletics has specified in these Classification Rules the process, assessment criteria and methodology whereby Athletes will be allocated a Sport Class and designated a Sport Class Status. This process is referred to as Athlete Evaluation.

6.2 Athlete Evaluation encompasses a number of steps and these Classification Rules therefore include provisions regarding:

6.2.1 an assessment of whether or not an Athlete has an Eligible Impairment for the sport;

6.2.2 an assessment of whether an Athlete complies with Minimum Impairment Criteria for World Para athletics; and

6.2.3 the allocation of a Sport Class (and designation of a Sport Class Status) depending on the extent to which an Athlete is able to execute the specific tasks and activities fundamental to the sport (with the exception for Athletes with Vision Impairment, where the current assessment criteria is not yet sport specific and does not include a requirement that the Athletes are assessed in respect of the 'extent to which the Athlete is able to execute the specific tasks and activities fundamental to the sport').

## 7 Eligible Impairment

7.1 Any Athlete wishing to compete in Para athletics must have an Eligible Impairment and that Eligible Impairment must be Permanent.

7.2 Appendices One, Two and Three of these Classification Rules specify the Eligible Impairment(s) an Athlete must have in order to compete in Para athletics.

7.3 Any Impairment that is not listed as an Eligible Impairment in Appendices One, Two or Three is referred to as a Non-Eligible Impairment.

7.4 Appendix Four includes examples of Non-Eligible Impairments.



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## Assessment of Eligible Impairment

7.5 World Para Athletics must determine if an Athlete has an Eligible Impairment.

7.5.1 In order to be satisfied that an Athlete has an Eligible Impairment, World Para Athletics may require an Athlete to provide evidence that he or she has a Health Condition that leads to an Eligible Impairment (an Underlying Health Condition).

7.5.2 Appendix Four lists examples of Health Conditions that are not Underlying Health Conditions.

7.5.3 The means by which World Para Athletics determines that an individual Athlete has an Eligible Impairment is at the sole discretion of World Para Athletics. World Para Athletics may consider that an Athlete's Eligible Impairment is sufficiently obvious and therefore does not require evidence that demonstrates the Athlete's Eligible Impairment.

7.5.4 If, in the course of determining if an Athlete has an Eligible Impairment, World Para Athletics becomes aware that the Athlete has a Health Condition, and believes that the impact of that the Health Condition may be that it is unsafe for that Athlete to compete or there is a risk to the health of the Athlete (or other Athletes) if that Athlete competes, it may designate the Athlete as Classification Not Completed (CNC) in accordance with Article 10 of these Classification Rules. In such instances World Para Athletics will explain the basis of its designation to the relevant National Body and/or National Paralympic Committee.

7.6 For Athletes with Intellectual Impairment the medical Diagnostic Information is captured through the primary eligibility check completed by INAS (see Appendix Three). All other Athletes are required to supply World Para Athletics with Medical Diagnostic Information that must be provided as follows:

7.6.1 The relevant National Body and/or National Paralympic Committee must submit a Medical Diagnostics Form to World Para Athletics, upon completing the registration of an Athlete.

7.6.2 The Medical Diagnostics Form must be completed in English and dated and signed by a certified medical doctor (Physical Impairment) or ophthalmologist (Vision Impairment).



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7.6.3 The Medical Diagnostics Form must be submitted with supportive Diagnostic Information if required by World Para Athletics.

7.7 World Para Athletics may require an Athlete to re-submit the Medical Diagnostics Form (with necessary supportive Diagnostic Information) if World Para Athletics in its sole discretion considers the Medical Diagnostics Form and/or the Diagnostic Information to be incomplete and/or inconsistent.

7.8 World Para Athletics may consider the Diagnostic Information itself, and/or may appoint an Eligibility Assessment Committee to do so.

7.9 The process by which an Eligibility Assessment Committee is formed and considers Diagnostic Information is as follows:

7.9.1 The Head of Classification will appoint an Eligibility Assessment Committee. The Eligibility Assessment Committee must be comprised of the Head of Classification and at least two (2) other experts with appropriate medical qualifications (as determined by World Para Athletics). All members of the Eligibility Assessment Committee must sign confidentiality undertakings.

7.9.2 If the Head of Classification considers that he does not hold the necessary competencies to assess the Diagnostic Information, he will not participate in the review of the Diagnostic Information, but will assist the Eligibility Assessment Committee.

7.9.3 The Eligibility Assessment Committee will review the Medical Diagnostic Information provided and will determine if and what additional Diagnostic Information is required, and the purposes for which it is required.

7.9.4 The Head of Classification will notify the relevant National Body or National Paralympic Committee what Diagnostic Information must be provided on behalf of the Athlete and will set timelines for the production of additional Diagnostic Information.

7.9.5 Wherever possible all references to the individual Athlete and the source(s) of the Diagnostic Information must be withheld from the Eligibility Assessment Committee. Each member of the Eligibility Assessment Committee will review the Diagnostic Information and decide whether such information establishes the existence of an Eligible Impairment.



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7.9.6 If the Eligibility Assessment Committee concludes that the Athlete has an Eligible Impairment with the stated Underlying Health Condition the Athlete will be permitted to complete Athlete Evaluation with a Classification Panel.

7.9.7 If the Eligibility Assessment Committee is not satisfied that the Athlete has an Underlying Health Condition the Head of Classification will provide a decision to this effect in writing to the relevant National Body or National Paralympic Committee. The National Body or National Paralympic Committee will be given an opportunity to comment on the decision and may provide further Diagnostic Information to the Eligibility Assessment Committee for review. If the decision is subsequently revised, the Head of Classification will inform the National Body or National Paralympic Committee.

7.9.8 If the decision is not changed, the Head of Classification will issue a final decision letter to the National Body or National Paralympic Committee and the Athlete will be allocated Sport Class Not Eligible (NE) in accordance with the provisions of Article 18.3 of these Classification Rules.

7.9.9 The Eligibility Assessment Committee must make its decisions by a majority. If the Head of Classification participates in the review of the Diagnostic Information, he may veto any decision if he does not agree that the Diagnostic Information supports the conclusion that the Athlete has an Eligible Impairment.

7.10 World Para Athletics may delegate one (1) or more of the functions described above to a Classification Panel.

# 8 Minimum Impairment Criteria

8.1 An Athlete who wishes to compete in a sport must have an Eligible Impairment that complies with the relevant Minimum Impairment Criteria for that sport.

8.2 World Para Athletics has set Minimum Impairment Criteria to ensure that an Athlete's Eligible Impairment affects the extent to which an Athlete is able to execute the specific tasks and activities fundamental to the sport (with the exception for Athletes with Vision Impairment as outlined in Article 6.2.3).

8.3 Appendices Appendix One, Appendix Two, and Appendix Three of these Classification Rules specify the Minimum Impairment Criteria applicable to each



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sport and the process by which an Athlete's compliance with Minimum Impairment Criteria is to be assessed by a Classification Panel as part of an Evaluation Session.

8.4 Any Athlete who does not comply with the Minimum Impairment Criteria for a sport must be allocated Sport Class Not Eligible (NE) for that sport.

8.5 A Classification Panel must assess whether or not an Athlete complies with Minimum Impairment Criteria. This will take place as part of an Evaluation Session. Prior to participating in an Evaluation Session, an Athlete must first satisfy World Para Athletics that he has an Eligible Impairment.

8.6 In relation to the use of Adaptive Equipment, World Para Athletics has set Minimum Impairment Criteria as follows:

8.6.1 for Eligible Impairments (other than Vision Impairment), Minimum Impairment Criteria must not consider the extent to which the use of Adaptive Equipment might affect how the Athlete is able to execute the specific tasks and activities fundamental to the sport; and

8.6.2 for Vision Impairment, Minimum Impairment Criteria must take into consideration the use of Adaptive Equipment.

# 9 Sport Class

9.1 A Sport Class is a category defined by World Para Athletics in these Classification Rules, in which Athletes are grouped by reference to the impact of an Eligible Impairment on their ability to execute the specific tasks and activities fundamental to a sport (with the exception for Athletes with Vision Impairment as outlined in Article 6.2.3).

9.1.1 An Athlete who does not have an Eligible Impairment or does not comply with the Minimum Impairment Criteria for a sport must be allocated Sport Class Not Eligible (NE) for that sport in accordance with the provisions of Article 26 of these Classification Rules.

9.1.2 An Athlete who complies with the Minimum Impairment Criteria for a sport must be allocated a Sport Class (subject to Article 29 and Article 30).

9.1.3 Except for the allocation of Sport Class Not Eligible (NE) by World Para Athletics (in accordance with Article 18.1) and the allocation of a Sport Class for Athletes with Vision Impairment as outlined in Article 6.2.3, the allocation of a Sport



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Class must be based solely on an evaluation by a Classification Panel of the extent to which the Athlete's Eligible Impairment affects the specific tasks and activities fundamental to sport. Except for any Observation in Competition Assessment, this evaluation must take place in a controlled non-competitive environment, which allows for the repeated observation of key tasks and activities.

9.2 Appendices One, Two and Three of these Classification Rules specify the assessment methodology and assessment criteria for the allocation of a Sport Class and the designation of Sport Class Status.

## 10 Classification Not Completed

10.1 If at any stage of Athlete Evaluation World Para Athletics or a Classification Panel is unable to allocate a Sport Class to an Athlete, World Para Athletics, the Head of Classification or the relevant Chief Classifier may designate that Athlete as Classification Not Completed (CNC).

10.2 The designation Classification Not Completed (CNC) is not a Sport Class and is not subject to the provisions in these Classification Rules concerning Protests. The designation Classification Not Completed (CNC) will however be recorded for the purpose of the World Para Athletics Classification Master List.

10.3 An Athlete who is designated as Classification Not Completed (CNC) may not compete in the sport of World Para Athletics. See Article 30 for remediation.



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# Part Four: Athlete Evaluation and the Classification Panel

## 11 The Classification Panel

11.1 A Classification Panel is a group of Classifiers appointed by World Para Athletics to conduct some or all of the components of Athlete Evaluation including as part of an Evaluation Session.

**General Provisions**

11.2 A Classification Panel must be comprised of at least two (2) certified Classifiers. In exceptional circumstances a Chief Classifier may provide that a Classification Panel is comprised of only one (1) Classifier, subject to that Classifier holding a valid medical qualification.

11.3 A Trainee Classifier may be part of a Classification Panel in addition to the required number of certified Classifiers, and may participate in Athlete Evaluation.

## 12 Classification Panel Responsibilities

12.1 A Classification Panel is responsible for conducting an Evaluation Session. As part of the Evaluation Session the Classification Panel must:

12.1.1 assess whether an Athlete complies with Minimum Impairment Criteria for the sport (Physical Assessment) in accordance with Appendix One, Appendix Two or Appendix Three;

12.1.2 assess the extent to which an Athlete is able to execute the specific tasks and activities fundamental to the sport (Technical Assessment) in accordance with Appendix One or Appendix Three; and

12.1.3 conduct (if required) an Observation in Competition Assessment.

12.2 Prior to the Evaluation Session, the assessment as to whether an Athlete has an Eligible Impairment must be undertaken by World Para Athletics, unless World Para Athletics requests this to be undertaken by a Classification Panel.

12.3 Following the Evaluation Session the Classification Panel must allocate a Sport Class and designate a Sport Class Status, or designate Classification Not Completed (CNC).



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12.4 Except for any Observation in Competition Assessment, the Evaluation Session must take place in a controlled non-competitive environment that allows for the repeated observation of key tasks and activities.

12.4.1 Although other factors such as low fitness level, poor technical proficiency and aging may also affect the fundamental tasks and activities of the sport, the allocation of Sport Class must not be affected by these factors.

12.5 An Athlete who has a Non-Eligible Impairment and an Eligible Impairment may be evaluated by a Classification Panel on the basis of the Eligible Impairment, provided the Non-Eligible Impairment does not affect the Classification Panel's ability to allocate a Sport Class.

12.6 The Sport Class allocated to the Athlete will be in accordance with the processes specified in Appendices One, Two and Three.

# 13 Evaluation Sessions

13.1 This Article applies to all Evaluation Sessions.

13.2 The Athlete's National Body or National Paralympic Committee is responsible for ensuring that Athletes comply with their duties in relation to the provisions in this Article.

13.3 In respect of Athletes:

13.3.1 Athletes have the right to be accompanied by a member of the Athlete's National Body or National Paralympic Committee when attending an Evaluation Session. The Athlete must be accompanied if the Athlete is a minor according to his national laws or lacks legal capacity according to his national laws.

13.3.2 The person chosen by the Athlete to accompany the Athlete at an Evaluation Session must be familiar with the Athlete's Impairment and sport history.

13.3.3 The Athlete and accompanying person must acknowledge the terms of the Athlete Evaluation Agreement Form as specified by World Para Athletics.

13.3.4 The Athlete must verify his identity to the satisfaction of the Classification Panel, by providing a document such as a passport, photo ID card, or Event accreditation.



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13.3.5 The Athlete must attend the Evaluation Session with any sports attire or equipment relevant to the sport for which the Athlete wishes to be allocated a Sport Class.

13.3.6 The Athlete must disclose the use of all medications (prescription and non-prescription and/or medical device/implant to the Classification Panel.

13.3.7 The Athlete must comply with all reasonable instructions provided by a Classification Panel.

13.4 In respect of the Classification Panel:

13.4.1 The Classification Panel may request that an Athlete provide medical documentation relevant to the Athlete's Eligible Impairment if the Classification Panel believes that this will be necessary to allocate a Sport Class.

13.4.2 The Classification Panel will conduct Evaluation Sessions in English unless otherwise stipulated by World Para Athletics. If the Athlete requires an interpreter, a member of the Athlete's National Body or National Paralympic Committee will be responsible for arranging for an interpreter. The interpreter is permitted to attend the Evaluation Session in addition to the person referred to in Article 13.3.1 above.

13.4.3 The Classification Panel may at any stage seek medical, technical or scientific opinion(s), with the agreement of the Head of Classification and/or a Chief Classifier, if the Classification Panel feels that such opinion(s) is necessary in order to allocate a Sport Class.

13.4.4 In addition to any opinion(s) sought in accordance with Article 13.4.3, a Classification Panel may only have regard to evidence supplied to it by the relevant Athlete, National Body, National Paralympic Committee and World Para Athletics (from any source) when allocating a Sport Class.

13.4.5 The Classification Panel may make, create or use video footage and/or other records to assist it when allocating a Sport Class.

# 14 Observation in Competition Assessment

14.1 A Classification Panel may require that an Athlete with a Physical Impairment or Intellectual Impairment undertake Observation in Competition Assessment before it allocates a final Sport Class and designates a Sport Class Status to that Athlete.



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14.2 The methods by which Observation in Competition Assessment may be undertaken, and the matters to be observed, must be determined by World Para Athletics.

14.3 If a Classification Panel requires an Athlete to complete Observation in Competition Assessment, the Athlete will be entered in the Competition with the Sport Class allocated by the Classification Panel after the conclusion of the initial components of the Evaluation Session.

14.4 An Athlete who is required to complete Observation in Competition Assessment will be designated with Tracking Code: Observation Assessment (OA). This replaces the Athlete's Sport Class Status for the duration of Observation in Competition Assessment.

14.5 Observation in Competition Assessment must take place during First Appearance. In this regard:

14.5.1 First Appearance is the first time an Athlete competes in an Event during a Competition in a particular Sport Class.

14.5.2 First Appearance within the same Sport Class applies to participation in all Events within the same Sport Class.

14.6 When Observation in Competition Assessment reveals:

14.6.1 inconsistencies with the Physical Assessment and/or the Technical Assessment; and/or

14.6.2 that the Athlete, in the sole discretion of the Classification Panel, may have not performed to his best ability,

14.6.3 re-assessment may take place before a Sport Class is allocated. Such re-assessment must take place as soon as possible at that same Competition by the same Classification Panel.

14.7 An Athlete who is required to complete a re-assessment will remain designated with Tracking Code: Observation Assessment (OA) for the duration of the re-assessment.

14.8 If a Classification Panel requires an Athlete to complete a re-assessment, the Athlete must complete another Observation in Competition Assessment. The Athlete will be entered in the Competition with the Sport Class allocated by the Classification Panel after the completion of the Physical and/or Technical Assessment(s) of the re-assessment. The Observation in Competition Assessment must take place the next time the Athlete competes in an Event during the Competition in a particular Sport



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Class. Such appearance within a Sport Class applies to participation in all Events within the same Sport Class.

14.9 If an Athlete is:

14.9.1 subject to a Protest after being allocated a final Sport Class and designated a Sport Class Status; and

14.9.2 the second Evaluation Session is conducted at that same Competition; and

14.9.3 pursuant to the second Evaluation Session the Athlete is required to undergo an Observation in Competition Assessment,

Observation in Competition Assessment must take place at the next opportunity within the Sport Class allocated to the Athlete by the Protest Panel with Tracking Code Observation Assessment (OA). If there is no opportunity for the Observation in Competition Assessment to be conducted at that Competition, the Athlete must be permitted to compete in the Sport Class that is the subject of the Protest with Sport Class Status Review (R) pending the resolution of the Protest and all reasonable steps must be taken to ensure that the Protest is resolved at the earliest opportunity.

14.10 The Classification Panel must allocate a Sport Class and replace the Athlete's Tracking Code Observation Assessment (OA) by designating a Sport Class Status upon completion of First Appearance (or completion of any Observation in Competition Assessment conducted as part of a re-assessment or a Protest). If changes to an Athlete's Sport Class or Sport Class Status are made following an Observation in Competition Assessment, the changes are effective immediately.

14.11 The impact of an Athlete changing Sport Class after Observation in Competition Assessment on medals, records and results is detailed in the World Para Athletics Rules and Regulations.

# 15 Sport Class Status

15.1 If a Classification Panel allocates a Sport Class to an Athlete, it must also designate a Sport Class Status. The Sport Class Status indicates whether or not an Athlete will be required to undertake Athlete Evaluation in the future; and if the Athlete's Sport Class may be subject to Protest.

15.2 The Sport Class Status designated to an Athlete by a Classification Panel at the conclusion of an Evaluation Session will be one of the following:



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- Confirmed (C)
- Review (R)
- Review with a Fixed Review Date (FRD)

**Sport Class Status New**

15.3 An Athlete is allocated Sport Class Status New (N) by World Para Athletics prior to attending the Athlete's first Evaluation Session. An Athlete with Sport Class Status New (N) must attend an Evaluation Session prior to competing at any IPC Games, IPC Competition, World Para Athletics Sanctioned Competition, unless World Para Athletics determines otherwise.

**Sport Class Status Confirmed**

15.4 An Athlete will be designated with Sport Class Status Confirmed (C) if the Classification Panel is satisfied that both the Athlete's Eligible Impairment and the Athlete's ability to execute the specific tasks and activities fundamental to the sport are and will remain stable (with the exception for Athletes with Vision Impairment as referred to in Article 6.2.3).

15.4.1 An Athlete with Sport Class Status Confirmed (C) is not required to undergo any further Athlete Evaluation (except for the provisions in these Classification Rules concerning Protests (Article 19), Medical Review (Article 31) and changes to Sport Class criteria (Article 15.7)).

15.4.2 A Classification Panel that consists of only one (1) Classifier may not designate an Athlete with Sport Class Status Confirmed (C) but must designate the Athlete with Sport Class Status Review (R).

**Sport Class Status Review**

15.5 An Athlete will be designated Sport Class Status Review (R) if the Classification Panel believes that further Evaluation Sessions will be required.

15.5.1 A Classification Panel may base its belief that further Evaluation Sessions will be required based on a number of factors, including but not limited to situations where the Athlete has only recently entered Competitions sanctioned or recognised by World Para Athletics; has a fluctuating and/or progressive Impairment/Impairments that is/are permanent but not stable; and/or has not yet reached full musculoskeletal or sports maturity.



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15.5.2 An Athlete with Sport Class Status Review (R) must complete Athlete Evaluation prior to competing at any subsequent IPC Competition or World Para Athletics Sanctioned Competition, unless World Para Athletics determines otherwise.

### Sport Class Status Review with Fixed Review Date

15.6 An Athlete may be designated Sport Class Status Review with a Fixed Review Date (FRD) if the Classification Panel believes that further Athlete Evaluation will be required but will not be necessary before a set date, being the Fixed Review Date.

15.6.1 An Athlete with Sport Class Status Review with a Fixed Review Date (FRD) will be required to attend an Evaluation Session at the first opportunity after the relevant Fixed Review Date. For example, an Athlete with Sport Class Status Review with a Fixed Review Date of 2018 will be required to attend an Evaluation Session at his first opportunity after 01 January 2018.

15.6.2 An Athlete who has been allocated Sport Class Status Review with a Fixed Review Date (FRD) may not attend an Evaluation Session prior to the relevant Fixed Review Date except for a Medical Review Request and/or Protest.

15.6.3 A Classification Panel that consists of only one (1) Classifier may not designate an Athlete with Sport Class Status Review with a Fixed Review Date (FRD) but must designate the Athlete with Sport Class Status Review (R).

### Changes to Sport Class Criteria

15.7 If World Para Athletics changes any Sport Class criteria and/ or assessment methods defined in the Appendices to these Rules, then:

15.7.1 World Para Athletics may re-assign any Athlete who holds Sport Class Status Confirmed (C) with Sport Class Status Review (R) and require that the Athlete attend an Evaluation Session at the earliest available opportunity; or

15.7.2 World Para Athletics may remove the Fixed Review Date for any Athlete and require that the Athlete attend an Evaluation Session at the earliest available opportunity; and

15.7.3 in both instances the relevant National Body or National Paralympic Committee shall be informed as soon as is practicable.



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# 16 Multiple Sport Classes

16.1 This Article applies to Athletes who are potentially eligible to be allocated more than one Sport Class.

**Multiple Eligible Impairments**

16.2 An Athlete who has a Physical and Vision Impairment, a Physical and Intellectual Impairment, a Vision and Intellectual Impairment or multiple Physical Impairments may be eligible to be allocated more than one Sport Class in relation to those Eligible Impairments. In such instances:

16.2.1 the Athlete's National Body or National Paralympic Committee must notify World Para Athletics as to the Athlete's Eligible Impairments and the Athlete's eligibility to be allocated more than one Sport Class in respect of those Impairment types, and provide all necessary Diagnostic Information as required;

16.2.2 the Athlete must be offered the opportunity to participate in an Evaluation Session in respect of each Sport Class relevant to his multiple Impairments, either at the relevant Competition or the subsequent Competition;

16.2.3 at the conclusion of the Evaluation Sessions referred to in Article 16.2.2 the Athlete must choose the Sport Class that he wishes to compete in ('the preferred Sport Class'). If the allocation of any Sport Class is subject to Observation in Competition Assessment the Athlete must select the preferred Sport Class before making any First Appearance;

16.2.4 the selection of Sport Class will be subject to all applicable World Para Athletics Rules and Regulations (including but not limited to those in relation to the use of equipment, the weight of equipment, and the use of guides); and

16.2.5 the Athlete will be permitted to compete in the preferred Sport Class and details of the Athlete's preferred Sport Class will be published.

**Athletes with Physical Impairment**

16.3 An Athlete who has a Physical Impairment may be allocated and permitted to compete in more than one (1) Sport Class relevant to that Physical Impairment subject to any applicable World Para Athletics Rules and Regulations.

16.4 Any such Athlete may only be allocated a single sport class for each of F (field Events) and T (track Events). Any such Athlete must not be allocated more than one



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(1) Sport Class if the combination of those Sport Classes would allow the Athlete to compete:

16.4.1 in two (2) different Sport Classes for track Events; and/or

16.4.2 in two (2) different Sport Classes for field Events.

**Changing Sport Class**

16.5 An Athlete who has a Physical and Vision Impairment, a Physical and Intellectual Impairment, a Vision and Intellectual Impairment, multiple Physical Impairments or an Athlete who wants to change from competing in sitting Events to competing in standing Events (and vice versa) may request to change his preferred Sport Class:

a) at the end of the season when the Athlete's first Evaluation Session was completed; or

b) after the close of the Paralympic Games and before the start of the next season thereafter.

16.6 A request to change a preferred Sport Class must be made to World Para Athletics by the Athlete's National Body or National Paralympic Committee. The application must be submitted to World Para Athletics in accordance with the time frame identified under Article 16.5.

16.7 If the change request is accepted, World Para Athletics will amend the Classification Master List in accordance with the Sport Class and Sport Class Status designated to the Athlete in the initial assessment.

16.8 Nothing in this Article 16 precludes an Athlete from making a Medical Review Request as outlined in Article 31 at any time in respect of any Sport Class.

# 17 Notification

17.1 The outcome of Athlete Evaluation must be notified to the Athlete and/or National Body or National Paralympic Committee and published as soon as practically possible after completion of Athlete Evaluation.

17.2 World Para Athletics must publish the outcome of Athlete Evaluation at the Competition following Athlete Evaluation, and the outcomes must be made available post Competition via the Classification Master List at World Para Athletics website.



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# Part Five: Sport Class Not Eligible

## 18 Sport Class Not Eligible

### General Provisions

18.1 If World Para Athletics determines that an Athlete:

18.1.1 has an Impairment that is not an Eligible Impairment; or

18.1.2 does not have an Underlying Health Condition,

World Para Athletics must allocate that Athlete Sport Class Not Eligible (NE).

18.2 If a Classification Panel determines that an Athlete who has an Eligible Impairment does not comply with Minimum Impairment Criteria for a sport that Athlete must be allocated Sport Class Not Eligible (NE) for that sport.

### Absence of Eligible Impairment

18.3 If World Para Athletics determines that an Athlete does not have an Eligible Impairment, that Athlete:

18.3.1 will not be permitted to attend an Evaluation Session; and

18.3.2 will be allocated with Sport Class Not Eligible (NE) and designated with Sport Class Status Confirmed (C) by World Para Athletics.

18.4 If another International Sport Federation has allocated an Athlete with Sport Class Not Eligible (NE) because the Athlete does not have an Eligible Impairment, World Para Athletics may likewise do so without the need for the process detailed in Article 7 of these Classification Rules.

18.5 An Athlete who is allocated Sport Class Not Eligible (NE) by World Para Athletics or a Classification Panel (if delegated by World Para Athletics) because that Athlete has

18.5.1 an Impairment that is not an Eligible Impairment; or

18.5.2 a Health Condition that is not an eligible Underlying Health Condition;

has no right to request such determination be reviewed by a second Classification Panel and will not be permitted to participate in any sport.

### Absence of Compliance with Minimum Impairment Criteria

18.6 A second Classification Panel must review by way of a second Evaluation Session any Athlete who is allocated Sport Class Not Eligible (NE) on the basis that a



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Classification Panel determines that the Athlete does not comply with Minimum Impairment Criteria. This must take place as soon as is practicable.

18.6.1 Pending the second Evaluation Session the Athlete will be allocated Sport Class Not Eligible (NE) and designated Sport Class Status Review (R). The Athlete will not be permitted to compete before such re-assessment.

18.6.2 If the second Classification Panel determines the Athlete does not comply with Minimum Impairment Criteria (or if the Athlete declines to participate in a second Evaluation Session at the time set by the Chief Classifier), Sport Class Not Eligible (NE) will be allocated and the Athlete designated with Sport Class Status Confirmed (C).

18.7 If an Athlete makes (or is subject to) a Protest on a previously allocated Sport Class other than Not Eligible (NE) and is allocated Sport Class Not Eligible (NE) by a Protest Panel, the Athlete must be provided with a further and final Evaluation Session which will review the decision to allocate Sport Class Not Eligible (NE) made by the Protest Panel.

18.8 If a Classification Panel allocates Sport Class Not Eligible (NE) on the basis that it has determined that an Athlete does not comply with Minimum Impairment Criteria for a sport the Athlete may be eligible to compete in another sport, subject to Athlete Evaluation for that sport.

18.9 If an Athlete is allocated Sport Class Not Eligible (NE), this does not question the presence of a genuine Impairment. It is only a ruling on the eligibility of the Athlete to compete in the sport of Para athletics.



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# Part Six: Protests

# Protests

## 19 Scope of a Protest

19.1 A Protest may only be made in respect of an Athlete's Sport Class. A Protest may not be made in respect of an Athlete's Sport Class Status.

19.2 A Protest may not be made in respect of an Athlete who has been allocated Sport Class Not Eligible (NE).

## 20 Parties Permitted to Make a Protest

20.1 A Protest may only be made by one of the following bodies:

20.1.1 a National Body (see Articles 21-22); or

20.1.2 a National Paralympic Committee (see Articles 21-22); or

20.1.3 World Para Athletics (see Articles 23-24).

## 21 National Protests

21.1 A National Body or a National Paralympic Committee may only make a Protest in respect of an Athlete under its jurisdiction at a Competition or venue set aside for Athlete Evaluation.

21.2 If the outcome of Athlete Evaluation is published during a Competition (pursuant to Article 17 of these Classification Rules) a National Protest must be submitted within one (1) hour of that outcome being published. If the outcome of Athlete Evaluation is published following Observation in Competition Assessment a National Protest must be submitted within fifteen (15) minutes of that outcome being published.

21.3 If an Athlete is required by a Classification Panel to undergo Observation in Competition Assessment, a National Body or a National Paralympic Committee may make a Protest before or after First Appearance takes place. If a Protest is made before First Appearance takes place the Athlete must not be permitted to compete until the Protest has been resolved. Subject to Article 26, if a Protest is made after Observation in Competition Assessment the Athlete must not be permitted to compete until the Protest has been resolved.



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# 22 National Protest Procedure

22.1 To submit a National Protest, a National Body or a National Paralympic Committee must show that the Protest is bona fide with supporting evidence and complete a Protest Form, that must be made available by World Para Athletics at the Competition and via World Para Athletics website, and must include the following:

22.1.1 the name and SDMS ID of the Protested Athlete;

22.1.2 the details of the Protested Decision and/or a copy of the Protested Decision;

22.1.3 an explanation as to why the Protest has been made and the basis on which the National Body or National Paralympic Committee believes that the Protested Decision is flawed;

22.1.4 reference to the specific rule(s) alleged to have been breached; and

22.1.5 a Protest Fee of €150.

22.2 The Protest Documents must be submitted to the Chief Classifier of the relevant Competition within the timeframes specified in 21.2 Upon receipt of the Protest Documents the Chief Classifier must conduct a review of the Protest, in consultation with World Para Athletics, of which there are two (2) possible outcomes:

22.2.1 the Chief Classifier may dismiss the Protest if, in the discretion of the Chief Classifier, the Protest does not comply with the Protest requirements in this Article 22; or

22.2.2 the Chief Classifier may accept the Protest if, in the discretion of the Chief Classifier, the Protest complies with the Protest requirements in this Article 22.

22.3 If the Protest is dismissed the Chief Classifier must notify all relevant parties and provide a written explanation to the National Body or National Paralympic Committee as soon as practicable. The Protest Fee will be forfeited.

22.4 If the Protest is accepted:

22.4.1 the Protested Athlete's Sport Class must remain unchanged pending the outcome of the Protest but the Protested Athlete's Sport Class Status must immediately be changed to Review (R) unless the Protested Athlete's Sport Class Status is already Review (R);

22.4.2 the Chief Classifier must appoint a Protest Panel to conduct a new Evaluation Session as soon as possible, which must be either at the Competition the Protest was made or at the next Competition; and



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22.4.3 World Para Athletics must notify all relevant parties of the time and date the new Evaluation Session is to be conducted by the Protest Panel.

# 23 World Para Athletics Protests

23.1 World Para Athletics may, in its discretion, make a Protest at any time in respect of an Athlete under its jurisdiction if:

23.1.1 it considers an Athlete may have been allocated an incorrect Sport Class; or

23.1.2 a National Body or National Paralympic Committee makes a documented request to World Para Athletics. The assessment of the validity of the request is at the sole discretion of World Para Athletics.

# 24 World Para Athletics Protest Procedure

24.1 If World Para Athletics decides to make a Protest, the Head of Classification must advise the relevant National Body or National Paralympic Committee of the Protest at the earliest possible opportunity.

24.2 The Head of Classification must provide the relevant National Body or National Paralympic Committee with a written explanation as to why the Protest has been made and the basis on which the Head of Classification considers it is justified.

24.3 If World Para Athletics makes a Protest:

24.3.1 the Protested Athlete's Sport Class must remain unchanged pending the outcome of the Protest;

24.3.2 the Protested Athlete's Sport Class Status must immediately be changed to Review (R) unless the Protested Athlete's Sport Class Status is already Review (R); and

24.3.3 a Protest Panel must be appointed to resolve the Protest as soon as is reasonably possible.

# 25 Protest Panel

25.1 A Chief Classifier may fulfil one or more of the Head of Classification's obligations in this Article 25 if authorised to do so by the Head of Classification.



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25.2 A Protest Panel must be appointed by the Head of Classification in a manner consistent with the provisions for appointing a Classification Panel in these Classification Rules.

25.3 A Protest Panel must not include any person who was a member of the Classification Panel that:

25.3.1 made the Protested Decision; or

25.3.2 conducted any component of Athlete Evaluation in respect of the Protested Athlete within a period of twelve (12) months prior to the date of the Protested Decision, unless otherwise agreed by the National Body or National Paralympic Committee (whichever is relevant) and World Para Athletics.

25.4 The Head of Classification must notify all relevant parties of the time and date for the Evaluation Session that must be conducted by the Protest Panel.

25.5 The Protest Panel must conduct the new Evaluation Session in accordance with these Classification Rules. The Protest Panel must only refer to the Protest Documents after conducting the new Evaluation Session prior to allocating a Sport Class and designating a Sport Class Status.

25.6 The Protest Panel must allocate a Sport Class and designate a Sport Class Status. All relevant parties must be notified of the Protest Panel's decision in a manner consistent with the provisions for notification in these Classification Rules.

25.7 The decision of a Protest Panel in relation to both a National Protest and a World Para Athletics Protest is final. A National Body, National Paralympic Committee or World Para Athletics may not make another Protest at the relevant Competition.

25.8 If the decision of the Protest Panel results in the Sport Class of the Athlete being changed, the Protest Fee will be refunded to the National Body or National Paralympic Committee (whichever is relevant).

# 26 Provisions Where No Protest Panel is Available

26.1 If a Protest is made at a Competition but there is no opportunity for the Protest to be resolved at that Competition:

26.1.1 the Protested Athlete must be permitted to compete in the Sport Class that is the subject of the Protest with Sport Class Status Review (R), pending the resolution of the Protest; and



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26.1.2 all reasonable steps must be taken to ensure that the Protest is resolved at the earliest opportunity.

## 27 Special Provisions

27.1 World Para Athletics may make arrangements (subject to the approval of the IPC) for some or all of the components of Athlete Evaluation to be carried out at a place and at a time away from a Competition. If so, World Para Athletics must also implement Protest provisions to enable Protests to take place in respect of any Evaluation Sessions conducted away from a Competition.

# Application during Major Competitions

## 28 Ad Hoc Provisions Relating to Protests

28.1 The IPC and/or World Para Athletics may issue special ad hoc provisions to operate during the Paralympic Games or other Competitions.



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# Part Seven: Misconduct during Evaluation Session

## 29 Failure to Attend Evaluation Session

29.1 An Athlete is personally responsible for attending an Evaluation Session.

29.2 An Athlete's National Body or National Paralympic Committee must take reasonable steps to ensure that the Athlete attends an Evaluation Session.

29.3 If an Athlete fails to attend an Evaluation Session, the Classification Panel will report the failure to the Chief Classifier. The Chief Classifier may, if satisfied that a reasonable explanation exists for the failure to attend and subject to the practicalities at a Competition, specify a revised date and time for the Athlete to attend a rescheduled Evaluation Session before the Classification Panel.

29.4 If the Athlete is unable to provide a reasonable explanation for non-attendance, or if the Athlete fails to attend an Evaluation Session on a second occasion, no Sport Class will be allocated and the Athlete will not be permitted to compete at the relevant Competition. Article 10 applies.

## 30 Suspension of Evaluation Session

30.1 A Classification Panel, in consultation with the Chief Classifier, may suspend an Evaluation Session if it cannot allocate a Sport Class to the Athlete, including but not limited to, in one or more of the following circumstances:

30.1.1 a failure on the part of the Athlete to comply with any part of these Classification Rules;

30.1.2 a failure on the part of the Athlete to provide any medical information that is reasonably required by the Classification Panel;

30.1.3 the Classification Panel believes that the use (or non-use) of any medication and/or medical procedures/devices/implants disclosed by the Athlete will affect the ability to conduct its determination in a fair manner;

30.1.4 the Athlete has a Health Condition that may limit or prohibit complying with requests by the Classification Panel during an Evaluation Session, which the Classification Panel considers will affect its ability to conduct the Evaluation Session in a fair manner;

30.1.5 the Athlete is unable to communicate effectively with the Classification Panel;



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30.1.6 the Athlete refuses or is unable to comply with any reasonable instructions provided by any Classification Personnel to such an extent that the Evaluation Session cannot be conducted in a fair manner; and/or

30.1.7 the Athlete's representation of his abilities is inconsistent with any information available to the Classification Panel to such an extent that the Evaluation Session cannot be conducted in a fair manner.

30.2 If an Evaluation Session is suspended by a Classification Panel, the following steps must be taken:

30.2.1 an explanation for the suspension and details of the remedial action that is required on the part of the Athlete will be provided to the Athlete and/or the relevant National Body or National Paralympic Committee;

30.2.2 if the Athlete takes the remedial action to the satisfaction of the Chief Classifier or Head of Classification, the Evaluation Session will be resumed; and

30.2.3 if the Athlete fails to comply and does not take the remedial action within the timeframe specified, the Evaluation Session will be terminated, and the Athlete must be precluded from competing at any Competition until the new Evaluation Session is completed.

30.3 If an Evaluation Session is suspended by a Classification Panel, the Classification Panel may designate the Athlete as Classification Not Completed (CNC) in accordance with Article 10 of these Classification Rules.

30.4 The suspension of an Evaluation Session may be subject to further investigation into any possible Intentional Misrepresentation.



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# Part Eight: Medical Review

## 31 Medical Review

31.1 This Article applies to any Athlete who has been allocated a Sport Class with Sport Class Status Confirmed (C) or Review with Fixed Review Date (FRD).

31.2 A Medical Review Request must be made if a change in the nature or degree of an Athlete's Impairment changes the Athlete's ability to execute the specific tasks and activities required by a sport in a manner that is clearly distinguishable from changes attributable to levels of training, fitness and proficiency.

31.3 A Medical Review Request must be made by the Athlete's National Body or National Paralympic Committee (together with a €100 non-refundable fee and any supporting documentation). The Medical Review Request must explain how and to what extent the Athlete's Impairment has changed and why it is believed that the Athlete's ability to execute the specific tasks and activities required by a sport has changed.

31.4 A Medical Review Request must be received by World Para Athletics as soon as reasonably practicable.

31.5 The Head of Classification must decide whether or not the Medical Review Request is upheld as soon as is practicable following receipt of the Medical Review Request.

31.6 Any Athlete or Athlete Support Personnel who becomes aware of such changes outlined in Article 31.2 but fails to draw those to the attention of their National Body, National Paralympic Committee or World Para Athletics may be investigated in respect of possible Intentional Misrepresentation.

31.7 If a Medical Review Request is accepted, the Athlete's Sport Class Status will be changed to Review (R) with immediate effect.

31.8 If a Medical Review Request does not include sufficient evidence to explain how and to what extent the Athlete's Impairment has changed and why it is believed that the Athlete's ability to execute the specific tasks and activities required by a sport has changed, the Medical Review will not be accepted and the Athlete's Sport Class Status will not be changed.



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# Part Nine: Intentional Misrepresentation

## 32 Intentional Misrepresentation

32.1 It is a disciplinary offence for an Athlete to intentionally misrepresent (either by act or omission) his skills and/or abilities and/or the degree or nature of Eligible Impairment during Athlete Evaluation and/or at any other point after the allocation of a Sport Class. This disciplinary offence is referred to as 'Intentional Misrepresentation'.

32.2 It will be a disciplinary offence for any Athlete or Athlete Support Personnel to assist an Athlete in committing Intentional Misrepresentation or to be in any other way involved in any other type of complicity involving Intentional Misrepresentation, including but not limited to covering up Intentional Misrepresentation or disrupting any part of the Athlete Evaluation process.

32.3 In respect of any allegation relating to Intentional Misrepresentation a hearing may be convened by the IPC to determine whether the Athlete or Athlete Support Personnel has committed Intentional Misrepresentation.

32.4 The consequences to be applied to an Athlete or Athlete Support Personnel who is found to have been guilty of Intentional Misrepresentation and/or complicity involving Intentional Misrepresentation may include one (1) or more of the following:

32.4.1 disqualification from all Events at the Competition at which the Intentional Misrepresentation occurred, and any subsequent Competitions at which the Athlete competed;

32.4.2 being allocated with Sport Class Not Eligible (NE) and designated a Review with Fixed Review Date (FRD) Sport Class Status for a specified period of time ranging from one (1) to four (4) years;

32.4.3 suspension from participation in Competitions in all sport for a specified period of time ranging from one (1) to four (4) years; and

32.4.4 publication of their names and suspension period.

32.5 Any Athlete who is found to have been guilty of Intentional Misrepresentation and/or complicity involving Intentional Misrepresentation on more than one occasion will be allocated Sport Class Not Eligible with Fixed Review Date Status for a period of time from four (4) years to life.

32.6 Any Athlete Support Personnel who is found to have been guilty of Intentional Misrepresentation and/or complicity involving Intentional Misrepresentation on more



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than one occasion will be suspended from participation in any Competition for a period of time from four (4) years to life.

32.7 If another International Sports Federation brings disciplinary proceedings against an Athlete or Athlete Support Personnel in respect of Intentional Misrepresentation which results in consequences being imposed on that Athlete or Athlete Support Personnel, those consequences will be recognised, respected and enforced by World Para Athletics.

32.8 Any consequences to be applied to teams, which include an Athlete or Athlete Support Personnel who is found to have been guilty of Intentional Misrepresentation and/or complicity involving Intentional Misrepresentation, will be at the discretion of World Para Athletics.

32.9 Any disciplinary action taken by World Para Athletics pursuant these Classification Rules must be resolved in accordance with the applicable Board of Appeal of Classification Bylaws.



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# Part Ten: Use of Athlete Information

## 33 Classification Data

33.1 World Para Athletics may only Process Classification Data if such Classification Data is considered necessary to conduct Classification.

33.2 All Classification Data Processed by World Para Athletics must be accurate, complete and kept up-to-date.

## 34 Consent and Processing

34.1 Subject to Article 34.3, World Para Athletics may only Process Classification Data with the consent of the Athlete to whom that Classification Data relates.

34.2 If an Athlete cannot provide consent (for example because the Athlete is a minor) the legal representative, guardian or other designated representative of that Athlete must give consent on their behalf.

34.3 World Para Athletics may only Process Classification Data without consent of the relevant Athlete if permitted to do so in accordance with National Laws.

## 35 Classification Research

35.1 World Para Athletics may request that an Athlete provide it with Personal Information for Research Purposes.

35.2 The use by World Para Athletics of Personal Information for Research Purposes must be consistent with these Classification Rules and all applicable ethical use requirements.

35.3 Personal Information that has been provided by an Athlete to World Para Athletics solely and exclusively for Research Purposes must not be used for any other purpose.

35.4 World Para Athletics may only use Classification Data for Research Purposes with the express consent of the relevant Athlete. If World Para Athletics wishes to publish any Personal Information provided by an Athlete for Research Purposes, it must obtain consent to do so from that Athlete prior to any publication. This restriction does not apply if the publication is anonymised so that it does not identify any Athlete(s) who consented to the use of their Personal Information.



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## 36 Notification to Athletes

36.1 World Para Athletics must notify an Athlete who provides Classification Data as to:

36.1.1 that fact that World Para Athletics is collecting the Classification Data; and

36.1.2 the purpose for the collection of the Classification Data; and

36.1.3 the duration that the Classification Data will be retained.

## 37 Classification Data Security

37.1 World Para Athletics must:

37.1.1 protect Classification Data by applying appropriate security safeguards, including physical, organisational, technical and other measures to prevent the loss, theft or unauthorised access, destruction, use, modification or disclosure of Classification Data; and

37.1.2 take reasonable steps to ensure that any other party provided with Classification Data uses that Classification Data in a manner consistent with these Classification Rules.

## 38 Disclosures of Classification Data

38.1 World Para Athletics must not disclose Classification Data to other Classification Organisations except where such disclosure is related to Classification conducted by another Classification Organisation and/or the disclosure is consistent with applicable National Laws.

38.2 World Para Athletics may disclose Classification Data to other parties only if such disclosure is in accordance with these Classification Rules and permitted by National Laws.

## 39 Retaining Classification Data

39.1 World Para Athletics must ensure that Classification Data is only retained for as long as it is needed for the purpose it was collected. If Classification Data is no longer necessary for Classification purposes, it must be deleted, destroyed or permanently anonymised.



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39.2 World Para Athletics must publish guidelines regarding retention times in relation to Classification Data.

39.3 World Para Athletics must implement policies and procedures that ensure that Classifiers and Classification Personnel retain Classification Data for only as long as is necessary in order for them to carry out their Classification duties in relation to an Athlete.

## 40 Access Rights to Classification Data

40.1 Athletes may request from World Para Athletics:

40.1.1 confirmation of whether or not World Para Athletics Processes Classification Data relating to them personally and a description of the Classification Data that is held;

40.1.2 a copy of the Classification Data held by World Para Athletics; and/or

40.1.3 correction or deletion of the Classification Data held by World Para Athletics.

40.2 A request may be made by an Athlete or a National Body or a National Paralympic Committee on an Athlete's behalf and must be complied with within a reasonable period of time.

## 41 Classification Master Lists

41.1 World Para Athletics must maintain a Classification Master List of Athletes, which must include the Athlete's name, gender, year of birth, country, Sport Class and Sport Class Status. The Classification Master List must identify Athletes that enter IPC Games, IPC Competitions and World Para Athletics Sanctioned Competitions.

41.2 World Para Athletics must make available the Classification Master List to all relevant National Bodies on the World Para Athletics website.



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# Part Eleven: Appeals

## 42 Appeal

42.1 An Appeal is the process by which a formal objection to how Athlete Evaluation and/or Classification procedures have been conducted is submitted and subsequently resolved.

## 43 Parties Permitted to Make an Appeal

43.1 An Appeal may only be made by one of the following bodies:

43.1.1 a National Body; or

43.1.2 a National Paralympic Committee.

## 44 Appeals

44.1 If a National Body or National Paralympic Committee considers there have been procedural errors made in respect of the allocation of a Sport Class and/or Sport Class Status and as a consequence an Athlete has been allocated an incorrect Sport Class or Sport Class Status, it may submit an Appeal.

44.2 The Board of Appeal of Classification (BAC) will act as the hearing body for the resolution of Appeals.

44.3 An Appeal must be made and resolved in accordance with the applicable BAC Bylaws.

## 45 Ad Hoc Provisions Relating to Appeals

45.1 The IPC and/or World Para Athletics may issue special ad hoc provisions to operate during the Paralympic Games or other Competitions.



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## Part Twelve: Glossary

**Adaptive Equipment:** Implements and apparatus adapted to the special needs of Athletes, and used by Athletes during Competition to facilitate participation and/or to achieve results.

**Appeals:** The means by which a complaint that World Para Athletics has made an unfair decision during the Classification process is resolved.

**Athlete:** For purposes of Classification, any person who participates in sport at the international level (as defined by World Para Athletics) or national level (as defined by each National Federation) and any additional person who participates in sport at a lower level if designated by the person's National Federation.

**Athlete Evaluation:** The process by which an Athlete is assessed in accordance with these Classification Rules in order that an Athlete may be allocated a Sport Class and Sport Class Status.

**Athlete Support Personnel:** Any coach, trainer, manager, interpreter, agent, team staff, official, medical or para-medical personnel working with or treating Athletes participating in or preparing for training and/or Competition.

**BAC:** The IPC Board of Appeal of Classification.

**Chief Classifier:** A classifier appointed by World Para Athletics to direct, administer, co-ordinate and implement Classification matters for a specific Competition according to these Classification Rules.

**Classification:** Grouping Athletes into Sport Classes according to how much their Impairment affects fundamental activities in each specific sport or discipline. This is also referred to as Athlete Classification.

**Classification Data:** Personal Information and/or sensitive Personal Information provided by an Athlete and/or a National Body and/or any other person to a Classification Organisation in connection with Classification.

**Classification Intelligence:** Information obtained and used by an International Sport Federation in relation to Classification.

**Classification Master List:** A list made available by World Para Athletics that identifies Athletes who have been allocated a Sport Class and designated a Sport Class Status.

**Classification Not Completed:** The designation applied to an Athlete who has commenced but not completed Athlete Evaluation to the satisfaction of World Para Athletics or a Classification Panel.



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**Classification Organisation:** Any organisation that conducts the process of Athlete Evaluation and allocates Sport Classes and/or holds Classification Data.

**Classification Panel:** A group of Classifiers, appointed by World Para Athletics, to determine Sport Class and Sport Class Status in accordance with these Classification Rules.

**Classification Personnel:** Persons, including Classifiers, acting with the authority of a Classification Organisation in relation to Athlete Evaluation, for example administrative officers.

**Classification Rules:** Also referred to as Classification Rules and Regulations. The policies, procedures, protocols and descriptions adopted by World Para Athletics in connection with Athlete Evaluation.

**Classification System:** The framework used by World Para Athletics to develop and designate Sport Classes within Para athletics.

**Classifier:** A person authorised as an official by World Para Athletics to evaluate Athletes as a member of a Classification Panel.

**Classifier Certification:** The processes by which World Para Athletics must assess that a Classifier has met the specific Classifier Competencies required to obtain and maintain certification or licensure.

**Classifier Competencies:** The qualifications and abilities that World Para Athletics deems necessary for a Classifier to be competent to conduct Athlete Evaluation for sport(s) governed by World Para Athletics.

**Classifier Code of Conduct:** The behavioural and ethical standards for Classifiers specified by World Para Athletics.

**Code:** The Athlete Classification Code 2015 together with the International Standards for: Athlete Evaluation; Eligible Impairments; Protests and Appeals; Classifier Personnel and Training; and Classification Data Protection.

**Competition:** A series of individual events conducted together under one ruling body.

**Compliance:** The implementation of rules, regulations, policies and processes that adhere to the text, spirit and intent of the Code as defined by the IPC. Where terms such as (but not limited to) 'comply', 'conform' and 'in accordance' are used in the Code they shall have the same meaning as 'Compliance.'



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**Continuing Education**: The delivery of higher knowledge and practical skills specified by World Para Athletics to preserve and/or advance knowledge and skills as a Classifier in the sport(s) under its governance.

**Diagnostic Information**: Medical records and/or any other documentation that enables World Para Athletics to assess the existence or otherwise of an Eligible Impairment or Underlying Health Condition.

**Eligible Impairment:** An Impairment designated as being a prerequisite for competing in Para athletics, as detailed in these Classification Rules.

**Eligibility Assessment Committee**: An ad hoc body formed to assess the existence or otherwise of an Eligible Impairment.

**Entry Criteria**: Standards set by World Para Athletics relating to the expertise or experience levels of persons who wish to be Classifiers. This may be, for example, former Athletes or coaches, sports scientists, physical educators and medical professionals, all of whom have the qualifications and abilities relevant to conduct all, or specific parts of, Athlete Evaluation.

**Entry-Level Education:** The basic knowledge and practical skills specified by World Para Athletics to begin as a Classifier in the sport(s) of Para athletics.

**Evaluation Session**: The session an Athlete is required to attend for a Classification Panel to assess that Athlete's compliance with the Minimum Impairment Criteria for a sport; and allocation of a Sport Class and Sport Class Status depending on the extent to which that Athlete is able to execute the specific tasks and activities fundamental to that sport. An Evaluation Session may include Observation in Competition Assessment.

**Event**: A single race, match, game or singular sport contest.

**First Appearance:** The first time an Athlete competes in an Event during a Competition in a particular Sport Class.

**Fixed Review Date:** A date set by a Classification Panel prior to which an Athlete designated with a Sport Class Status Review with a Fixed Review Date will not be required to attend an Evaluation Session except for a Medical Review Request and/or Protest.

**Head of Classification:** A person appointed by World Para Athletics to direct, administer, co-ordinate and implement Classification matters for World Para Athletics.

**Health Condition:** A pathology, acute or chronic disease, disorder, injury or trauma.

**IAAF:** The International Athletics Association Federation.

**Impairment:** A Physical, Vision or Intellectual Impairment.



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**Intellectual Impairment**: A limitation in intellectual functioning and adaptive behaviour as expressed in conceptual, social and practical adaptive skills that originates before the age of eighteen (18).

**INAS:** International Federation for Intellectual Impairment Sport.

**Intentional Misrepresentation:** A deliberate attempt (either by fact or omission) to mislead an International Sport Federation or National Body as to the existence or extent of skills and/or abilities relevant to a Para sport and/or the degree or nature of Eligible Impairment during Athlete Evaluation and/or at any other point after the allocation of a Sport Class.

**International Sport Federation:** A sport federation recognised by the IPC as the sole world-wide representative of a sport for Athletes with an Impairment that has been granted the status as a Para sport by the IPC. The IPC and the International Organisations of Sports for the Disabled act as an International Sport Federation for certain sports, including World Para Athletics.

**International Standards:** A document complementing the Code and providing additional technical and operational requirements for Classification.

**IPC:** International Paralympic Committee.

**IPC Competitions:** World Para Athletics Championships and World Para Athletics Regional Championships.

**IPC Games:** The Paralympic Games and the Parapan American Games.

**Maintaining Certification**: The advanced training, education and practice necessary for continued competency as a Classifier.

**Medical Diagnostics Form:** A form that a National Body or National Paralympic Committee must submit in order for an Athlete to undergo Athlete Evaluation, identifying the Athlete's Underlying Health Condition if so required.

**Medical Review:** The process by which World Para Athletics identifies if a change in the nature or degree of an Athlete's Impairment means that some or all of the components of Athlete Evaluation are required to be undertaken in order to ensure that any Sport Class allocated to that Athlete is correct.

**Medical Review Request:** A request made by a National Body or National Paralympic Committee for Medical Review, made on behalf of an Athlete.

**Models of Best Practice:** An ad hoc guidance document prepared by the IPC to assist in the implementation of the Code and International Standards.



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**National Body:** Refers to the national member of an International Sport Federation.

**National Laws:** The national data protection and privacy laws, regulations and policies applicable to a Classification Organisation.

**National Paralympic Committees:** The national member of the IPC who is the sole representative of Athletes with an Impairment in that country or territory. These are the national members of the IPC.

**National Protest:** A Protest made by a National Body or a National Paralympic Committee in respect of an Athlete under its jurisdiction.

**Non-Competition Venue:** Any place or location (outside of a Competition) designated by World Para Athletics as being a place or location where Athlete Evaluation is made available to Athletes in order that they may be allocated a Sport Class and designated with a Sport Class Status.

**Observation in Competition Assessment:** The observation of an Athlete with a Physical Impairment in a Competition by a Classification Panel so that the Classification Panel can complete its determination as to the extent to which an Eligible Impairment affects that Athlete's ability to execute the specific tasks and activities fundamental to the sport.

**Paralympic Games:** Umbrella term for both Paralympic Games and Paralympic Winter Games.

**Permanent:** The term Permanent as used in the Code and International Standards describes an Impairment that is unlikely to be resolved meaning the principle effects are lifelong.

**Personal Information:** Any information that refers to, or relates directly to, an Athlete.

**Physical Assessment:** The assessment by the Classification Panel to determine whether an Athlete complies with Minimum Impairment Criteria for the sport and to assist in determining the allocation of a Sport Class and Sport Class Status.

**Physical Impairment:** An Impairment that affects an Athlete's biomechanical execution of sporting activities, comprising Ataxia, Athetosis, Hypertonia, Impaired Muscle Power, Impaired Passive Range of Movement, Limb Deficiency, Leg Length Difference and Short Stature.

**Process/Processing:** The collection, recording, storage, use or disclosure of Personal Information and/or sensitive Personal Information.

**Prosthesis:** An artificial device that replaces a missing body part, which may be lost through trauma, disease, or congenital conditions.



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**Protested Athlete:** An Athlete whose Sport Class is being challenged.

**Protested Decision:** The Sport Class decision being challenged.

**Protest Documents:** The information provided in the Protest Form together with the Protest Fee.

**Protest Fee:** The fee prescribed by World Para Athletics, payable by the National Body or National Paralympic Committee when submitting a Protest.

**Protest Form:** The form on which a National Protest must be submitted.

**Protest:** The procedure by which a reasoned objection to an Athlete's Sport Class is submitted and subsequently resolved.

**Protest Panel:** A Classification Panel appointed by the Chief Classifier to conduct an Evaluation Session as a result of a Protest

**Re-certification:** The process by which World Para Athletics must assess that a Classifier has maintained specific Classifier Competencies.

**Research Purposes:** Research into matters pertaining to the development of sports within the Paralympic Movement, including the impact of Impairment on the fundamental activities in each specific sport and the impact of assistive technology on such activities.

**Signatories:** Any organisation that accepts the Code and commits to implement it and the International Standards by way of its Classification Rules.

**Sport Class:** A category for Competition defined by World Para Athletics by reference to the extent to which an Athlete can perform the specific tasks and activities required by a sport.

**Sport Class Status:** A designation applied to a Sport Class to indicate the extent to which an Athlete may be required to undertake Athlete Evaluation and/or be subject to a Protest.

**Team Sport:** A sport in which substitution of players is permitted during a Competition.

**Technical Assessment:** The assessment by the Classification Panel to determine the extent to which an Athlete is able to execute the specific tasks and activities fundamental to the sport.

**Tracking Code Observation Assessment (OA):** A designation given to an Athlete that replaces the Athlete's Sport Class Status until Observation in Competition Assessment has been completed.

**Underlying Health Condition:** a Health Condition that may lead to an Eligible Impairment.



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**Vision Impairment:** An Impairment of the eye structure, optical nerves or optical pathways, or visual cortex of the central brain that adversely affects an Athlete's vision.

**World Para Athletics Approved Competitions:** international, national, endorsed and IAAF endorsed competitions for the sport of Para athletics that have been approved by World Para Athletics.

**World Para Athletics Recognised Competitions:** IPC Games, IPC Competitions, World Para Athletics Sanctioned Competitions and World Para Athletics Approved Competitions.

**World Para Athletics Sanctioned Competitions:** World Para Athletics Grand Prix Events, World Para Athletics World Cups and other World Para Athletics international competitions determined by World Para Athletics.



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# Appendix One: Athlete Evaluation of Athletes with Physical Impairment

## Introduction

This Appendix outlines the process by which an Athlete with a Physical Impairment(s) will be classified and allocated a Sport Class for World Para Athletics. It is divided into three parts:

- **Section 1 - Eligible Impairment types:** describes the Eligible Impairment types for World Para Athletics and lists examples of Underlying Health Conditions that can give rise to Eligible Impairments.
- **Section 2 – Minimum Impairment Criteria (MIC) and Assessment Methodology:** identifies how severe Eligible Impairment types must be in order to be eligible for World Para Athletics and describes the assessment techniques to be applied during Athlete Evaluation.
- **Section 3 – Sport Class Profiles:** describes the Sport Classes for World Para Athletics.

**Figure 1** Provides a general overview of the decision-making process that must be made by Classifiers when conducting Athlete Evaluation for Athletes with Physical Impairments.



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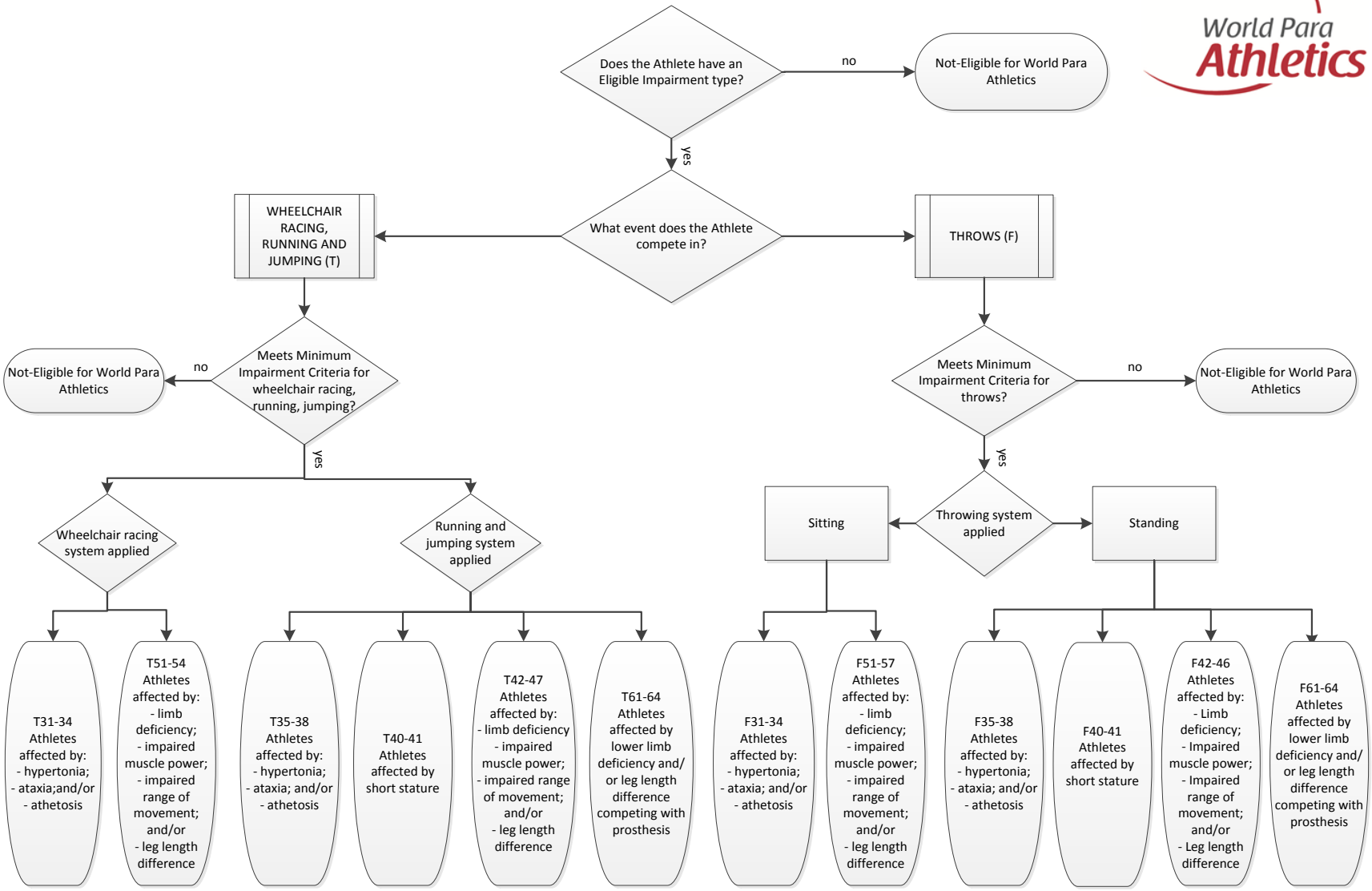



**Figure 1**: Decision-Making Process for Athlete Evaluation



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As outlined in Article 12.1, the three (3) components of Athlete Evaluation for Athletes with a Physical Impairment are:

- Physical Assessment;
- Technical Assessment; and
- (if required) Observation in Competition Assessment.

Each Classification Panel must conduct a Physical Assessment and a Technical Assessment prior to assigning an Athlete with a Sport Class, unless a Classification Panel determines that a Sport Class and Sport Class Status may be assigned solely on the basis of a Physical Assessment for an Athlete with one (1) or more of the following Impairments:

- Limb Deficiency;
- Short stature; and/or
- Leg Length Difference.

A Classification Panel may require that an Athlete undertake Observation in Competition Assessment before it allocates a final Sport Class and designates a Sport Class Status to that Athlete.

**Step 1: Physical Assessment**

The Physical Assessment must include impairment tests and any one (1) or more of the following tests:

1. **Impairment tests**

The Physical Assessment **must** include Impairment tests. These tests include, but are not limited to, manual muscle test scores for individual movements (e.g., elbow flexion, elbow extension), assessment of hypertonia/ataxia/athetosis, anthropometric measures and passive range of movement assessment.

2. **Novel activities**

The Physical Assessment may include novel tests. These are activities that reflect the Athletes strength, range of movement and coordination. The activities are unlikely to have been practiced by the Athlete in the usual course of training for their sport. Examples of such activities include but are not limited to foot tapping tasks, hand rubbing, isolated finger flexion/extension, static and dynamic balance exercises.

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3. **Practised activities**

The Physical Assessment may include practiced activities. These are activities that incorporate elements of strength, range of movement and coordination. They are highly likely to have been practiced by the Athlete in the course of training for their sport. For example, assessment of sprinters would include bounds, heel flicks, dynamic warm-up routines and dynamic balance exercises. Wheelchair racers will not only be practised at drills in their racing chair but will be practiced at transfers in and out of their day chair as well as getting into and out of their racing chair.

*[Note on Section 1.5.2 and 1.5.3 above: the term "activity limitation tests" is the collective term that refers to both novel activities and practiced activities. Observation of activity limitation tests provides the Classification Panel with an indication of the impact of an Athlete's Impairments on movement independent of their training. Performance on these tests can be compared with performance on activities which are integral to training for the sport (practiced activities) and provide the Classification Panel with an overall impression of how the various components of Impairment combine to affect sport movement.]*

4. **Assessment of training history and other personal factors**

The Physical Assessment may include the Classification Panel asking the Athlete questions to determine the frequency and duration of training, periodization of training, coaching standard (e.g., coach qualifications) and use of sports medicine/sports science services. In addition, other factors such as Athlete age, gender, medical history and medications may also be considered by the Classification Panel in the allocation of Sport Class and Sport Class Status.

## Step 2: Technical Assessment

The Technical Assessment refers to the sport specific assessment conducted prior to the Athlete taking part in their first event in the Competition (First Appearance). The aim is to replicate the activity that the Athlete will do in the Event(s) that the Athlete will compete in. Importantly, the Athlete is required to execute the activity with best effort. During the Technical Assessment the Athlete must wear the same attire and use the same equipment (e.g. wheelchair, throwing frame, Prosthesis, Orthosis, correct implement weights) that the Athlete uses in Competition.



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### Step 3: Observation In Competition Assessment

Observation in Competition Assessment refers to the observation of an Athlete in a Competition by a Classification Panel. The Observation in Competition is only required if a Classification Panel considers it is necessary in order to complete an Evaluation Session. Observation in Competition Assessment follows the principles of the Technical Assessment (as outlined above). It complements the Technical Assessment by providing the Classification Panel an opportunity to observe the Athlete in a competitive sport situation where he is more likely to be using his best effort in order to be competitive against other Athletes. When Observation in Competition Assessment reveals: inconsistencies with the Physical Assessment and/or the Technical Assessment; and/or, in the sole discretion of the Classification Panel, that the Athlete may have not performed to his/her best ability, re-assessment may take place before a Sport Class is allocated, in accordance with Article 14.



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# 1 Eligible Impairment Types

## 1.1 Eligible Impairment Types

The following eight (8) Physical Impairment types are eligible in Para athletics (Table 1) under the following conditions:

1.1.1 an Athlete must be affected by at least one (1) of the Impairments listed in the first column of the table; and

1.1.2 The Impairment must result directly from a permanent Underlying Health Condition, examples of which are included in the second column.

***Table 1** – Eligible Impairment Types: In order to compete in World Para Athletics, an Athlete must be affected by at least one (1) of the eight (8) Eligible Impairments listed in first column of the below table.*

| Impairment Type | Examples of Underlying Health Conditions likely to cause such Impairments | Impairment as described in the ICF* | Relevant ICF Impairment Codes |
|---|---|---|---|
| Hypertonia | Cerebral palsy, stroke, acquired brain injury, multiple sclerosis | High muscle tone<br>*Inclusions*: Hypertonia / High muscle tone<br>*Exclusions*: Low muscle tone. | b735 |
| Ataxia | Ataxia resulting from cerebral palsy, brain injury, Friedreich's ataxia, multiple sclerosis, spinocerebellar ataxia | Control of voluntary movement<br>*Inclusions*: Ataxia only<br>*Exclusions*: Problems of control of voluntary movement that do not fit description of Ataxia. | b760 |



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| Impairment Type | Examples of Underlying Health Conditions likely to cause such Impairments | Impairment as described in the ICF* | Relevant ICF Impairment Codes |
|---|---|---|---|
| Athetosis | Cerebral Palsy, stroke, traumatic brain injury | Involuntary contractions of muscles<br>*Inclusions*: Athetosis, chorea<br>*Exclusions*: Sleep related movement disorders. | b7650 |
| 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. | s720, s730, s740, s750<br>Note: These codes would have the extension .81 or 0.82 to indicate total or partial absence of the structure respectively. |
| Impaired Passive Range of Movement (PROM) | Arthrogryposis, ankylosis, post burns joint contractures. | Impaired joint mobility.<br>*Exclusions*: Hypermobility of joints. | b7100 – b7102 |
| Impaired Muscle Power | Spinal cord injury, muscular dystrophy, brachial plexus injury, polio, spina bifida, Guillain-Barré syndrome | Impaired muscle power. | b730 |


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| Impairment Type | Examples of Underlying Health Conditions likely to cause such Impairments | Impairment as described in the ICF* | Relevant ICF Impairment Codes |
|---|---|---|---|
| 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.<br>*Inclusions*: shortening of bones of one lower limb<br>*Exclusions*: shortening of bones of both lower limbs; any increase in dimensions. | s75000, s75010, s75020<br>Note: for coding purposes aberrant dimensions of bones of right lower limb is indicated by addition of the qualifying code .841 and in the left lower limb, .842 |
| Short Stature | Achondroplasia, growth dysfunction. | Aberrant dimensions of bones of upper and lower limbs or trunk which will reduce standing height. | s730.343, s750.343, s760.349 |

*For further information on ICF codes, including how to obtain a copy of the ICF, visit the website at http://www.who.int/classifications/icf/en/.



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# 2 Minimum Impairment Criteria (MIC) and Methods of Assessment

MIC defines how severe an Athlete's Impairment must be in order to be eligible for Para athletics.

As a general reference to anthropometric measurements, the average of two (2) measures is taken. If the difference between these two (2) measures is greater than 1%, one additional measure is taken, and the median measure is recorded on the Classification sheet as the measurement.

World Para Athletics has two sets of MIC:

- MIC for wheelchair racing, running and jumping Events (Section 2.1):

Impairments described in this section are considered to alter the biomechanical execution of the running action in a way that is demonstrable and which will adversely affect performance.

- MIC for throwing Events (Section 2.2):

Impairments described in this section are considered to alter the biomechanical execution of the throwing action in a way that is demonstrable and which will adversely affect performance.

## 2.1 MIC and Methods of Assessment for wheelchair racing, running and jumping Events

### 2.1.1 Hypertonia

In Para athletics, spasticity grades refer to the Ashworth scale (1):

- Grade 0: No increase in tone
- Grade 1: Slight increase in tone giving a "catch" when the limb is flexed or extended
- Grade 2: More marked increase in tone, but limb is easily flexed or extended
- Grade 3: Considerable increase in tone with passive movement difficult
- Grade 4: Limb rigid in flexion or extension

Hypertonia is defined as increased muscle tone which is caused by central nervous system impairment and which results in increased resistance to



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passive lengthening of the muscle (4). One of the following types of hypertonia must be clearly clinically detectable – i.e., grade 1 on the Ashworth scale (1) at the wrist, elbow, shoulder, ankle, knee or hip.

**Spastic hypertonia**: Is defined as a velocity-dependent resistance to passive movement with a clasp-knife type of resistance (4). Clasp-knife resistance is resistance that is initially high and followed by a sudden relaxation. Velocity dependence increases as the speed of the passive movement increases, the resistance becomes greater and starts earlier in the range.

Spastic **Hypertonia** is initially assessed via the Ashworth scale (1):

Spastic hypertonia must be clearly clinically detectable – i.e., grade 1 on the Ashworth scale (1) at the wrist, elbow, shoulder, ankle, knee or hip.

Spastic hypertonicity tends to predominate in the antigravity muscles particularly the flexors of the arms and extensors of the legs and may affect certain parts of the body more than others. In Classification, testing for Spastic hypertonicity involves rapid, passive movement through the principal ranges of movement at the wrist, elbow, shoulder, ankle, knee or hip. Athletes with clearly clinically detectable Spastic hypertonicity are eligible.

When testing for Spastic hypertonicity at the ankle or wrist, clonus may be elicited. Clonus is rapid, involuntary alternation of muscle contraction and relaxation and typically occurs in the ankle plantar flexors in response to rapid, passive dorsiflexion or the wrist flexors in response to rapid, passive wrist extension. Clonus that lasts for 4 beats or more and which can be reliably reproduced during a single Classification session (i.e., is non-dampening clonus) is considered to indicate presence of Spastic hypertonicity that meets the MIC.

**Rigidity**: Is defined as a heightened resistance to passive movement of a limb that is independent of the velocity of stretch and is relatively uniform throughout the range of motion of that limb (4). The uniform resistance is often referred to as 'lead pipe' type of resistance. Usually has a predominant pattern with a flexor pattern being more common.

**Dystonia**: Is resistance to passive movement that may be focal (affecting muscles of one limb or joint) or general (affecting the whole body). Contractions are powerful and sustained and cause twisting or writhing of the affected areas*. The pattern is highly variable – contractions may be fast or slow; painful or not; and the direction of greatest resistance may change regularly (e.g., a limb may move regularly from an extreme flexion pattern to an extreme extension pattern) (4, 10).

*As the description indicates, Dystonia may equally be classified as a type of Hypertonia OR a type of involuntary movement pattern.



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- An Athlete who does not have one of the three types of Hypertonia – Spasticity, Rigidity or Dystonia – is not eligible. The Classification Panel must be satisfied that the resistance to passive lengthening of the muscle is due to central nervous system impairment and the following signs may be useful in this regard:
- Presence of non-damping clonus on the side on which the tone is increased;
- Abnormally brisk reflexes in the limb in which the tone is increased;
- Mild atrophy in the limb in which the tone is increased;
- Positive Babinski on the side in which the tone is increased.

### 2.1.2 Ataxia

Ataxia refers to an unsteadiness, incoordination or clumsiness of volitional movement (4). Eligible ataxias must result from either motor or sensory nervous system dysfunction. Motor ataxias most frequently result from malformation or damage to the cerebellum and are often associated with hypotonia (4). Motor ataxias are poorly compensated for by visual input. Sensory ataxias most frequently result from lower motor neuron damage or spinal cord disease, affecting vestibular function or proprioceptive function. Visual input can help compensate for sensory ataxia and so sensory ataxias are often more evident when eyes are closed (4).

When evaluating an Athlete the Classification Panel must be satisfied that the ataxic movement is demonstrable and clearly evident during Classification and that the observed ataxia is due to motor or sensory nervous system dysfunction as described. Tests that may be useful for determining this include but are not limited to:

- Finger-to-nose test 1 (Athlete touching own nose from the crucifix position);
- Finger-to-nose test 2 (classifier presents his/her index finger and asks the Athlete to touch it with their own index finger);
- Toe-to-finger test (classifier presents his/her index finger and asks the Athlete to touch it with their toe);
- Heel shin test (i.e., draw the heel of one leg along the length of the contralateral shin, from ankle to knee and then in the reverse direction);
- Tandem walk;
- Gait.



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### 2.1.3 Athetosis

Athetosis refers to unwanted movement and posturing resulting from damage to motor control centres of the brain, most frequently the basal ganglia. When evaluating an Athlete the Classification Panel must be satisfied that athetosis is clearly evident and that it is neurological in origin. Clearly evident athetosis is unwanted movement and posturing that is characteristically athetoid and is observable as at least one of the following:

- Involuntary movement of the fingers or upper extremities despite the Athlete trying to remain still;
- Involuntary movement of the toes or lower extremities despite the Athlete trying to remain still;
- Inability to hold the body still – swaying of the body. Swaying must not be due to other neurological deficits such as vestibular or proprioceptive Impairments and therefore must not be exacerbated by closing of the eyes;
- Characteristic athetoid posturing of limbs and/or trunk;

The Athlete will not be eligible if athetoid movements of the face are the sole Impairment.

### 2.1.4 Limb Deficiency

#### 2.1.4.1 Limb Deficiency – Lower Limb

Unilateral:

- Complete unilateral amputation of half the length of the foot (i.e., measured on the non- amputated foot from the tip of the great toe to the posterior aspect of calcaneus)* or equivalent congenital limb deficiency.

* In surgical terms this description equates closely to a Lisfranc's amputation (amputation through the tarsometatarsal joint)

- Unilateral dysmelia in which the length of the affected foot is less than or equal to 50% of the length of the unaffected foot.

Bilateral:

- No anatomically intact metatarsals in both the left and right foot.



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### 2.1.4.2 Limb Deficiency – Upper Limb

Certain types of upper limb deficiency (i.e. Athletes with unilateral upper limb Impairment) have restricted participation opportunities under these World Para Athletics Classification Rules and Regulations (e.g. T47).

#### 1. Eligible for all running (100m – marathon) and jumping Events

The types of upper limb deficiency, meeting the Minimum Impairment Criteria as described below, are eligible for **all** running and jumping Events offered by World Para Athletics:

Unilateral:

- Unilateral amputation, through or above elbow;
- Unilateral dysmelia in which the length of the affected arm measured from acromion to wrist is equal in length or shorter than the humerus of the unaffected arm (i.e., the length of the hand is not taken into account);

Bilateral:

- Bilateral amputation through or above wrist (i.e., no carpal bones present in either wrist). Arthrodesis of the wrist joint/s does not meet eligibility requirements;
- Bilateral dysmelia in which the combined length of the upper limbs measured from acromion to the most distal point of affected limb is ≤ 0.646 x standing height; that is the length of a normal humerus (0.193 x standing height) + length of a normal arm (0.453 x standing height). Both values from Contini (3).

Athletes meeting the criteria of Section 2.1.4.2.1 are identified as T46 further down in these rules.

#### 2. Eligible ONLY for running Events from 100m to 400m and jumping Events

The reason for including the types of upper limb deficiency described below is not because they alter the biomechanics of the running action, but because they have been judged to alter the biomechanical execution of the crouch start or jumping actions in a way that is demonstrable and which will adversely affect performance.

Athletes with Impairments that meet the criteria below but not the criteria in Section 2.1.4.2.1 are only eligible for 100m – 400m running Events (i.e., not running Events greater than 400m) and jumping Events. The criteria are:



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Unilateral:

- Unilateral amputation, through or above wrist (i.e., no carpal bones present in affected limb).
- Unilateral dysmelia in which the length of the affected arm measured from acromion to the most distal point of affected limb is equal in length or shorter than the combined length of the humerus and the radius of the unaffected arm.
  - Measuring unaffected arm: For people who can fully extend the elbow, the combined length of humerus and radius can be a single measure of the distance from the acromion to the tip of the radial styloid. When full elbow extension cannot be achieved, humerus length (from acromion to superior head of radius) and radius length (from head of radius to the tip of the radial styloid, measured with hand supinated) must be measured separately and then summed.
  - Measuring affected arm: Length of arm from acromion to most distal point of affected limb – the length of the hand IS taken into account in this criterion.

Bilateral:

- Bilateral dysmelia in which the combined length of the upper limbs measured from acromion to the most distal point of affected limb is ≤ 0.674 x standing height; that is the length from the acromion to the tip of the radial styloid in a normally proportioned body (0.337) multiplied by 2. Values from Contini (3).

Athletes meeting the criteria of Section 2.1.4.2.2 are identified as T47 as set out below.

### 2.1.5 Impaired Passive Range of Movement (PROM)

Unless otherwise indicated, PROM must be assessed using the protocols described by Clarkson (2). In brief, measurement of PROM requires the Athlete to relax completely while the classifier moves the joint of interest through the available passive range. The Athlete must be relaxed and not attempting voluntary movement during these tests (5, 8, 9).

#### 2.1.5.1 Impaired PROM - Lower limb

The Minimum Impairment Criteria for impaired PROM in the lower limbs is met if one lower limb meets:

- **One or more** of the **5 primary** criteria presented in Section 2.1.5.1.1; **or**

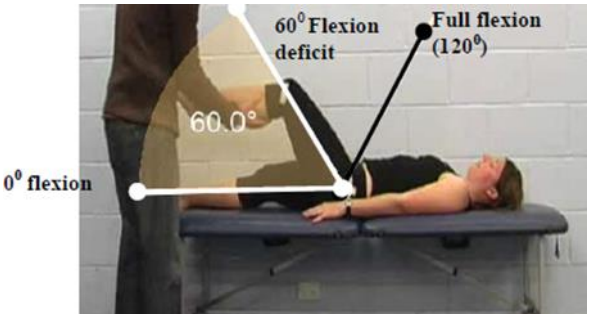
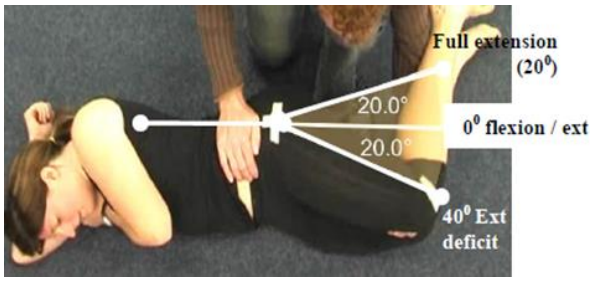
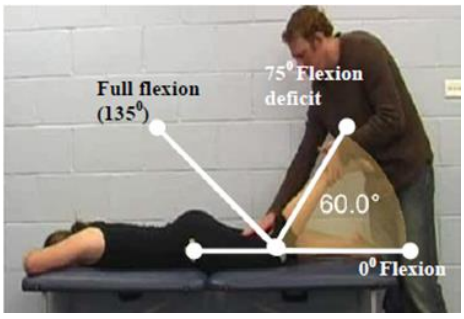


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- **Two or more** of the **5 secondary** criteria presented in Section 2.1.5.1.2.

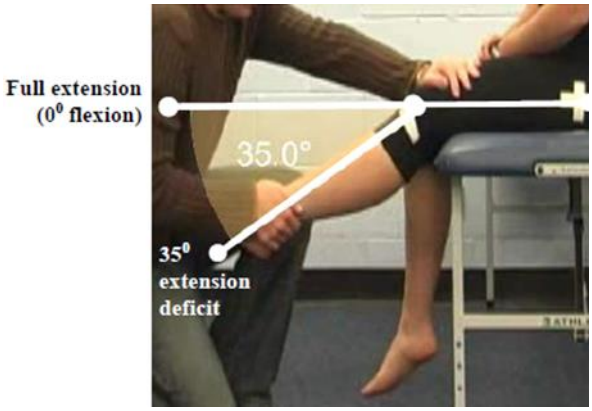
### 1. Primary Criteria for impaired PROM - Lower limb

Athletes are eligible if they meet **one or more** of the following criteria:

| | |
|---|---|
| **Primary Criterion #1**<br>**Hip flexion deficit of ≥ 60˚.**<br>The figure shows normal anatomical range of 120˚ hip flexion (6) and the maximum amount of hip flexion PROM that is permissible in order to meet this criterion (60˚ hip flexion). |  |
| **Primary Criterion #2**<br>**Hip Extension deficit of ≥ 40˚.**<br>The figure shows normal anatomical range of 20˚ hip extension (6). The neutral position (0˚) is also shown, as is the maximum amount of hip extension PROM that is permissible in order to meet this criterion (40˚ hip extension deficit). |  |
| **Primary Criterion #3**<br>**Knee Flexion deficit of ≥ 75˚.**<br>The figure shows normal anatomical range of 135˚ knee flexion (6) and the maximum amount of knee flexion PROM that is permissible in order to meet this criterion (60˚ knee flexion). |  |



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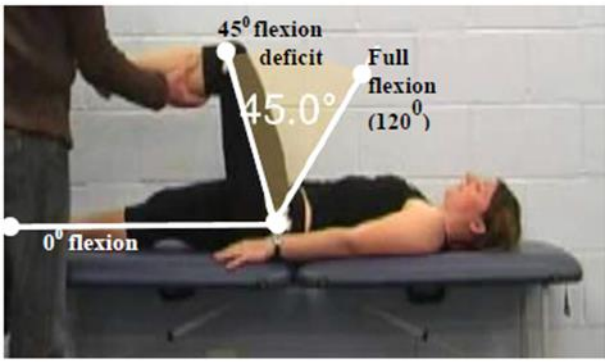
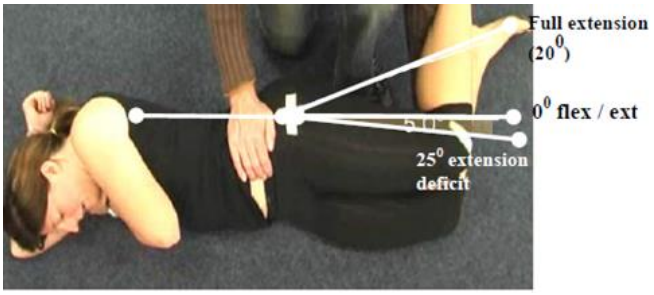
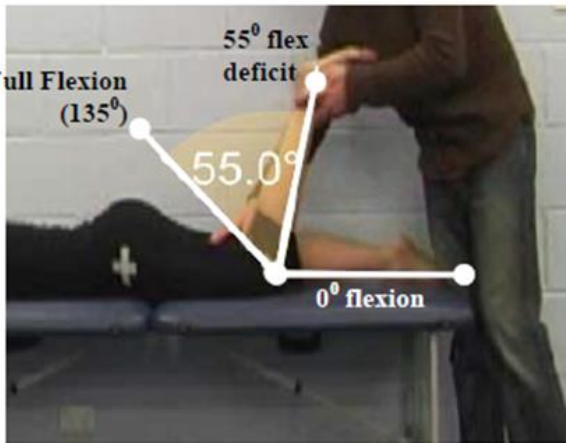
| | |
|---|---|
| **Primary Criterion #4**<br><br>**Knee Extension deficit of ≥ 35˚.**<br><br>The figure shows normal knee extension range – i.e., 0˚ flexion (6) and the maximum amount of knee extension PROM that is permissible in order to meet this criterion (extension deficit of 35˚) |  |
| **Primary Criterion #5**<br><br>**≤ 10˚ ankle dorsi / plantar flexion available in the range between 10˚ dorsiflexion and 25˚ plantar flexion.**<br><br>The test is conducted with the knee in 90˚. The outer (dashed) lines in the figure show 10˚ dorsiflexion and 25˚ plantar flexion – this range was chosen because it is the range of ankle movement used in running (8, 9). The inner lines show an example of a 10˚ arc within this range – this is the maximum PROM is that is permissible in order to meet this criterion. Normal anatomical PROM is not shown in the figure but is 20˚ dorsiflexion to 45˚ plantar flexion (6). |  |



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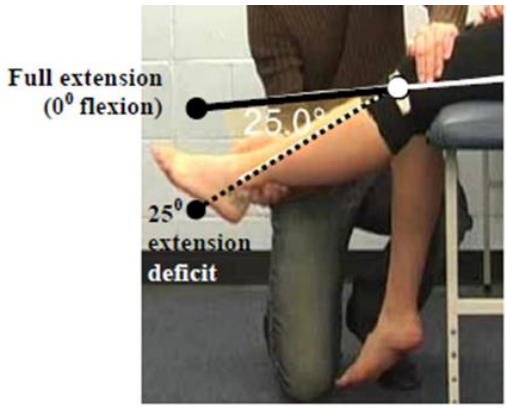
## 2. Secondary Criteria for impaired PROM - Lower limb

Athletes are eligible if they meet **two or more** of the following secondary criteria unilaterally:

| | |
|---|---|
| **Secondary Criterion #1 –**<br>**Hip flexion deficit of ≥ 45˚ but <60˚.**<br>The figure shows normal anatomical range of 120˚ hip flexion (6) as well as a 45˚ flexion deficit – the maximum amount of hip flexion ROM that is permissible in order to meet this criterion. Athletes with ≥ 60˚ loss of flexion meet the primary criterion for loss of hip PROM. |  |
| **Secondary Criterion #2 –**<br>**Hip extension deficit of ≥ 25˚ but < 40˚.**<br>The figure shows normal anatomical range of 20˚ hip extension (6) as well as the neutral position and a 25˚ extension deficit (i.e., 5˚ flexion, just in front of the 0˚ line). A 25˚ deficit is the maximum amount of hip extension that is permissible in order to meet this criterion. Athletes with ≥ 40˚ loss of extension meet the primary criterion for loss of hip PROM. |  |
| **Secondary Criterion #3 –**<br>**Knee flexion deficit of ≥ 55˚ but < 75˚.**<br>The figure shows normal anatomical range of 135˚ knee flexion (6) as well as 0˚ flexion and a 55˚ flexion deficit – the maximum amount of knee flexion that is permissible in order to meet this criterion. Athletes with ≥ 75˚ loss of knee flexion meet the primary criterion for loss of knee PROM. |  |



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| | |
|---|---|
| **Secondary Criterion #4 –**<br>**Knee Extension deficit of ≥ 25˚ but < 35˚.**<br>The figure shows normal knee extension range – i.e., 0˚ flexion (6) as well as a 25˚ extension deficit, the maximum amount of knee extension that is permissible in order to meet this criterion. Athletes with ≥ 35˚ loss of extension meet the primary criterion for loss of knee PROM. |  |
| **Secondary Criterion #5 –**<br>**≤ 20˚ ankle dorsi / plantar flexion available in the range between 10˚ dorsiflexion and 25˚ plantar flexion.**<br>Test conducted with knee in 90˚. The outer (dashed) lines in the figure show 10˚ dorsiflexion and 25˚ plantar flexion – this range was chosen because it is the range of ankle movement used in running (8, 9). The inner lines show an example of a 20˚ arc within this range – this is the maximum PROM is that is permissible in order to meet this criterion. Athletes with ≤10˚ PROM available meet the primary criterion for ankle PROM. |  |

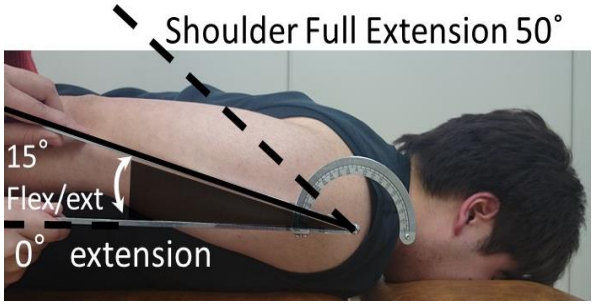
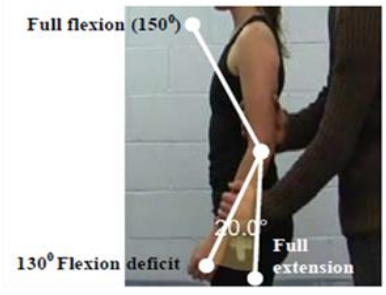
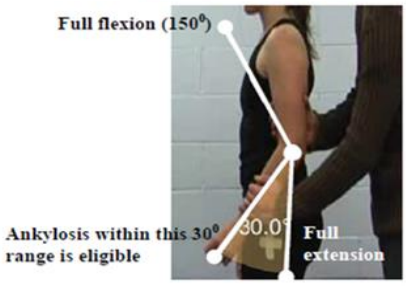


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2.1.5.2 Impaired PROM - Upper limb

**1. Impaired PROM upper limb – eligible for all running (100m – marathon) and jumping Events**

Athletes meeting **one or more** of the following two upper limb criteria are eligible for **all** running and jumping Events offered by World Para Athletics:

| | |
|---|---|
| **Criterion #1**<br><br>**≤ 15˚ shoulder extension available in the range between neutral and 50˚ extension.**<br><br>Test is conducted with athlete in prone.<br><br>The outer (dashed) lines indicate 0˚ flexion and 50˚ extension – the range of shoulder movement used in running (5, 8, 9). The inner lines show an example of a 15˚ arc within this range – this is the maximum PROM is that is permissible in order to meet this criterion. Normal anatomical PROM is not shown in the figure but is 180˚ flexion 50˚ extension. |  |
| **Criterion #2**<br><br>**Elbow flexion deficit of ≥ 130˚ OR ankylosis in any position in the range 0-30˚ flexion.**<br><br>The top left figure shows full elbow extension and a flexion deficit of 130˚ (i.e., max. elbow flexion of 20˚ from full extension) as well as full flexion of 150˚. 20˚ flexion from full extension is the maximum amount of flexion permissible in order to meet this criterion. The top right figure shows the range in which ankylosis will meet this criterion (from full extension to 30˚ flexion). Ankylosis outside this range is not eligible. The range of movement used in running is from 80˚ flexion to 120˚ flexion (5, 8, 9). |  <br>  |

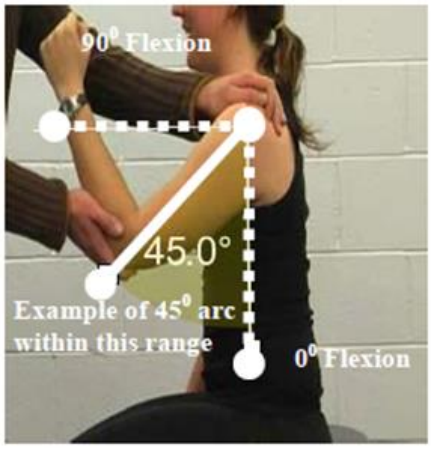
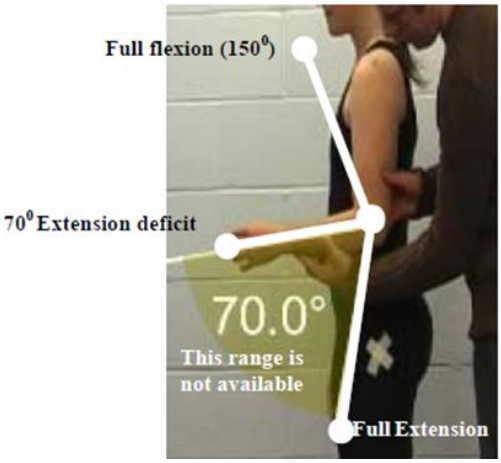
Wrist and fingers are not assessed. Athletes with an impairment only affecting the PROM of the wrist are not eligible.



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2. **Impaired PROM upper limb – eligible only for running Events from 100m to 400m and jumping events**

Athletes with Impairments that meet **one or more** of the criteria below but not the criteria in Section 2.1.5.2.1 are **only** eligible for 100 – 400m running and jumping Events. The criteria are:

| | |
|---|---|
| **Criterion #1**<br><br>**≤ 45˚ shoulder flexion available in the range between neutral and 90˚ flexion.**<br><br>The outer (dashed) lines indicate 0˚ flexion and 90˚ flexion. The inner lines show an example of a 45˚ arc within this range – this is the maximum PROM is that is permissible in order to meet this criterion. Normal anatomical PROM is not shown in the figure but is 180˚ flexion to 50˚ extension (6). |  |
| **Criterion #2**<br><br>**Elbow extension deficit of ≥ 70˚ or ankylosis of the elbow ≥ 80˚ flexion.**<br><br>The outer lines in the figure indicate full elbow flexion (150˚) and full elbow extension. The middle line shows an extension deficit of 70˚ (indicated in the picture). Ankylosis in 80˚ elbow flexion or a greater amount of flexion will also meet this criterion. |  |



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### 2.1.6 Impaired Muscle Power

Muscle power will be assessed according to the Daniels and Worthingham (D&W) scale published in 2002 (6). The scale has six (6) levels, from 0-5:

- **5:** normal muscle power through available ROM
- **4:** active movement through available ROM, against gravity plus some resistance
- **3:** active movement through full available ROM against gravity but no resistance
- **2:** active movement with gravity eliminated (some movement against gravity may be possible, but not through full range);
- **1:** trace muscle activity but no movement of the limb
- **0:** No muscle activity

While manual muscle testing methods in this system are based upon the published D&W text (6), some elements have been modified in order to make the grades more relevant to the sport of Para athletics, as follows:

- World Para Athletics considers impaired muscle power only in the reference range of movement. Principles underpinning these adjustments are described below and details are presented in Table 2
- Plus and minus grades must not be used
- An adjustment to the range of movement required for an Athlete to be assigned a grade of 3, 4 or 5.

According the D&W methods (6), the muscle grade assigned for a given muscle action is influenced by the range of movement that can be achieved. For example if an Athlete is assessed as having passive range of movement (ROM) of 120˚ at the hip (normal anatomical range) and then can only actively flex the hip to 100˚ against gravity, according to the conventional D&W scale the Athlete must receive a grade of 2, because s/he cannot complete the available range of movement against gravity (6). However, even Athletes performing at the very highest levels in athletics do not use full anatomical ROM at every joint. For example, the range of hip flexion required for elite level sprinting is only 90˚ (9). If a person can actively flex their hip to 100˚, assignment of a grade 2 will not be a valid reflection of the activity limitation such a person would experience in the activity of running.

The reference range of movement for assessment of muscle power is not normal anatomical range but the range of movement required for the activity (either running or throwing). Example: A runner with 100˚ hip flexion movement against gravity will receive a grade of 3 to



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5, depending on the amount of resistance that can be tolerated at 90˚ flexion (no resistance tolerated = 3; some = 4; normal = 5). Muscle grades assigned using this method will provide a more valid indication of the activity limitation likely to be experienced by the Athlete when running. Table 2 presents the reference range of movement that must be used assessing muscle power in the lower and upper limbs for running and Table 3 presents the reference range of movement for assessing muscle power in the upper limbs in throwing (lower limbs for throwing are assessed using the same reference range as for running).

*Table 2: Reference range of movement for testing muscle power for **runners** in World Para Athletics*

| Movement | Anatomical ROM | Reference range for this System, based on ROM used in running |
|---|---|---|
| Hip Flexion | 120˚ | 90˚ |
| Hip Extension | 20˚ | 5˚ |
| Hip Abduction | 45˚ | 5˚ |
| Hip Adduction | 20˚ | 5˚ |
| Knee Extension | 0˚ | -15˚* |
| Ankle plantar flexion | 45˚ | 25˚ |
| Ankle dorsiflexion | 20˚ | 10˚ |
| Ankle Eversion | 25˚ | 10˚** |
| Ankle inversion | 35˚ | 10˚** |
| Shoulder Flexion | 180˚ | 10˚ |
| Shoulder Extension | 50˚ | 40˚ |
| Elbow flexion | 150˚ | 90˚ |

*In running the knee does not fully extend.
**Range of movement data in running was not available for these movements but was thought to be minimal, so a mild restriction of these movements was taken a guide.

In all other regards the methods for assignment of muscle grade are as per the D&W system (6). For example, a runner with a flexion deficit of 40˚ (i.e., an available range of 80˚ hip flexion) and normal muscle power in this range would receive a grade of 5.


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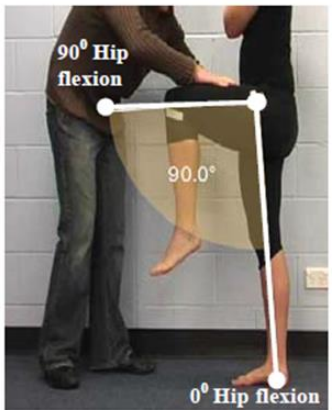
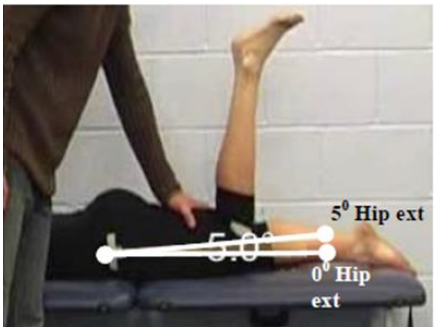
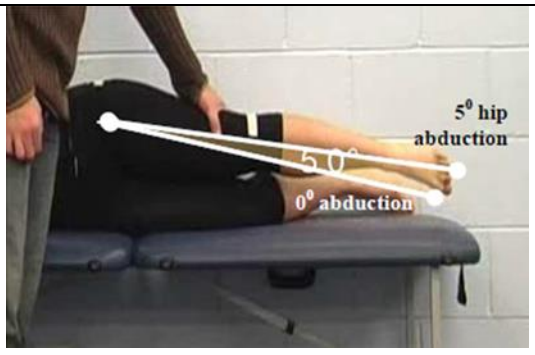
### 2.1.6.1 Impaired muscle power - Lower limb

The Minimum Impairment Criteria for impaired muscle power in the lower limbs is met if one lower limb meets:

- **One or more** of the **7 primary** criteria presented in Section 2.1.6.1.1; **or**
- **Two or more** of **5 secondary** criteria presented in Section 2.1.6.1.2.

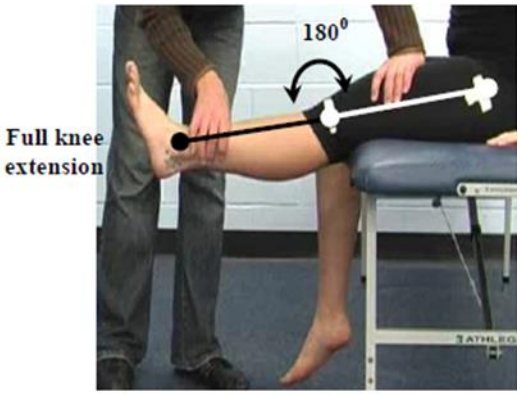
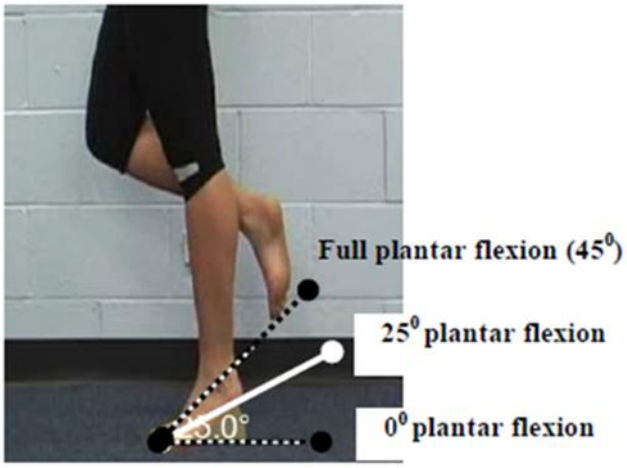
#### 1. Primary Criteria for impaired muscle power - Lower limb

Athletes are eligible if they meet **one or more** of the following criteria:

| | |
|---|---|
| **Primary Criterion #1**<br>**Hip flexion loss of 3 muscle grade points (muscle grade of two).**<br>The figure shows manual resistance being applied at 90˚ hip flexion. To meet this criterion the Athlete must not be able to actively flex the hip to 90˚ against gravity OR, if PROM is <90˚, must not be able to actively flex through available PROM. |  |
| **Primary Criterion #2**<br>**Hip extension loss of 3 muscle grade points (muscle grade of two).**<br>The figure shows manual resistance being applied at 5˚ hip extension. To meet this criterion the Athlete must not be able to actively extend the hip 5˚ against gravity. |  |
| **Primary Criterion #3**<br>**Hip Abduction loss of 3 muscle grade points (muscle grade of two).**<br>The figure shows manual resistance being applied at 5˚ hip abduction. To meet this criterion the Athlete must not be able to actively abduct the hip 5˚ against gravity. |  |

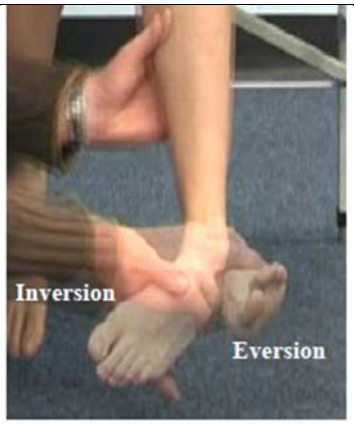


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| | |
|---|---|
| **Primary Criterion #4**<br><br>**Hip Adduction loss of 4 muscle grade points (muscle grade of one).**<br><br>**The figure shows the Athlete** in a gravity eliminated position for adduction and the examiner has moved the leg into 10˚ of abduction. To meet this criterion the Athlete must not have any active adduction in the direction of the arrow. |  |
| **Primary Criterion #5**<br><br>**Knee extension loss of 3 muscle grade points (muscle grade of two).**<br><br>The figure shows manual resistance being applied at full knee extension (0˚ flexion). To meet this criterion the Athlete must not be able to fully extend the knee against gravity OR, if knee extension is restricted, must not be able to actively extend through available PROM. |  |
| **Primary Criterion #6**<br><br>**Ankle plantar flexion loss of 3 muscle grade points (muscle grade of two).**<br><br>The outer (dashed) lines on the figure show 0˚ plantar flexion and 45˚ plantar flexion (normal anatomical AROM). The centre line shows the Athlete raising her heel in 25˚ plantar flexion. In the Daniels and Worthingham system plantar flexion is tested differently to all other muscle groups (6). Below is the method with the range of movement adjusted from full anatomical to 25˚ (the ROM required for running). |  |



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| | |
|---|---|
| ▪ Grade 5 = can do 20 single leg heel rises to 25˚;<br>▪ Grade 4 = can do 10-19 single leg heel rises to 25˚;<br>▪ Grade 3 = can do 1-9 single leg heel rises to 25˚;<br>▪ Grade 2 = can't complete 1 heel rise to 25˚. In lying may complete full ROM with resistance.<br>▪ Grade 1 = in lying, trace muscle activity but no actual movement. | |
| **Primary Criterion #7**<br><br>**At least two of the following three muscle actions must have a loss of 3 points each: Ankle Dorsiflexion, Ankle Eversion, and Ankle Inversion.**<br><br>Test conducted in sitting, knee in 90˚. The top figure shows inversion and eversion and the bottom figure shows 0˚ dorsiflexion and 10˚ dorsiflexion. To meet this criterion the Athlete must not be able to perform two of the following movements:<br><br>Active eversion through available PROM;<br>Active inversion through available PROM;<br>Active dorsiflexion to 10˚.<br>Muscle power in knee flexion is not expressly examined as an independent criterion. Knee flexors are active in late swing and act to retard forward swing of the leg. Impaired power would only result in a more rapid knee extension prior to contact and therefore this is not important.<br><br>Moreover the main knee flexors contribute to |  <br>  |



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| | |
|---|---|
| other Principal muscle actions – Hamstrings perform hip extension and Gastrocnemius plantar flexes – so any weakness in these muscles will be reflected in assessment of those actions. | |

## 2. Secondary Criteria for impaired muscle power - Lower limb

Athletes will be eligible to compete in wheelchair racing or running and jumping Events if they lose a total of 6 muscle grade points (in one limb) in two or more of the following 5 "principal" muscle actions*:

- Hip Flexion
- Hip Extension
- Hip Abduction
- Knee Extension
- Ankle Plantar Flexion

Two of the movements must have a loss of two (2) points each (i.e., a combination of 4 x 1 point losses and 1x 2 point loss would not meet this criterion**).

*Only the "principal" muscle actions were considered in the combined Impairment criterion since decreases in the power of these actions would be cumulative, decreasing the overall propulsion the Athlete is able to generate.

**According to the authors of the Daniels and Worthingham muscle testing manual, the grade of 4 is the most difficult to grade reliably, due to the subjectivity of deciding whether resistance is "normal" or "below normal") (6).

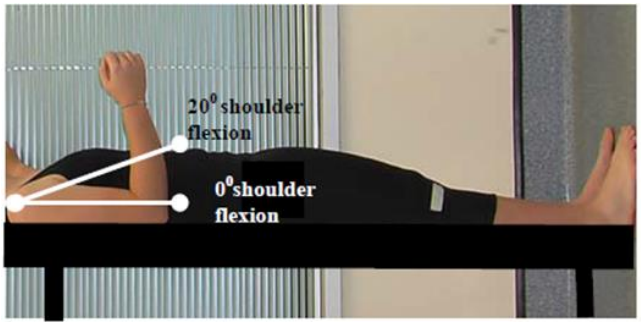
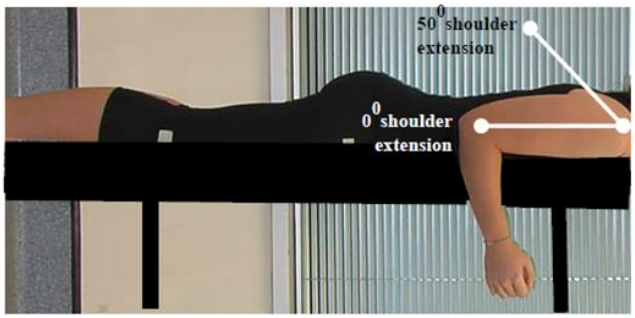


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2.1.6.2 Impaired muscle power - Upper limb

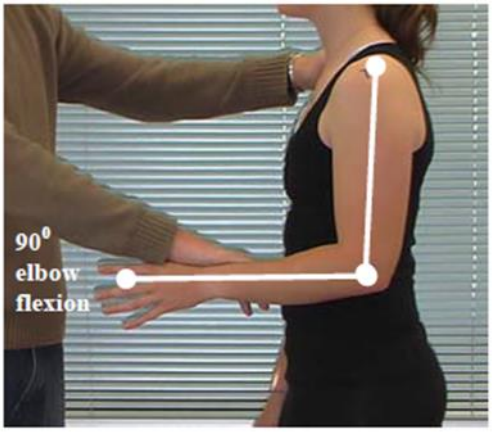
**1. Eligible for all running (100m – marathon) and jumping Events**

Athletes meeting **one or more** of the following three upper limb criteria are eligible for **all** running and jumping Events offered by World Para Athletics:

| | |
|---|---|
| **Criterion #1**<br>**Shoulder flexion loss of 3 muscle grade points (muscle grade of two).**<br>The figure shows the Athlete lying in supine with the shoulder in 0˚ flexion and a line representing 20˚ flexion. To meet this criterion the Athlete must not be able to flex the shoulder to 20˚ OR if shoulder PROM is < 20˚, must not be able to actively flex through available PROM. |  |
| **Criterion #2**<br>**Shoulder extension loss of 3 muscle grade points (muscle grade of two).**<br>The figure shows the Athlete lying prone, shoulder in 0˚ extension and a line representing 50˚ extension. To meet this criterion the Athlete must not be able to extend the shoulder to 50˚ OR if shoulder PROM is < 50˚, must not be able to actively extend through available PROM |  |



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| | |
|---|---|
| **Criterion #3**<br><br>**Elbow flexion loss of 3 muscle grade points (muscle grade of two).**<br><br>The figure shows manual resistance applied at 90˚. To meet this criterion the Athlete must not be able to actively flex the elbow to 90˚ against gravity OR, if PROM is < 90˚, must not be able to actively flex through full available PROM.<br><br>Note: Elbow extension and muscle power of the wrist and fingers <u>are not assessed.</u> |  |

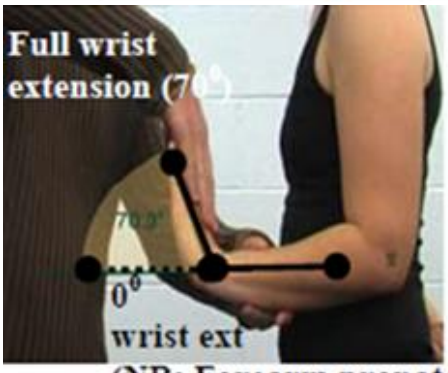
## 2. Eligible ONLY for running Events from 100m to 400m and jumping Events

Athletes with Impairments that meet **one or more** of the two criteria below, but not the criteria in Section 2.1.6.2.1, are **only** eligible for 100 – 400m running Events (i.e., not running Events greater than 400m) and jumping Events. The criteria are:

| | |
|---|---|
| **Criterion #1 –**<br><br>**Loss of 3 muscle grade points in elbow extension (i.e., grade 2 elbow extensors).**<br><br>The figure shows manual resistance applied at full elbow extension, with the shoulder fully flexed. To meet this criterion the Athlete must not be able to actively fully extend the elbow against gravity OR, if PROM is restricted, must not be able to actively extend through available PROM. |  |



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| | |
|---|---|
| **Criterion #2 –**<br><br>**A loss of 3 muscle grade points (i.e., muscle grade of 2) in wrist flexion AND wrist extension.**<br><br>**Wrist flexion:** The figure in the top left shows manual resistance being applied at 80˚ wrist flexion. To meet this criterion the Athlete must not be able to actively flex the wrist 80˚ against gravity OR, if wrist PROM is < 80˚ flexion, must not be able to actively flex through available PROM; AND<br><br>**Wrist Extension:** The figure second from the left shows manual resistance being applied at 70˚ wrist extension. To meet this criterion the Athlete must not be able to actively extend the wrist 70˚ against gravity OR, if wrist PROM is <70˚ extension, must not be able to actively extend through available PROM. |  <br><br>0° wrist flexion<br>(NB: Forearm supinated)<br>  <br><br>(NB: Forearm pronated) |



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### 2.1.7 Leg Length difference

The difference in length between right and left legs must be 7cm or more to meet eligibility. To measure, the Athlete must lie supine with legs relaxed and fully extended. Measure from the inferior aspect of the anterior superior iliac spine to the inferior aspect of the tip of the medial malleolus on each leg and then compare.

### 2.1.8 Short Stature

Short stature Athletes will be subject to an annual review (in accordance with Article 15.6 of these Rules) until the age of 18 years.

#### 2.1.8.1 Males with short stature

Maximum standing height permitted is 145cm. The maximum arm length permitted is 66cm, measured with the Athlete lying supine; arm abducted to 90 degrees and the measure taken is from the acromion to the tip of the longest finger of the longest arm. The measure must be taken regardless of elbow contracture because the effective length of the arm is reduced by such an Impairment. This arm length is proportionate for a male of standing height 145cm. The sum of standing height + length of longest arm must be ≤ 200cm.

To be eligible, male Athletes must meet all of the following criteria:

- Standing height ≤145cm; AND
- Arm length ≤66cm; AND
- Sum of standing height plus arm length ≤200cm.

#### 2.1.8.2 Females with short stature

Maximum standing height permitted is 137cm). The maximum arm length permitted is 63cm, measured with the Athlete lying supine; arm abducted to 90 degrees and the measure taken is from the acromion to the tip of the longest finger of the longest arm. The measure must be taken regardless of elbow contracture because the effective length of the arm is reduced by such an Impairment. This arm length is proportionate for a female of standing height 137cm. The sum of standing height + length of longest arm must be ≤ 190cm.

To be eligible, female Athletes must meet all of the following criteria:

- Standing height ≤137cm; AND
- Arm length ≤63cm; AND
- Sum of standing height plus arm length ≤190cm.

There are two (2) classes of Athletes with short stature, T/F40, T/F41.



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## 2.2 MIC and Methods of Assessment for Throwing

The following Minimum Impairment Criteria are exactly the same for throwing as for running Events:

- Hypertonia (Section 2.1.1)
- Ataxia (Section 2.1.2);
- Athetosis (Section 2.1.3);
- Limb deficiency – Lower limb (Section 2.1.4.1;
- Impaired PROM – Lower limb (Section 2.1.4.2);
- Impaired Muscle Power – Lower limb (Section 2.1.6.1);
- Leg Length Difference (Section 2.1.7);
- Short Stature (Section 2.1.8).

The following Minimum Impairment Criteria are different for throwing Events than for running Events, and these are presented below:

- Limb deficiency – Upper limb;
- Impaired PROM – Upper limb;
- Impaired Muscle Power – Upper limb;

**Notes on the development of MIC for upper limb impairment in throwing Events**: The criteria have been developed on the principle that Athletes with upper limb Impairments will be classified as if they throw with their least impaired arm irrespective of arm dominance. In practice, Athletes will be permitted to throw with their more impaired arm if they wish to, but they will be classified as if they throw with their least impaired arm. There are two divisions for Athletes with upper limb Impairments:

- Unilateral upper limb Impairments: For Athletes with one limb affected by limb deficiency, impaired PROM or impaired muscle power. MIC are presented in Section 2.2.1;
- Bilateral upper limb Impairments: For Athletes with both limbs affected by limb deficiency, impaired PROM or impaired muscle power. MIC are presented in Section 2.2.2.



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### 2.2.1 MIC for Unilateral Upper Limb Impairment

An Athlete with unilateral upper limb Impairment must have one upper limb that meets the MIC below for limb deficiency (Section 2.2.1), impaired PROM (Section 2.2.1.1) or impaired muscle power (Section 2.2.1.3); otherwise they are ineligible for Competition.

Refer to Section 2.2.2 for the MIC for **Bilateral** Upper Limb Impairment.

#### 2.2.1.1 Limb Deficiency

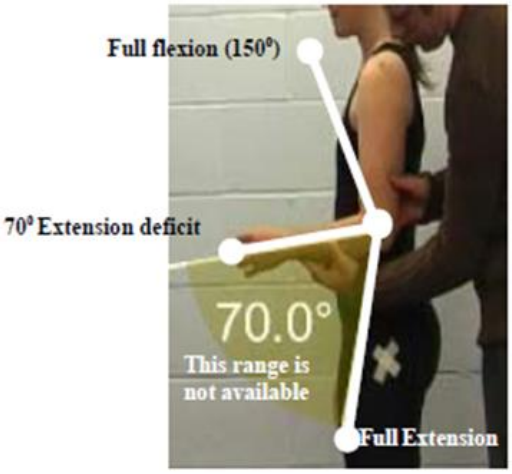
- Unilateral amputation, through or above wrist (i.e., no carpal bones present in affected limb). Arthrodesed wrist joint is not eligible.
- Unilateral dysmelia in which the length of the affected arm measured from acromion to most distal point of affected limb is equal in length or shorter than the combined length of the humerus and the radius of the unaffected arm.
- Measuring unaffected arm: For people who can fully extend the elbow, the combined length of humerus and radius can be a single measure of the distance from the acromion to the tip of the radial styloid. When full elbow extension cannot be achieved, humerus length (from acromion to superior head of radius) and radius length (from head of radius to the tip of the radial styloid, measured with hand supinated) must be measured separately and then summed.
- Measuring affected arm: Length of arm from acromion to most distal point of affected limb – the length of the hand IS taken into account in this criterion. If full elbow extension cannot be achieved, humerus length (from acromion to superior head of radius) and radius + hand length (from head of radius to most distal point of affected limb) must be measured separately and then summed.



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### 2.2.1.2 Impaired PROM

Athletes are eligible for throwing Events if they have a unilateral upper limb Impairment of PROM that meets **one or more** of the following criteria:

| | |
|---|---|
| **Criterion #1**<br>**Shoulder abduction ≤ 60˚ available in the range between 0˚ and 90˚ abduction.**<br>Test is conducted with Athlete in supine.<br>The dashed lines in the figure show 0˚ shoulder abduction and shoulder abduction to 90˚. It also shows 60˚ abduction, the maximum amount of PROM that is permissible in order to meet this criterion. |  |
| **Criterion #2**<br>**Elbow extension deficit of ≥ 70˚ or ankylosis of the elbow ≥ 80˚ flexion.**<br>The outer lines in the figure indicate full elbow flexion (150˚) and full elbow extension. The middle line shows an extension deficit of 70˚ (indicated in the picture). Ankylosis in 80˚ elbow flexion or a greater amount of flexion will also meet this criterion. |  |



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### 2.2.1.3 Impaired Muscle Power

Muscle power will be assessed based on the Daniels and Worthingham (D&W) scale (2002) (6). Details of the method and how it must be adjusted are described in Section 2.1.6. The reference ranges of movement for throwers are presented in Table 3.

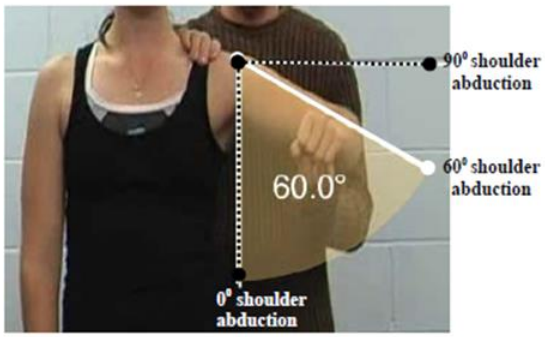
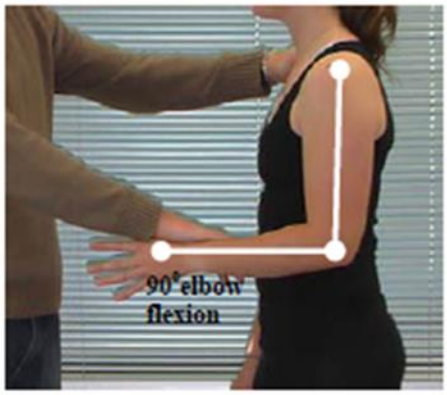
***Table 3:*** *Reference range of movement for testing muscle power for* ***throwers*** *in World Para Athletics.*

| Movement | Anatomical ROM | Reference range for this System |
|---|---|---|
| | All lower limb actions as per running (see table 2) | |
| Shoulder Abduction | 180˚ | 90˚ |
| Shoulder Horizontal Flexion | 130˚ | Shoulder abducted to 90˚ and apply manual resistance at 60˚ shoulder horiz. Flex |
| Shoulder Internal Rotation | 80˚ | 60˚ |
| Shoulder External Rotation | 60˚ | 50˚ |
| Elbow Flexion | 150˚ | 90˚ |
| Elbow Extension | 0˚ | 0˚ |
| Wrist Flexion | 80˚ | 80˚ |
| Wrist Extension | 70˚ | 70˚ |
| Finger Flexion | 90˚ | 90˚ |
| Finger Extension | 0˚ | 0˚ |



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Athletes are eligible for throwing Events if they have a unilateral upper limb Impairment of muscle power that meets **one or more** of the following criteria:

| | |
|---|---|
| **Criterion #1**<br><br>**Shoulder abduction loss of 3 muscle grade points (i.e., grade 2 shoulder abductors).**<br><br>The dashed lines in the above figure show 0˚ abduction and 90˚ abduction. The solid line shows manual resistance being applied at 60˚ shoulder abduction. To meet this criterion the Athlete must not be able to abduct to 60˚ OR, if PROM is <60˚, must not be able to actively abduct through available PROM. |  |
| **Criterion #2**<br><br>**Loss of 2 muscle grade points in elbow flexion AND extension (i.e., grade 3 elbow extensors and flexors).**<br><br>This criterion has two parts – Athletes must meet both parts to meet the criterion.<br><br>The top figure shows manual resistance being applied at 90˚ elbow flexion. To meet the first part of this criterion the Athlete must not be able to flex to 90˚ and hold against resistance OR, if PROM is <90˚, must not be able to flex through available PROM and hold against resistance.<br><br>The bottom figure shows manual resistance being applied at full elbow extension. To meet the second part of this criterion the Athlete must not be able to go to full extension and hold against resistance OR, if PROM is less than full extension, must not be able to extend through available PROM and hold against resistance. |  <br>  |



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### 2.2.2 MIC for Bilateral Upper Limb Impairment

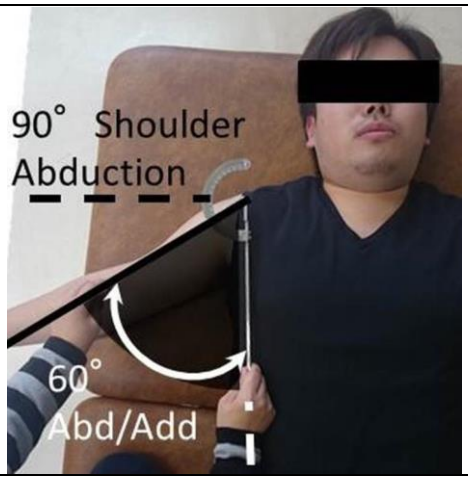
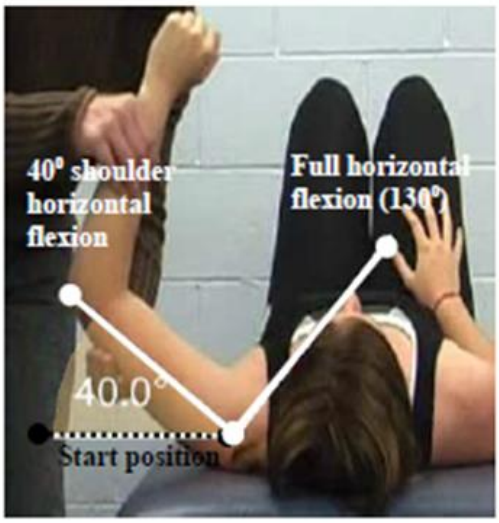
For Athletes with bilateral upper limb impairments, **both** upper limbs must separately meet the MIC as outlined in Section 2.2.2.1, Section 2.2.2.2, or Section 2.2.3.

#### 2.2.2.1 Limb Deficiency

Complete amputation of at least 4 digits (excluding or including the thumb) from **at least** the metacarpophalangeal joint **or** amputation of thumb and thenar eminence **or** equivalent congenital deformity.

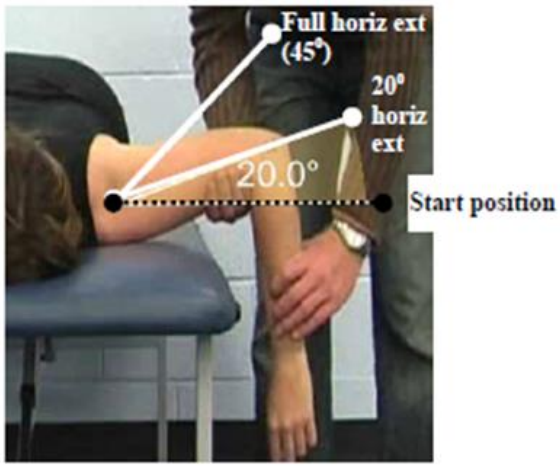
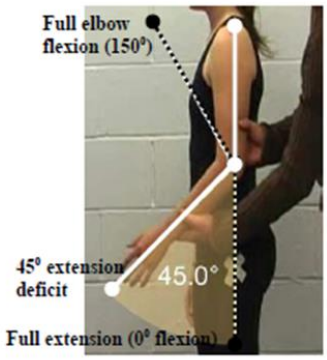
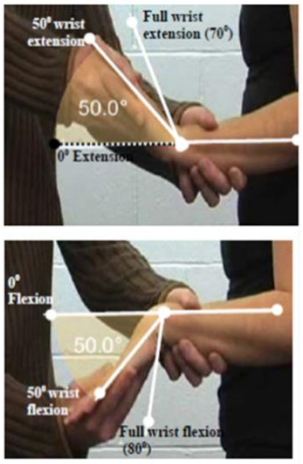
#### 2.2.2.2 Impaired PROM

Athletes are eligible if they meet **one or more** of the following criteria for impaired PROM:

| | |
|---|---|
| **Criterion #1**<br>**Shoulder abduction ≤60˚.**<br>Test is conducted with Athlete in supine.<br>The dashed lines in the figure show 0˚ shoulder abduction and shoulder abduction to 90˚. The solid line is at 60˚ abduction, the maximum amount of PROM that is permissible in order to meet this criterion. |  |
| **Criterion #2**<br>**Shoulder horizontal flexion of ≤40˚.**<br>The dashed line in the figure shows the start position for testing (supine lying, shoulder abducted to 90˚, humerus supported by bench, elbow flexed to 90˚, forearm at 90˚ to the horizontal, fingers pointing to the sky). The solid lines represent normal anatomical range for horizontal shoulder flexion (130˚), as well as 40˚ horizontal flexion, the maximum horizontal flexion permissible in order to meet this criterion. |  |

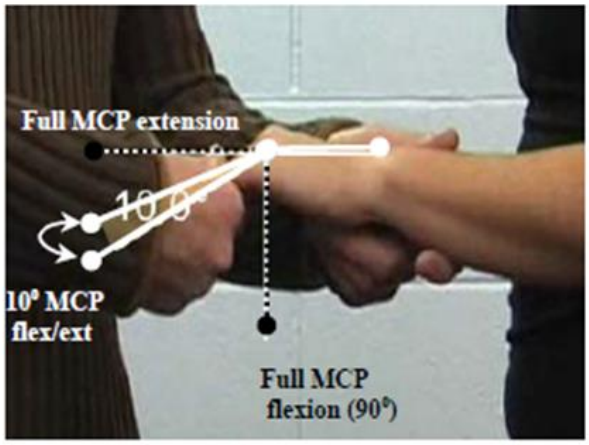


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| | |
|---|---|
| **Criterion #3**<br><br>**Shoulder horizontal extension of ≤ 20˚.**<br><br>The dashed line in the figure shows the start position for testing (prone lying, shoulder abducted to 90˚, humerus supported by bench, elbow flexed to 90˚, forearm at 90˚ to the horizontal, fingers pointing to the floor). It also shows normal anatomical range for horizontal shoulder extension of 45˚ (6), as well as 20˚ horizontal extension, the maximum horizontal extension permissible in order to meet this criterion. |  |
| **Criterion #4**<br><br>**Elbow extension deficit of ≥ 45˚ or ankylosis in any position*.**<br><br>The dashed lines in the figure are full elbow flexion (150˚) and full extension (0˚). The solid line represents an extension deficit of 45˚, the maximum amount of elbow extension that is permissible in order to meet this criterion. |  |
| **Criterion #5**<br><br>**Wrist ankylosed in ≥ 50˚ flexion or extension.**<br><br>The dashed line in top figure is 0˚ extension and the solid lines represent 50˚ extension and full wrist extension (70˚). An Athlete with a wrist ankylosed in 50-70˚ is eligible. The dashed line in bottom figure is 0˚ flexion and the solid lines represent 50˚ flexion and full wrist flexion (80˚). An Athlete with a wrist ankylosed in 50-80˚ is eligible. |  |



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| | |
|---|---|
| **Criterion #6**<br><br>**Any four (4) digits with ≤10˚ of flexion / extension at the metacarpophalangeal joint.**<br><br>The outer (dashed) lines in the figure show normal anatomical range, from full extension to 90˚ flexion (6). The inner lines show an example of a 10˚ arc within this range. This amount of movement may occur anywhere in the range but 10˚ is the maximum PROM that is permissible in order to meet this criterion. |  |



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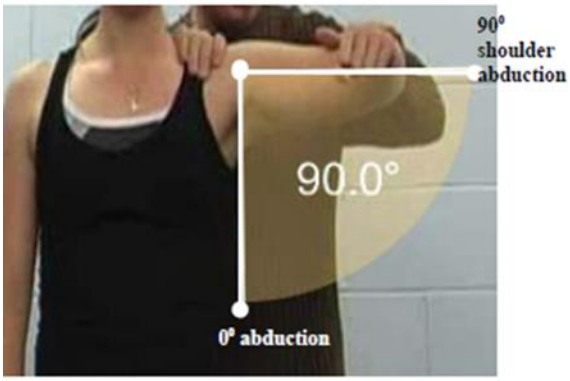
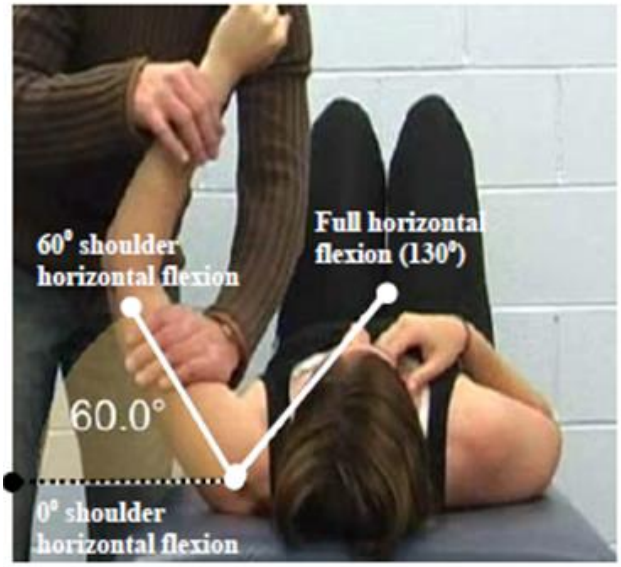
2.2.2.3 Impaired Muscle Power

The Minimum Impairment Criteria for Athletes with **bilateral** upper limb muscle power impairments is met if each upper limb meets:

- **One or more** of the **seven primary** criteria presented in Section 2.2.2.3.1**; or**
- **The secondary** criteria presented Section 2.2.2.3.2 in each upper limb.

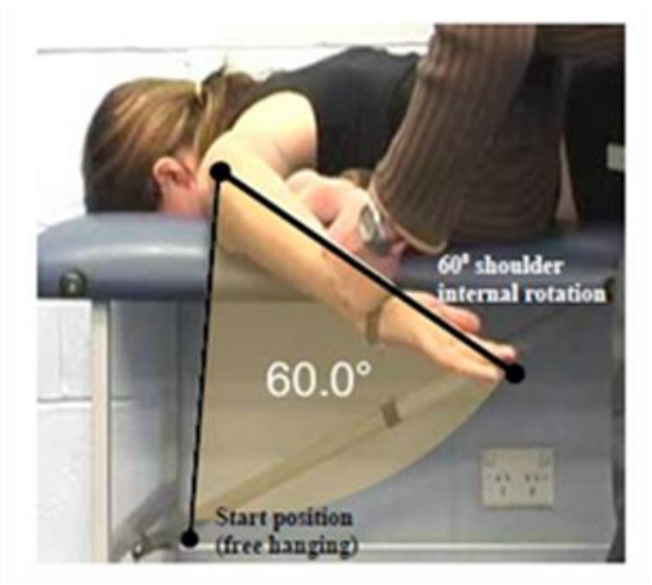
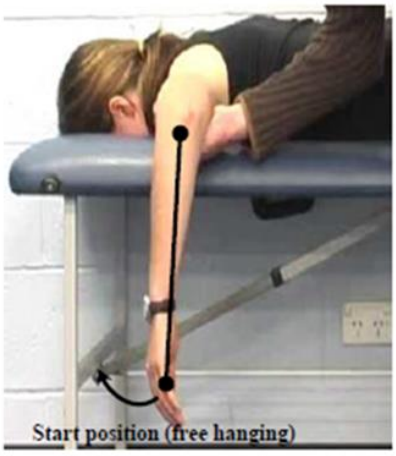
**1. Primary Criteria for impaired muscle power – Bilateral Upper limb**

Athletes are eligible if they meet **one or more** of the following criteria:

| | |
|---|---|
| **Criterion #1**<br>**Shoulder abduction loss of 3 muscle grade points (i.e., grade 2 shoulder abductors).**<br>The figure shows manual resistance being applied at 90˚ shoulder abduction. To meet this criterion the Athlete must not be able to abduct to 90˚ OR, if PROM is < 90˚, must not be able to actively abduct through available PROM. |  |
| **Criterion #2**<br>**Shoulder Horizontal Flexion loss of 3 muscle grade points (i.e., muscle grade of two).**<br>The dashed line in the figure shows the start position for testing (supine lying, shoulder abducted to 90˚, humerus supported by bench, elbow flexed to 90˚, forearm at 90˚ to the horizontal, fingers pointing to the sky). The solid lines represent 60˚ horizontal shoulder flexion and full horizontal flexion (130˚). To meet this criterion the Athlete must not be able to do one of the following (to be tested in order):<br>▪ horizontally flex to 90˚; |  |



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| | |
|---|---|
| ▪ hold the arm at 60˚ horizontal flexion<br><br>If PROM is < 90˚ but > 60˚, the Athlete must not be able to horizontally flex actively through available PROM to 60˚. If horizontal flexion is <60˚ the Athlete must not be able to horizontally flex actively through available PROM. | |
| **Criterion #3**<br><br>**Shoulder Internal Rotation loss of 3 muscle grade points (i.e., muscle grade of two).**<br><br>The figure shows the start position for testing (prone lying, shoulder abducted to 90˚, humerus supported by bench, elbow flexed to 90˚, forearm at 90˚ to the horizontal, fingers pointing to the floor). It also shows manual resistance being applied at 60˚. To meet this criterion the Athlete must not be able to internally rotate to 60˚ OR, if PROM is < 60˚, must not be able to actively internally rotate through available PROM. |  |
| **Criterion #4**<br><br>**Shoulder External Rotation loss of 4 muscle grade points (i.e., muscle grade of 1).**<br><br>The figure shows the start position for testing (prone lying, shoulder abducted to 90˚, humerus supported by bench, elbow flexed to 90˚, forearm at 90˚ to the horizontal, fingers pointing to the floor). To meet this criterion the Athlete must not be able to demonstrate any active external rotation (external rotation is movement in the direction of the arrow) |  |

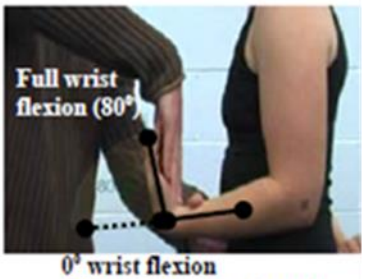
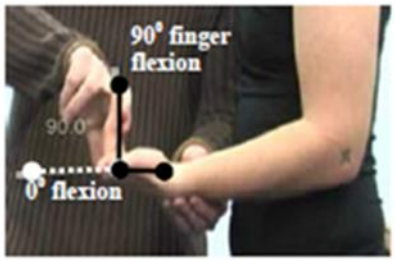


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| | |
|---|---|
| **Criterion #5**<br><br>**Elbow flexion loss of 4 muscle grade points (i.e., muscle grade of 1).**<br><br>The figure shows the classifier supporting the wrist of the Athlete so that the elbow is in 90˚ flexion. The Athlete is asked to flex the elbow. To meet this criterion there must be no active elbow flexion in this position. |  |
| **Criterion #6**<br><br>**Elbow extension loss of 3 muscle grade points (i.e., muscle grade of two).**<br><br>The figure shows manual resistance being applied at full elbow extension. To meet this criterion the Athlete must not be able to go to full extension against gravity OR, if elbow PROM restricted, must not be able to extend through available PROM. |  |



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| | |
|---|---|
| **Criterion #7**<br><br>**Any two of the following four muscle actions must have a loss of 3 muscle grade points (i.e., muscle grade of 2):**<br><br>▪ Wrist flexion;<br>▪ Wrist extension;<br>▪ Finger extension;<br>▪ Finger flexion.<br><br>**Wrist flexion:** The first figure shows manual resistance being applied at 80˚ wrist flexion. To meet this criterion the Athlete must not be able to actively flex the wrist 80˚ against gravity OR, if wrist PROM is <80˚ flexion, must not be able to actively flex through available PROM;<br><br>**Wrist Extension:** The second figure shows manual resistance being applied at 70˚ wrist extension. To meet this criterion the Athlete must not be able to actively extend the wrist 70˚ against gravity OR, if wrist PROM is <70˚ extension, must not be able to actively extend through available PROM;<br><br>**Finger extension:** The third figure shows manual resistance being applied at full finger extension. To meet this criterion the Athlete must not be able to actively extend the fingers 90˚ against gravity OR, if finger PROM is <90˚ extension, must not be able to actively extend through available PROM;<br><br>**Finger flexion:** The fourth figure shows manual resistance being applied at 90˚ finger flexion. To meet this criterion the Athlete must not be able to actively flex the fingers 90˚ against gravity OR, if finger PROM is <90˚ flexion, must not be able to actively flex through available PROM. |  <br>0° wrist flexion<br>(NB: Forearm supinated)<br>  <br>(NB: Forearm pronated<br>  <br>  |



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## 2. Secondary Criteria for impaired muscle power – Bilateral upper limb

Athletes are eligible if they meet the following criteria: Total loss of four (4) points from a combination of the following shoulder and elbow movements in **each** upper limb, with at least 1 (one) movement having a loss of 2 (two) points:

- Shoulder abduction;
- Shoulder horizontal flexion
- Shoulder internal / external rotation
- Elbow extension

**Special notes:**

- A loss of one (1) point for four (4) movements is NOT eligible – at least One (1) movement must have a loss of two (2) points.



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# 3 Methods of Assessment in support of Sport Class Allocation Decisions

This section identifies mandatory supplementary assessments required for Athletes with the following Impairments:

- Hypertonia, Ataxia and Athetosis and/or
- Bilateral lower Limb Deficiency.

Activity Limitation Tests for Athletes with Hypertonia, Ataxia and Athetosis for seated throwing Events and wheelchair racing

3.1 **Athletes affected by Hypertonia, Ataxia or Athetosis who compete seated must complete the following tests:**

- Hand function test;
- Arm function test; and
- Trunk function test.

A Classification Panel may, in its sole discretion, repeat any tests to assist the allocation of a Sport Class.

In addition to these mandatory tests, a Classification Panel may also conduct any other novel or practised test(s) to assist it to identify the Impairment(s) and/or to understand the impact an Impairment(s) may have on the sport activity.

### 3.1.1 Hand Function Tests

There are three (3) tests for hand function designed to assess the ability of an Athlete to pick up (grasp) an object (specifically a club, discus, shot or javelin); hold such object and move it in the hand (manipulation); and let go of (release).

To perform the hand function tests, the Athlete sits on a non-moving chair facing a table (with the exception of test 3 where the table is not needed). In all tests the Athlete sits with his back staying still and in contact with a backrest and their feet on the floor (whenever possible). The Athlete will need to complete the tests on both hands (separately) to help identify and compare Impairments between sides and in doing so help determine the least impaired hand.



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**Test 1 – Grasp**

A tennis ball (or similar object) is placed on the table directly in front of the Athlete and at a distance that is comfortably within the Athlete's reach without moving his trunk. The Athlete is asked to:

- pick up the ball (or similar object) and hold it for >3 seconds.

This test is repeated at least twice and may be repeated more if needed.

**Test 2 – Manipulation**

The Athlete is given a tennis ball (or similar object) to hold in one hand with his elbow of the same arm resting on the table. The Athlete is asked to hold the ball above and away from their palm and then turn the ball 360 degrees. The test is repeated at least twice and may be repeated more if needed.

**Test 3 – Release**

The Athlete is asked

- to 'drop' a tennis ball, from shoulder height (if possible) and at arm's length in front of them, onto a target on the floor.

### 3.1.2 Arm Function Tests

To perform the arm function tests, the Athlete sits on a non-moving chair with his back staying still and in contact with a backrest and his feet on the floor (whenever possible). The Athlete sits at a table for test 1 and away from a table for test 2. The Athlete must complete the tests on both arms (separately) to help identify and compare Impairments between sides and in doing so help determine the least impaired arm.

**Test 1 – Reach to touch**

The Athlete reaches out to touch a bottle (or similar object) positioned at arm's length in front of him, bends his elbow to touch their chest and then quickly reaches out to touch bottle again. The Athlete then continues that movement between his chest and the bottle at an increasing pace and should aim to do so until the bottle has been touched ten (10) times and as fast as possible without knocking it over or missing it. The whole test may be repeated up to three (3) times with each arm.

**Test 2 – Simulated event**

In this test, Athletes will be asked to perform a similar movement to test 1 but in the style or direction that more closely resembles their chosen Events. For example, rather than reaching



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from chest to the bottle, a shot putter will be expected to reach from the side of their chin to a specified target in front and above their starting height. Similarly, a wheelchair racer will be expected to reach lower down and move from behind to in front. In this test, the track Athlete may be asked to use perform the movement with arms separately as well as with both arms at the same time.

### 3.1.3 Trunk Function Tests

To perform the trunk function tests, the Athlete sits on a plinth or in an upright chair with removable armrests. The feet should ideally be in contact with the floor or. If not, the legs may be supported. Prior to conducting the following tests the Classification Panel must determine the passive / available range of the trunk, through assisting the Athlete, unless the Athlete is confident of demonstrating full movements himself. When measuring range of movement the Classification Panel will fix the pelvis to ensure the movements are coming from the trunk.

The test movements are:

1. Slumped sitting to upright position with thoracic extension. To imagine a mark on the xiphisternum moving closer to and then further away from the navel.
2. Trunk flexion – with arms crossed across their chest, the Athlete is asked to bend forward to touch his legs with their arms and then return to upright without use of his arms. If unable, the test can be modified with a Classifier supporting his arms but encouraging the Athlete to sit up without pushing.
3. Trunk rotation – with both arms abducted to 90 degrees (or as close to this as possible), the Athlete is asked to rotate through full trunk rotation actively and with increasing speed.
4. Side flexion – To reach sideways towards the floor as far down as possible to each side and to return to upright independently each time. When sitting on a plinth this can be done through by reaching down with elbows rather than hands.



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## 3.2 Activity Limitation Tests for Athletes with Hypertonia, Ataxia and Athetosis competing in racing and standing throwing Events

Athletes with Hypertonia, Ataxia or Athetosis who compete standing must complete the following tests:

- Sidestep for Distance;
- Counter Movement Jump;
- Standing Broad Jump;
- Triple Hop for Distance; and
- Bounds for Distance.

### 3.2.1 Sidestep for Distance (left side and right side)

A straight line is marked on the ground. The Athlete completes five (5) consecutive sidesteps on the line, covering as much distance as possible (repeat this on the other side). The test is performed with the Athlete wearing their customary footwear.

To assess the left side leading, the Athlete stands with their feet together with the lateral border of the left foot against the starting line (Figure 2). The Athlete performs five (5) sidesteps as illustrated in Figure 2, attempting to step as wide as possible. Use of a wall or any other external support by the Athlete is not allowed and the Athlete must always have one foot on the ground (no jumping).

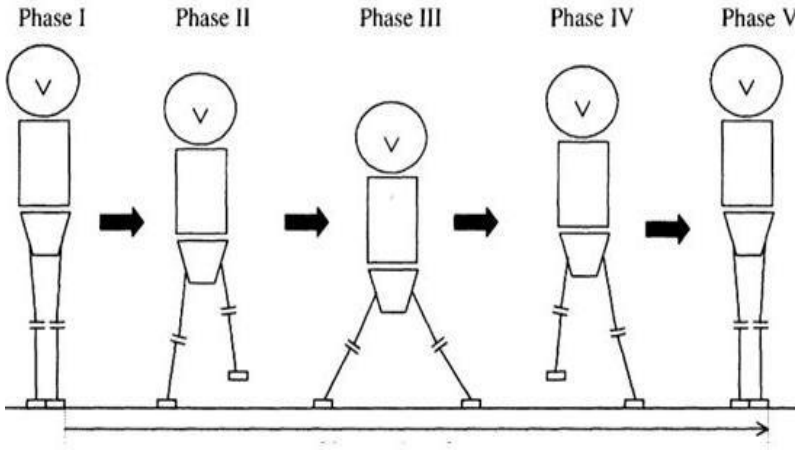



**Figure 2:** Sidestep for Distance (The test is performed in both directions).



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Qualitative observations of Athlete's static balance, active range of movement, symmetry and whole body co-ordination as well as any other aspects of the Athlete's performance are recorded.

### 3.2.2 Counter-Movement Jump

The Athlete stands in an upright standing position on a marked area with hands on hips and, on their own initiative, jumps as high as possible, landing on both feet as shown in Figure 3. Three (3) jumps are conducted. The test is performed with the Athlete wearing their customary footwear. One (1) test jump is permitted.




| Start position | Preparation | Jump |
|---|---|---|

**Figure 3**: Counter- movement Jump

Qualitative observations of the Athlete's dynamic balance, active range of movement, lower limb co-ordination, movement power, symmetry and any other aspects of the performance of Athlete's ''best effort'' jump are recorded.



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### 3.2.3 Standing Broad Jump

A straight line is marked on the ground. The Athlete stands on a line and, on his own initiative, jumps as far forward as possible, landing on both feet, as shown in Figure 4. The Athlete may use the upper limbs to increase jump distance. The test is performed with the Athlete wearing their customary footwear.



**Figure 4:** Standing Broad Jump

Qualitative observations of Athlete's dynamic balance, active range of movement, lower limb co-ordination, movement power, whole body co-ordination and any other qualitative aspects of the performance are recorded.

### 3.2.4 Triple Hop for Distance (right and left side)

A straight line is marked on the ground. The Athlete is instructed to stand on one (1) leg and perform three (3) consecutive hops as far as possible, landing on the same leg. There are no restrictions given to the Athlete regarding the use of arm movement. This is done first with one (1) leg, and then the other. The test is performed with the Athlete wearing their customary footwear.

Qualitative observations of Athlete's static and dynamic balance, lower limb co-ordination, movement power, symmetry, whole body co-ordination and any other aspects of the of Athlete's ''best effort'' performance are recorded.



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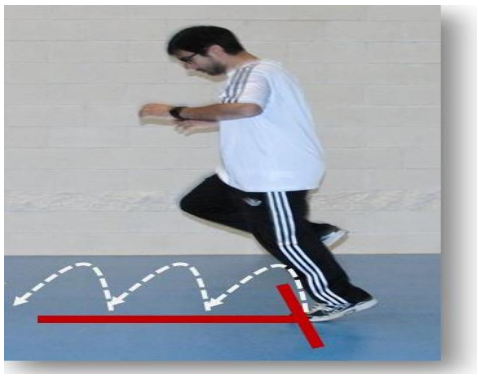


**Figure 5:** Triple Hop for Distance

### 3.2.5 Four Bounds for Distance

A straight line is marked on the ground. The Athlete starts on a marked line and is instructed to cover the maximum possible distance in four (4) consecutive, single-leg bounds from a standing start. The first bound is from the non-preferred leg, landing on the outstretched preferred leg. Using forward momentum to continue the movement, the Athlete then leaps from the preferred leg to the non-preferred leg. This patterns in repeated for four (4) consecutive bounds. The test is performed with the Athlete wearing their customary footwear.



| | | |
|---|---|---|
| Bound from Right leg with left leg leading | Right leg stance phase | Bound from Left leg with Right leg leading |

**Figure 6:** Four Bounds for Distance



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Qualitative observations of Athlete's dynamic balance, active range of movement, lower limb co-ordination, movement power, symmetry, whole body co-ordination and any other aspects of Athlete's ''best effort'' performance are recorded.

### 3.3 Determining Maximum Allowable Standing Height (MASH) for Athletes with bilateral lower limb deficiency competing with Prostheses

For ambulatory Athletes running, jumping and throwing with Prostheses (i.e. bilateral above knee amputations, bilateral below knee amputations, or combined above knee and below knee amputations, bilateral lower limb dysmelia), the following formulas apply for measuring the maximum allowable standing height:

- For Athletes with below knee deficiencies:

| | |
|---|---|
| Males | Max. height = -5.272 + (0.998 x sitting height) + (0.855 x thigh) + (0.882 x upper arm) + (0.820 x forearm) + 1.91 |
| Females | Max. height = = -0.126 + (1.022 x sitting height) + (0.698 x thigh) + (0.899 x upper arm) + (0.779 x forearm) + 1.73 |

- For Athletes with above knee deficiencies:

| | |
|---|---|
| Males | Max. height = -5.857 + (1.116 x sitting height) + (1.435 x upper arm) + (1.189 x forearm) + 2.62 |
| Females | Max. height = -4.102 + (0.509 x arm span) + 0.966 x sitting height) + 2.14 |

- In cases of multiple dysmelia, the formula with the highest $R^2$ for which all parameters can be measured will be taken from the Canda 2009 publication (Canda, A. (2009) Stature estimation from body segment lengths in young adults: Application to people with physical disabilities. Journal of Anthropology, 28(2):71-82) The PE score will be added to the formula in table 4 (males) or table 5 (females) of this study (See Appendix 5).
- In cases with complex dysmelia, where no measures for the upper limb can be calculated, standing height will be based on the following formula:

| | |
|---|---|
| Males | Max. height = sitting height / 0.52 |
| Females | Max. height = sitting height / 0.533 |



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- In cases of Athletes with combined above and below knee amputation (or comparable dysmelia), the formula for below knee deficiency (see above) will be taken with the measurement of the thigh on the non-affected side.

All measures are taken in conformity with the ISAK standardized measures (International Society for the Advancement of Kinantropometry). All measures are taken in centimetres (cm) rounded at 1 digit behind the comma.

## 3.4 Measurement of Athletes wearing bilateral Prostheses at a competition

To determine whether Athletes wearing Prostheses remain within the MASH, have the Athlete wear the Prostheses and measure their standing height as follows:

Athlete stands with back against a rigid pole with feet shoulder width apart, in the most upright position possible. Methods for achieving the most upright position possible are presented in Figure 4 and described below:

The Athlete must be positioned so that they have contact with the pole at the following points:

- Head (if possible)
- Shoulder girdle
- Buttocks

To achieve contact at all three points, the most posterior aspect of the blade of the Prostheses may need to be positioned behind the pole.



Figure 7: Athlete in the most upright position possible

Joint position must be as close as possible to:

- Neck in neutral (not extension or flexion). In some Athletes, this may mean that the head is not in contact with the wall;
- Pelvis in neutral (no anterior or posterior pelvic tilt);
- Hips in neutral (not in flexion);
- Knee extension

It may be difficult for Athletes to maintain their balance while in this position and consequently the Athlete must be provided with the support necessary to maintain balance



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using their arms (e.g., tall chair or an assistant). The support must be high enough so the Athlete does not have to stoop to reach it (see figure 4).

The height measurement obtained must be less than or equal to the MASH.

Note that the Athlete in figure 4 is positioned against a rigid pole (rather than a wall) which allows the most posterior part of the prosthesis to be positioned behind the pole if required.



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# 4 Sport Class Profiles for Athletes with Physical Impairments

World Para Athletics designates its Sport Classes according to the discipline used in the Event: the Track Events (running or wheelchair racing) and Jump Events have the prefix "T"; the Throwing Events have the prefix "F". Athletes are given a single class for discus, shot put and javelin Events. Athletes are not permitted to choose to compete from a standing position in one discipline and a sitting position in another discipline (for example, throwing Events as F57 and compete in track Events as a T42).

The Sport Classes in World Para Athletics are as follows:

**Wheelchair/Sitting Athletes**

- **Track – Classes :** T31, T32, T33, T34, T51, T52, T53, T54
- **Throwing – Classes :** F31, F32, F33, F34, F51, F52, F53, F54, F55, F56, F57

**Ambulant/Standing Athletes**

- **Track /Jump – Classes**
  - T35, T36, T37, T38
  - T40, T41, T42, T43, T44, T45, T46, T47
  - T61, T62, T63, T64

- **Throwing – Classes**
  - F35, F36, F37, F38
  - F40, F41, F42, F43, F44, F45, F46
  - F61, F62, F63, F64



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## 4.1 Class profiles for wheelchair racing, running and jumps

### 4.1.1 Wheelchair racing class profiles for Athletes affected by hypertonia, athetosis or ataxia

In this system Athletes competing in jumping Events will receive a class preceded by the letter "T" – for example T44.

#### 4.1.1.1 Class T31

Athletes in this class compete by propelling the wheelchair with their feet. They will usually propel the wheelchair more efficiently with their feet than with their arms.

Quadriplegic - Severe to moderate involvement. Spasticity Grade 4 to 3 with or without athetosis. Included in this Sport Class are severe athetoid quadriplegics with more function in less affected side and no spasticity. Poor functional strength in all extremities and trunk.

Upper Extremities - Hand severe to moderate involvement. Spasticity Grade 3. If the Classification Panel determines that the upper limb function is more appropriate for T33 or higher, then the Athlete does not qualify as Class T31. However Athletes with arm function equivalent to class T32 may choose to propel the chair with their feet. Class T31 Athletes can sometimes ambulate but never run functionally.

Trunk – 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).

Lower Extremities – A demonstrable degree of function in one or both lower limbs allowing propulsion of the wheelchair automatically qualifies individual as a Class T31.

#### 4.1.1.2 Class T32

Quadriplegic – Severe to moderate involvement. Spasticity Grade 4 to 3 with or without athetosis. Included in this Sport Class are severe athetoid quadriplegics with more function in less affected side and no spasticity. Poor functional strength in all extremities and trunk but able to functionally propel a wheelchair with arms.

Upper extremities - Hand severe to moderate involvement. Spasticity Grade 3. A Class 32 Athlete often has a cylindrical or spherical grasp. Active range of movement is moderately to severely impaired, thus hand function is the key.



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Trunk – 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).

Lower extremities – The Athlete may ambulate (always with abnormal gait) but is never able to run functionally.

#### 4.1.1.3 Class T33

Quadriplegic, triplegic, severe hemiplegic – Moderate (asymmetric or symmetric) quadriplegic or severe hemiplegic in a wheelchair with almost full functional strength in least impaired 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 least impaired upper limb. Can propel a wheelchair independently.

Upper extremities - Moderate limitation spasticity Grade 2 in least impaired arm shown as limitation in extension and follow through. Least impaired hand may demonstrate cylindrical and spherical grasp.

Trunk control - When pushing chair forward trunk movement is often limited by extensor tone during forceful pushing. Spasticity Grade 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.

In order to differentiate between Class T33 and T34, 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, s/he is a Class T33. An Athlete using only one arm for wheelchair propulsion may have long strokes and rapid grasp and release in the least impaired arm and still be Class T33.

#### 4.1.1.4 Class T34

Diplegic – Moderate to Severe involvement. Good functional strength with minimal limitation or control problems noted in upper limbs and trunk.

Upper extremities – the upper limbs often show normal functional strength. Minimal limitation of range of movement may be present but close to normal follow through and propulsion is observed when throwing or wheeling. With hand function, normal cylindrical/spherical opposition and prehensile grasp is seen in all sports. Limitation if any is usually apparent only during rapid fine motor tasks. It must be remembered that diplegia



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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.

Trunk – Spasticity Grade 2 to 1. Minimal limitation of trunk movements when propelling a wheelchair. In some Athletes fatigue can increase spasticity which can be overcome with proper positioning. When standing, poor balance is obvious even using assistive devices.

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.

When propelling the chair 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.

### 4.1.2 Wheelchair racing class profiles for Athletes affected by limb deficiency, impaired PROM, impaired muscle power or leg length difference

**Sport Class Profiles for Class T51 – T54**

The class profiles for Athletes in these groups are written in terms of the muscle power that an Athlete is likely to have. If an Athlete has an impairment that is not directly related to impaired muscle power (e.g., loss of range of movement, amputation) then it is important to use judgement and experience to try to match this Impairment with the most appropriate class profile.

#### 4.1.2.1 Class T51

These Athletes will usually have elbow flexion and wrist dorsiflexion muscle power to grade 5, a decrease of shoulder muscle power especially pectoralis major, and triceps muscle power from grade 0-3. Usually have no muscle power in the trunk.

Use elbow flexors and wrist dorsiflexors for propulsion. Sit in an upright position with knees under the chin. Usually have small push rims. Equivalent activity limitation to Athlete with complete spinal cord injury at neurological level C5-6.



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#### 4.1.2.2 Class T52

These Athletes will usually have normal shoulder, elbow and wrist muscle power, poor to normal muscle power of the finger flexors and extensors with there being wasting of the intrinsic muscles of the hands.

Use shoulders, elbows and wrists for propulsion. Usually have no muscle power in the trunk. May use gloving techniques similar to the next two classes. Equivalent activity limitation to Athlete with complete spinal cord injury at neurological level C7-8.

#### 4.1.2.3 Class T53

These Athletes will have normal arm muscle power with no abdominal and no lower spinal muscle activity.

Use different techniques to compensate for lack of abdominal musculature including lying horizontal. In general when acceleration occurs, the trunk rises off the legs due to a lack of abdominal muscles to hold the trunk down; there is no active downward movement of the trunk to assist with propulsion.

Usually have to interrupt the pushing cycle to adjust the compensator. Equivalent activity limitation to Athlete with complete spinal cord injury at neurological level T1-7.

#### 4.1.2.4 Class T54

These Athletes will have normal arm muscle power with a range of trunk muscle power extending from partial trunk control to normal trunk control. Athletes who compete in this group may have significant leg muscle power.

These Athletes have reasonable to normal trunk control which allows them to hold their trunk down when the propulsion force is applied to the push rim. Usually do not interrupt the pushing cycle to adjust the compensator. May be able to shift direction of the wheelchair by sitting up and applying a trunk rotational force to the wheelchair. Equivalent activity limitation to Athlete with complete spinal cord injury at neurological level T8-S4.

Athletes competing in this class must meet one or more of the MIC presented in Section 2.1.4 (limb deficiency), Section 2.1.5 (impaired PROM) and Section 2.1.6 (impaired muscle power) or Section 2.1.7 (leg length difference).



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### 4.1.3 Running and jumping class profiles for Athletes affected by hypertonia, athetosis or ataxia

#### 4.1.3.1 Class T35

This Class involves Athletes with Impairments of the lower limbs (moderate involvement). There may be some mild Impairment observed in the arms. Athletes with Impairments of both legs and one (1) arm may fall in this Class. This Athlete may require the use of assistive devices in walking but not necessarily when standing. A shift of centre of gravity may lead to loss of balance.

Upper extremities – this is an area where variation occurs. Some moderate to minimal limitation in range of movement in upper extremities can often be seen when running, but strength is within normal limits.

Lower extremities – spasticity Grade 3 to 2: Involvement of both legs which may require assistive devices for walking. A Class T35 Athlete must have sufficient function to run on the track. Motor performance tests will typically be characterised by one (1) or more of the following: reduced active range of movement through the hip, knee and/or ankle; reduced dynamic balance; sub-optimal movement sequencing of the legs, trunk and arms; reduced intra- and inter-limb coordination in the legs; and reduced power. Symmetry may also be affected but is not typical.

Balance – usually has normal static balance but exhibits problems in dynamic balance.

#### 4.1.3.2 Class T36

This Class includes Athletes with athetosis, ataxia, dystonia type Impairments affecting all four (4) limbs and the trunk. Athletes with spasticity in all limbs where the arms are more involved than the legs also fall in this Class. All four (4) limbs will usually show functional involvement in running movements. Class T36 Athletes have more control problems in upper limbs than Class 35 Athletes, although the T36 Athlete usually has better function in lower limbs particularly when running.

Lower extremities – Function for a given Athlete can vary considerably depending on what activity the Athlete is performing. For example, an Athlete may have a walking gait that is laboured and, slow but a running gait that has comparatively better mechanics. There can be a marked contrast between the walking athetoid with uncoordinated gait and the smooth even paced co-coordinated running action. Cyclical movements like running are much better performed than non-cyclical movements.



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Balance – May have good dynamic balance compared with static balance. Spasticity is common in Class 36 Athletes and must not be a reason for placement in Class 35.

For the T36 Athlete, holding the 'set' position may present difficulties (e.g. false starts). Explosive movements may also be difficult to perform. This is demonstrated in the long jump where an Athlete may have good run-up speed but poor height from the board with a subsequently limited jump distance.

Motor performance tests will typically be characterised by one (1) or more of the following: reduced balance, particularly static but also dynamic balance; sub optimal movement sequencing of the legs, trunk and arms and reduced intra- and inter-limb coordination in the legs; and reduced power. Symmetry, active range of movement and power may also be reduced but are not typical in this Class.

Some Athletes may have an upper extremity profile consistent with this class but be relatively more severely impaired in their lower limbs. In this circumstance the Classification Panel must consider Section 4.3.2 (Special Note Class T35/F36).

#### 4.1.3.3 Class T37

This Class is for the true ambulant hemiplegic Athlete. A Class T37 Athlete has spasticity Grade 3 or 2 or moderate dystonia, athetosis or ataxia in one half of the body. They walk without assistive devices but often with a limp due to spasticity in the more impaired lower limb. Good functional ability in less impaired side of the body.

Upper extremities – arm and hand control is affected in the more impaired side. There is good functional control on the less impaired side.

Lower extremities – Less impaired 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 more impaired leg. Side stepping towards the more impaired side is also affected. Athletes with mild to moderate athetosis do not fit into this Class.

In walking the Class T37 Athlete demonstrates a limp on the more impaired 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 Athletes with spastic hypertonia. In running only the forefoot hits the ground, providing support and push off. The tight calf muscle in the Class T37 Athletes facilitates the push off, and heel strike is not necessary. Thus a more normal looking running pattern occurs.



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The Class T37 Athlete demonstrates a weakness in knee pick-up in sprinting and an asymmetrical stride length.

#### 4.1.3.4 Class T38

This Class is for the Athletes who are affected by mild hypertonia (diplegic, hemiplegic or monoplegic presentation which is not consistent with Class T35 or T37 or with mild/very localised dystonia), ataxia or athetosis which is not consistent with a T36 profile. The Athlete must meet the Minimum Impairment Criteria presented in Sections 2.1.1 (hypertonia), 2.1.2 (ataxia) and 2.1.3 (athetosis).

Athletes in this Class have Impairments causing mild activity limitation. Some Athletes will execute the motor performance tests with no observable deficits, but this is not a requirement for this Class. The Class includes Athletes who execute the motor performance tests with mild reductions in one (1) or more of the following: active range of movement through the hip, knee and/or ankle; dynamic balance; movement sequencing of the legs, trunk and arms; reduced intra-limb coordination in the legs; reduced power; or asymmetry in lower limb range of movement.



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### 4.1.4 Running and jumping class profiles for Athletes affected by short stature

#### 4.1.4.1 Class T40

Males

Maximum standing height permitted is 130cm. The maximum arm length permitted is 59cm, measured with the Athlete lying supine; arm abducted to 90 degrees and the measure taken is from the acromion to the tip of the longest finger of the longest arm. The measure must be taken regardless of elbow contracture because the effective length of the arm is reduced by such an Impairment. This arm length is proportionate for a male of standing height 130cm. The sum of standing height + length of longest arm must be ≤ 180cm.

To be eligible for T40 males must meet all of the following criteria:

- Standing height ≤ 130cm; AND
- Arm length ≤ 59cm; AND
- Sum of standing height plus arm length ≤ 180cm.

Athletes who are ≤130cm in standing height but who do not meet either of the other two criteria will be assessed against the criteria for class T41.

Females

Maximum standing height permitted is 125cm. The maximum arm length permitted is 57cm, measured with the Athlete lying supine; arm abducted to 90 degrees and the measure taken is from the acromion to the tip of the longest finger of the longest arm. The measure must be taken regardless of elbow contracture because the effective length of the arm is reduced by such an Impairment. This arm length is proportionate for a female of standing height 125cm. The sum of standing height + length of longest arm must be ≤ 173cm.

To be eligible for T40, female Athletes must meet all of the following criteria:

- Standing height ≤ 125cm; AND
- Arm length ≤ 57cm; AND
- Sum of standing height plus arm length ≤173cm.

Athletes who are ≤125cm in standing height but who do not meet either of the other two criteria will be assessed against the criteria for class T41.



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#### 4.1.4.2 Class T41

Males

Maximum standing height permitted is 145cm. The maximum arm length permitted is 66cm, measured with the Athlete lying supine, arm abducted to 90 degrees and the measure taken is from the acromion to the tip of the longest finger of the longest arm. The measure must be taken regardless of elbow contracture because the effective length of the arm is reduced by such an Impairment. This arm length is proportionate for a male of standing height 145cm. The sum of standing height + length of longest arm must be ≤ 200cm.

To be eligible for T41, male Athletes must meet all of the following criteria:

- Standing height ≤145cm; AND
- Arm length ≤66cm; AND
- Sum of standing height plus arm length ≤200cm.

Females

Maximum standing height permitted is 137cm. The maximum arm length permitted is 63cm, measured with the Athlete lying supine, arm abducted to 90 degrees and the measure taken is from the acromion to the tip of the longest finger of the longest arm. The measure must be taken regardless of elbow contracture because the effective length of the arm is reduced by such an Impairment. This arm length is proportionate for a female of standing height 137cm. The sum of standing height + length of longest arm must be ≤ 190cm.

To be eligible for T41, female Athletes must meet all of the following criteria:

- Standing height ≤137cm; AND
- Arm length ≤63cm; AND
- Sum of standing height plus arm length ≤190cm.



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### 4.1.5 Running and jumping class profiles for Athletes affected by limb deficiency, impaired PROM, impaired muscle power, or leg length difference

**General comment classes T42 – 47**

These Sport Classes are written to accommodate Athletes with impaired muscle power (upper or lower limbs), impaired range of movement (upper or lower limbs), leg length difference or upper limb deficiency. Athletes in Sport Class T42-T44 have lower limb Impairments and compete without a lower limb Prosthesis /Prostheses

**Orthosis:** an orthopaedic appliance or apparatus used to assist functioning in a limb that is anatomically intact but which has impaired range of movement, muscle power or leg length difference.

**Prosthesis:** An artificial device that replaces a missing body part, which may be lost through trauma, disease, or congenital conditions.

#### 4.1.5.1 Class T42

This Class is for Athletes competing **without Prosthesis/Prostheses** with bilateral and/or single through and above knee lower limb Impairments such as impaired muscle power, impaired range of movement and Lower limb deficiency. The Athlete's Impairments for this Class are comparable to those of bilateral or single through and above knee amputation.

#### 4.1.5.2 Class T43

This Class is for any Athlete competing **without Prostheses** with bilateral below knee Impairments such as impaired muscle power and impaired range of movement and, where each limb separately meets the MIC for:

- Impaired lower limb PROM (Section 2.1.5.1);
- Impaired lower limb muscle power (Section 2.1.6.1).
- Lower limb deficiency (Section 2.1.4.1);

#### 4.1.5.3 Class T44

This Class is for any Athlete competing **without a Prosthesis** with single lower limb below knee Impairments such as impaired muscle power, impaired range of movement and leg length difference with a lower limb Impairment/s that meets MIC for:

- Impaired lower limb PROM (Section 2.1.5.1);
- Impaired lower limb muscle power (Section 2.1.6.1);or
- Leg length difference (Section 2.1.7).



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- Lower limb deficiency (Section 2.1.4.1);

#### 4.1.5.4 Class T45

Athletes will compete in this Class for all running and jumping Events if they have **bilateral** upper limb Impairments where **both** limbs must separately meet one of the following MIC:

- through or above elbow amputation;
- dysmelia where both limbs are less than or equal to the length of a normal humerus (i.e., 0.193 x standing height);
- criteria for impaired upper limb ROM detailed in Section 2.1.5.2.1;
- criteria for impaired upper limb muscle power detailed in Section 2.1.6.2.1

#### 4.1.5.5 Class T46

Athletes with a **unilateral** upper limb Impairment that meets the relevant criteria described for **unilateral** upper limb deficiency (Section.2.2.1.1) impaired upper limb PROM (Section) or impaired upper limb muscle power (Section 2.1.6.2.1);

Athletes with **bilateral** Impairment meeting the criteria described for **bilateral** upper limb deficiency in Section.2.1.4.2.1.

#### 4.1.5.6 Class T47

Athletes with a **unilateral** upper limb Impairment that meets the relevant criteria described for **unilateral** upper limb deficiency (Section.2.1.4.1.2), impaired upper limb PROM (Section 2.1.5.2.1), or impaired upper limb muscle power (Section 2.1.6.2.2);

Athletes with **bilateral** Impairment meeting the **bilateral** criteria described for upper limb deficiency in Section 2.1.4.2.2.



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### 4.1.6 Running and jumping class profiles for Athletes affected by lower limb deficiency and/or leg length difference, who use unilateral Prosthesis or bilateral Prostheses for Competition.

**General comments classes T61 – 64**

These classes are for Athletes who:

- are affected by lower limb deficiency or leg length difference; **and**
- who compete with a lower limb prosthesis **and** who compete in running/jumping Events to be eligible, they must meeting the following MIC :
  - Lower limb deficiency (Section 2.1.4.1); or
  - Leg length difference (Section 2.1.7).

Athletes who do not use a lower limb Prosthesis/Prostheses for competition not eligible to compete in these Classes.

#### 4.1.6.1 Class T61

Athletes with bilateral through knee or above knee limb deficiency competing with Prostheses. An Athlete with a combination of a unilateral above knee limb deficiency and unilateral below knee limb deficiency will also compete in this Class.

Athletes in this Class must meet the following MIC for lower limb deficiency (Section 2.1.4.1);

#### 4.1.6.2 Class T62

Athletes with bilateral below knee limb deficiency competing **with Prostheses**. Athletes in this Class must meet MIC for bilateral lower limb deficiency.

Athletes in this Class must meet the following MIC for lower limb deficiency (Section 2.1.4.1);

#### 4.1.6.3 Class T63

Athletes with single through knee or above knee limb deficiency competing **with a Prosthesis**. Athletes in this Class must meet the following MIC for lower limb deficiency (Section 2.1.4.1);



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#### 4.1.6.4 Class T64

Athletes with unilateral below knee limb deficiency competing **with a Prosthesis.** Athletes in this Class must meet the following MIC:

- Lower limb deficiency (Section 2.1.4.1); or
- Leg length difference (Section 2.1.7).



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## 4.2 Sport Class Profiles for Throwing Events

### 4.2.1 Class profiles for Athletes throwing from a seated position who are affected by hypertonia, athetosis or ataxia

#### 4.2.1.1 Class F31

Quadriplegic - 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. Dependant on power wheelchair or assistance for mobility. Unable to functionally propel a wheelchair.

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.

Trunk control-static and dynamic trunk control is very poor or non-existent and trunk function is poor. Severe difficulty adjusting back to mid-line or upright position when performing sports movements.

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 of the lower extremities would not change this Athlete's class.

F31 is determined by the very poor hand function in handling and throwing the club, shot or discus. An Athlete could have adequate static grip but may have difficulty when releasing the implement.

#### 4.2.1.2 Class F32

Quadriplegic – Severe to moderate involvement. Spasticity Grade 4 to 3 with or without athetosis. Included in this Sport Class are severe athetoid quadriplegics with more function in less affected side and no spasticity. Poor functional strength in all extremities and trunk but able to functionally propel a wheelchair with arms.

Upper extremities - Hand severe to moderate involvement. Spasticity Grade 3. A Class 32 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.



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Trunk – 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).

Lower extremities – the Athlete may demonstrate function in the lower extremities sufficient for foot wheelchair propulsion. This includes being able to move with a slow and abnormal gait.

Upper extremity Athletes with athetosis may demonstrate fair trunk rotation during throwing with unreliable release of implement. For Athletes with spasticity or athetosis the trunk makes a very limited contribution to propulsion of the implement.

#### 4.2.1.3 Class F33

Quadriplegic, triplegic, severe hemiplegic – Moderate (asymmetric or symmetric) quadriplegic or severe hemiplegic in a wheelchair with almost full functional strength in least impaired 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 least impaired upper limb. Can propel a wheelchair independently.

Upper extremities - Moderate limitation spasticity Grade 2 in least impaired arm shown as limitation in extension and follow through. Least impaired hand may demonstrate cylindrical and spherical grasp with poor finger dexterity demonstrable in release of shot and discus.

Trunk control - F33 Athletes typically have good hand and arm but poor trunk function.

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.

Class F33/F34 differentiation: Sometimes a hemiplegic Athlete with spasticity Grade 4 to 3 in the more impaired arm and near normal function in the less impaired arm (i.e., an asymmetric diplegic Athlete) is more appropriate in Class F34. However, a close look must 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 (i.e., F34, T33).

#### 4.2.1.4 Class F34

Diplegic – Moderate to Severe involvement. Good functional strength with minimal limitation or control problems noted in upper limbs and trunk.

Upper extremities – the upper limbs often show normal functional strength. Minimal limitation of range of movement may be present but close to normal follow through and



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propulsion is observed when throwing. With hand function, normal cylindrical/spherical opposition and prehensile grasp is seen in all sports. Limitation if any is usually apparent only during rapid fine motor tasks. It must 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. 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.

**Trunk** – Spasticity Grade 2 to 1. Minimal limitation of trunk movements when throwing. When standing, poor balance is obvious even using assistive devices. 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).

**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.

Due to 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.

Split Classification between F34 and F35 is considered a matter of preference for Athletes. The rules governing how this preference may be exercised are presented in 4.3.1. A hemiplegic seated Athlete with one functional arm and a free moving trunk is a F34 (see also F33).



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### 4.2.2 Class profiles for Athletes throwing from a seated position who are affected by limb deficiency, impaired PROM, impaired muscle power or leg length difference

The class profiles for Athletes in these groups are written in terms of the muscle power that an Athlete is likely to have. If an Athlete has an Impairment that is not directly related to impaired muscle power (e.g., loss of range of movement, amputation) then it is important to use judgement and experience try to match this Impairment with the most appropriate class profile.

#### 4.2.2.1 Class F51

These Athletes will usually have elbow flexion and wrist dorsiflexion muscle power to grade 5, a decrease of shoulder muscle power, and triceps muscle power grade 0-3.

Usually use elbow flexors to propel the implement. Hold the club between the fingers and the discus with the hand facing upwards.

Equivalent activity limitation to Athlete with complete spinal cord injury at neurological level C5-6.

#### 4.2.2.2 Class F52

These Athletes will have good shoulder muscle power, almost normal elbow muscle power, good wrist muscle power but finger flexor and extensor muscle power will be at a maximum grade 3. Wasting of the intrinsic muscles of the hand is present.

Usually have difficulty gripping with non-throwing arm.

No functional finger flexors lead to difficulties gripping all throwing implements. Usually there is no finger contact with the shot put, a lack of control of the discus unless there are finger contractures, and may hold the javelin between the digits of the hand including the index finger and the thumb.

Equivalent activity limitation to Athletes with complete spinal cord injury at neurological level C7.

Consideration of class 52 must be given if an Athlete has upper limb muscle power consistent with F51 and partial and full trunk muscle

#### 4.2.2.3 Class F53

These Athletes will have normal shoulder, elbow and wrist muscle power, good or normal muscle power of the finger flexors and extensors with there being wasting of the intrinsic muscles of the hands.



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Usually have good grip function in the non-throwing hand. Usually can grip the throwing implement normally and can impart force to the implement when throwing. Equivalent activity limitation to Athlete with complete spinal cord injury at neurological level C8. Consideration of Class F53 must be given if an Athlete has upper limb muscle power consistent with F52 and partial trunk muscle power.

#### 4.2.2.4 Class F54

These Athletes will have normal arm muscle power with no abdominal and no lower spinal muscle activity.

Usually have normal control of the implement when throwing. Have no active trunk movements when throwing. May generate the throwing movement by a forceful movement of the non-throwing arm.

Equivalent activity limitation to Athlete with complete spinal cord injury at neurological level T1-7. Consideration of Class F54 must be given if an Athlete has upper limb muscle power consistent with F52 and full or nearly full trunk muscle power.

#### 4.2.2.5 Class F55

These Athletes will have normal arm muscle power. They may have full or nearly full trunk muscle power. They may have a flicker of movement in the hip flexors.

Three trunk movements may be seen in this class. They are:

1. An upwards movement off the back of the chair (spinal extension with anterior pelvic tilt);
2. A degree of movement forwards and backwards (trunk flexion and extension);
3. A degree of rotation.

Equivalent activity limitation to Athlete with bilateral hip disarticulations or complete spinal cord injury at neurological level T8-L1.

#### 4.2.2.6 Class F56

These Athletes will have normal arm and trunk muscle power. They will have hip flexor and hip adductor muscle activity, knee extensor muscle activity, and up to grade 3 power in the medial hamstrings (knee flexor).

Usually have normal trunk control in the upwards, backwards and forwards, and rotation movements.



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May use hip flexors to reinforce forward movement in the process of throwing. Trunk rotation is best seen in the discus event.

Equivalent activity limitation to Athlete with bilateral high above knee amputation (The femoral length will be less than half the distance measured between the point of the elbow and the tip of the middle finger. The femoral length is measured from the greater trochanter to the distal bony tip of the residual limb) OR complete spinal cord lesion at L2-4. Athletes with a complete spinal cord injury must have grade 0 for hip extension and for hip abduction.

Unilateral hip disarticulation or very short femur (Bone cut above greater trochanter – no muscle attached, no active hip movement).

Those Athletes with incomplete spinal cord injuries who have grade 1s and 2s in most muscle groups in the lower limbs will generally fit into the F56 class.

#### 4.2.2.7 Class F57

Due to the introduction of the new technical rules 35 and 36, as of 01 January 2014 class F58 ceases to exist. The class profile for Sport Class F57 has been extended to include the existing F57 and F58 Classes (See memo sent to NPCs on 11/11/2013: 'New' Rule 35 & 36).

Athletes competing in this class must meet one or more of the following Minimum Impairment Criteria:

- Lower Limb deficiency as described in Section 2.1.4.1
- A loss of lower limb PROM as described in Section 2.1.5.1
- Muscle power impairment in the lower limb as described in Section 2.1.6.1.
- Leg Length Difference as described in Section 2.1.7

Athletes who do not fit the sport class profiles F51 - 56 but meet the MIC for seated throwing Events fall in the F57 class.



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### 4.2.3 Class profiles for Athletes throwing from a standing position who are affected by Hypertonia, Athetosis or Ataxia

#### 4.2.3.1 Class F35

Diplegic – moderate involvement: This Athlete may require the use of assistive devices in walking but not necessarily when standing. A shift of centre of gravity may lead to loss of balance. A Triplegic may appear in this Class.

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 prehensile grasp and release in the less impaired hand is seen in all sports.

Lower extremities – spasticity Grade 3 to 2: Involvement of one or both legs which may require assistive devices for walking. A Class F35 Athlete must have sufficient function to run.

When throwing the major problem is dynamic balance and function when standing in sport with or without assistive devices. Class F35 Athletes may use a run up in field Events.

Some Athletes may have a lower extremity profile consistent with this class but be relatively more severely impaired in their upper limbs. In this circumstance the Classification Panel must consider Section 4.3.2.

#### 4.2.3.2 Class F36

Athetoid or Ataxic – moderate involvement: This 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. Spasticity is common in Class 36 Athletes and must not be a reason for placement in Class 35. All four limbs will usually show functional involvement in sports movements. Class F36 Athletes have more control problems in upper limbs than Class 35 Athletes, although the F36 Athlete usually has better function in lower limbs particularly when running.

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.

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



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the smooth even paced co-coordinated running action. Cyclical movements like running are much better performed than non-cyclical movements like throwing.

Balance – May have good dynamic balance compared with static balance.

Throwing Events require explosive movement and because of instability and poor balance F36 Athletes often 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.

#### 4.2.3.3 Class F37

This Class is for the true ambulant hemiplegic Athlete. A Class F37 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 more impaired lower limb. Good functional ability in less impaired side of the body.

Upper extremities – arm and hand control is affected in the more impaired side. There is good functional control on the less impaired side.

Lower extremities – Less impaired 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 more impaired leg. Side stepping towards the more impaired side is also affected. Athletes with mild to moderate athetosis do not fit into this Class.

In walking the Class F37 Athlete demonstrates a limp on the more impaired side. While during 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 Athletes with a spastic paresis. In running only the forefoot hits the ground, providing support and push off. The tight calf muscle in the Class F37 Athletes facilitates the push off, and heel strike is not necessary.

In throwing Events, particularly the javelin, the F37 Athlete often demonstrates hip flexion instead of extension on the more impaired side. Trunk rotation during a throwing action also indicates a loss of fluency.

#### 4.2.3.4 Class F38

This class is for the Athletes who are affected by mild hypertonia, ataxia or athetosis which is consistent with the MIC presented in Sections 2.1.1 (hypertonia), Section 2.1.2 (ataxia) and Section 2.1.3 (athetosis).



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### 4.2.4 Class profiles for Athletes throwing from a standing position who are affected by short stature.

#### 4.2.4.1 Class F40

Athletes must meet the criteria as outlined in Section 4.1.4.1.

#### 4.2.4.2 Class F41

Athletes must meet the criteria as outlined in Section 4.1.4.2.

### 4.2.5 Class profiles for Athletes throwing from a standing position who are affected by limb deficiency, impaired PROM, impaired muscle power, leg length difference.

**General comment classes F42 – F46**

These Sport Classes are written to accommodate Athletes with impaired muscle power (upper or lower limbs), impaired range of movement (upper or lower limbs), leg length difference or upper limb deficiency. Athletes in Sport Class F42-T44 have lower limb impairments and compete without Prosthesis/Prostheses.

**Orthosis:** an orthopaedic appliance or apparatus used to assist functioning in a limb that is anatomically intact but which has impaired range of movement, muscle power or leg length difference

**Prosthesis:** An artificial device that replaces a missing body part, which may be lost through trauma, disease, or congenital conditions.

#### 4.2.5.1 Class F42

This Class is for Athletes competing **without Prosthesis/Prostheses** with bilateral and/or single through and above knee lower limb Impairments such as impaired muscle power, impaired range of movement, leg length difference and lower limb deficiency. The Athlete‘s Impairments for this Class are comparable to those of bilateral or single through and above amputation.



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#### 4.2.5.2 Class F43

This Class is for any Athlete competing **without Prostheses** with bilateral below knee Impairments such as impaired muscle power, impaired range of movement, and where each limb separately meets the MIC for:

- Lower limb deficiency (Section 2.1.4.1);
- Impaired lower limb PROM (Section 2.1.5.1);
- Impaired lower limb muscle power (Section 2.1.6.1).

#### 4.2.5.3 Class F44

This Class is for any Athlete competing **without a Prosthesis** with single lower limb below knee Impairments such as impaired muscle power, impaired range of movement, limb deficiency and leg length difference with a lower limb Impairment/s that meets MIC for:

- Impaired lower limb PROM (Section 2.1.5.1);
- Impaired lower limb muscle power (Section 2.1.6.1); or
- Leg length difference (Section 2.1.7).
- Lower limb deficiency (Section 2.1.4.1);

#### 4.2.5.4 Class F45

Athletes with **bilateral** upper limb Impairments where both arms must separately meet the MIC in Sections 2.2.2.1, 2.2.2.2, or 2.2.2.3.

#### 4.2.5.5 Class F46

Athletes with a **unilateral** upper limb impairment that meets the relevant MIC described for **unilateral** upper limb deficiency (Section 2.2.1), impaired upper limb PROM (Section 2.2.1.1 or impaired upper limb muscle power (Section 2.2.1.2);

Athletes with **bilateral** upper limb Impairment, one arm meeting the MIC for **unilateral** upper limb Impairment Sections 2.2.1, 2.2.1.1 or 2.2.1.2) and one NOT meeting the MIC for **bilateral** upper limb Impairment Sections 2.2.2.1, 2.2.2.2 or 2.2.2.3.



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### 4.2.6 Class profiles for Athletes throwing from a standing position affected by lower limb deficiency and/or leg length difference, who use unilateral Prosthesis or bilateral Prostheses for Competition.

**General comments classes F61 – F64**

These classes are for Athletes who:

- are affected by lower limb deficiency or leg length difference; AND
- who compete with a lower limb Prosthesis AND
- who compete in throwing Events to be eligible, they must meeting the following MIC :
  - Lower limb deficiency (Section 2.1.4.1); or
  - Leg length difference (Section 2.1.7).

Athletes who do not use a lower limb Prosthesis/Prostheses for throwing Events are not eligible to compete in these Classes.

#### 4.2.6.1 Class F61

Athletes with bilateral through knee or above knee limb deficiency competing with Prostheses. An Athlete with a combination of a unilateral above knee limb deficiency and unilateral below knee limb deficiency will also compete in this Class.

Athletes in this Class must meet the following MIC for Lower limb deficiency (Section 2.1.4.1);

#### 4.2.6.2 Class F62

Athletes with bilateral below knee limb deficiency competing **with Prostheses**. Athletes in this Class must meet MIC for bilateral lower limb deficiency.

Athletes in this Class must meet the following MIC for Lower limb deficiency (Section 2.1.4.1);

#### 4.2.6.3 Class F63

Athletes with single through knee or above knee limb deficiency competing **with a Prosthesis**. Athletes in this Class must meet the following MIC for lower limb deficiency (Section 2.1.4.1);

#### 4.2.6.4 Class F64

Athletes with unilateral below knee limb deficiency competing **with a Prosthesis**. Athletes in this Class must meet the following MIC:



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- Lower limb deficiency (Section 2.1.4.1); or
- Leg length difference (Section 2.1.7).

## 4.3 Special provisions for Class Allocation

### 4.3.1 Classes T/F30's, 40's, 50's and 60's

World Para Athletics recognizes a number of instances in which Athletes may have an impairment which matches one sports class profile if they compete in a sitting position (i.e. in a wheelchair or from a throwing chair) and another if they compete from a standing position and do not use these devices. All Athletes who are eligible for World Para Athletics and who have sufficient lower limb function may choose to compete in a sitting position or standing position. This means for track Events that they can compete in running Events or wheelchair racing, and for throwing Events that they can throw from a seated position with the aid of a throwing frame (World Para Athletics Rules and Regulations, Rule 35 and 36) or from a standing position without the aid of a throwing frame. Once the Athlete has indicated whether he/she will sit or stand to compete, a sport class is allocated based on how much his/her Impairment will affect the activity.

For Example:

An ambulant Athlete with spastic diplegia featuring lower limb spasticity grade 3 to 2. An Athlete with this impairment profile would be eligible to compete in:

- Track: T35 (running) or T34 (wheelchair racing);
- Throws: F35 (standing throwing Events) or F34 (seated throwing Events);

An Athlete with lower limb above knee amputation or equivalent. An Athlete with this Impairment profile would be eligible to compete in:

- Track: T42 or T61/T63 (running Events) or T54 (wheelchair racing Events);
- Throws: F42 or F61/F63 (standing throwing Events) or F57 (seated throwing Events);

An Athlete with unilateral below knee amputation or equivalent. An Athlete with this Impairment profile would be eligible to compete in:

- Track: T44 or T64 (running Events) or T54 (wheelchair racing Events);
- Throws: F44 or F64 (standing throwing Events) or F57 (seated throwing Events).



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An Athlete with bilateral below knee limb amputation or equivalent. An Athlete with this Impairment profile would be eligible to compete in:

- Track: T43 or T62 (running Events) or T54 (wheelchair racing Events);
- Throws: F43 or F62 (standing throwing Events) or F57 (seated throwing Events).

Once an Athlete has chosen to compete in a sitting or standing position, the following rules apply with the following provisions:

- An Athlete exercises this choice at the time of his/her FIRST Classification by an accredited World Para Athletics Classification panel at an event officially approved by World Para Athletics. Once the Athlete has been classified, the Athlete must continue to compete using his/her chosen technique - sitting or standing - in all World Para Athletics approved Events.

  - **Note that all World Para Athletics approved Events include both track and field. For example an Athlete may NOT choose a sitting technique for track and standing technique for field.**

- An Athlete may request **one (1)** review of the choice to compete sitting or standing prior to the start of the second World Para Athletics season after the initial international Classification took place. The application must be submitted to the World Para Athletics Head of Classification at the moment of renewal of the annual license (end of first trimester of the year).
- An Athlete may also request a review of the choice after the Athlete has already had ONE review as noted above if there is a clear medical justification for changing, in which case an application for Medical Review is completed.



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### 4.3.2 Special note Class T35/F36

Athletes who fit the following profile must compete in Class T35 for running and jumping Events, but Class F36 for throwing Events.

Quadriplegic – athetoid or ataxic with spasticity. Moderate involvement.

Upper extremities – Athetosis is the most prevalent factor and Athlete demonstrates significantly more control problems than the F35 Athlete. Hand control, grasp and release are affected when throwing.

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.



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# Appendix Two: Sport Class Profiles for Athletes with Vision Impairment

## 1 Introduction

1.1 World Para Athletics has designated Sport Classes for Athletes with Vision Impairment, which are defined in this Appendix Two.

1.2 World Para Athletics is currently reviewing the Sport Classes for Athletes with Vision Impairment. The objective is to create new Sport Classes for Athletes with Vision Impairment based on activity limitations that result from Impairments (i.e. a sport-specific Classification system). Until such a system is finalised, the processes detailed in this Appendix apply to Athlete Evaluation in respect of Sport Classes for Athletes with Vision Impairment.

1.3 The Sport Class allocated to Athletes with Vision Impairment applies to all Events offered by World Para Athletics.

1.4 All provisions of the World Para Athletics Classification Rules apply to the assessment of Athletes with Vision Impairment, unless otherwise specified in these Classification Rules.

## 2 Eligible Impairment Types

| Eligible Impairment | Examples of Heath Conditions |
|---|---|
| **Vision Impairment**<br><br>Athletes with Vision Impairment have reduced or no vision caused by damage to the eye structure, optical nerves or optical pathways, or visual cortex of the brain. | Examples of an Underlying Health Condition that can lead to Vision Impairment include retinitis pigmentosa and diabetic retinopathy. |

## 3 Minimum Impairment Criteria

3.1 Minimum Impairment Criteria for Athletes with a Vision Impairment have been set based on the Athlete's corrected vision. The difference in approach for Athletes with



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Vision Impairment must be seen within the historical context of Classification for these Athletes, which is an assessment with 'best correction' as used in the context of medical diagnostics for visual acuity.

3.2 To be eligible to compete in World Para Athletics, the Athlete must meet both of the criteria below:

The Athlete must have at least one of the following Impairments:

- Impairment of the eye structure;
- Impairment of the optical nerve/optic pathways; or
- Impairment of the visual cortex.

The Athlete's Vision Impairment must result in a visual acuity of less than or equal to LogMAR 1.0 or a visual field restricted to less than 40 degrees in diameter.

3.3 It is the responsibility of the Athlete and his National Body or National Paralympic Committee to provide sufficient evidence of the Athlete's Vision Impairment. This must be done by way of submitting medical Diagnostic Information completed by an ophthalmologist as described in the Article 7.6 of these Rules.

3.4 The medical Diagnostic Information must comprise the completed Medical Diagnostics Form (available on the World Para Athletics website) and additional medical documentation as indicated on the Medical Diagnostics Form. Failure to present with complete medical Diagnostic Information may result in Athlete Evaluation being suspended in accordance with Article 9.2 of these Rules.

3.5 Medical Diagnostic Information must be typewritten and submitted in English and must not be older than twelve (12) months prior to the date of Evaluation Session.

# 4 Assessment Methods

4.1 All Athlete Evaluation and Sport Class allocation will be based on the assessment of visual acuity in the eye with better visual acuity or visual field when wearing the best optical correction.

4.2 Depending on an Athlete's visual acuity, visual acuity is tested using the LogMAR chart for distance visual acuity testing with Illiterate "E" and/or the Berkeley Rudimentary Vision Test.

4.3 Visual field must be tested using one of the following: Goldmann Visual Field Perimeter, Humphrey Field Analyser or Octopus Interzeag. The software in automatic perimeters



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must be for full range fields (80º or more), not only for central visual fields. The reference stimulus/isopter must be Goldman III/4 or the equivalent on other equipment.

4.4 Athletes who compete using any corrective devices (e.g. glasses, lenses) must attend the Evaluation Session with these devices and their prescription.

4.5 An Athlete found to be using corrective devices during Competition that were not declared during Evaluation Session may be subject to further investigation of Intentional Misrepresentation (see Article 32).

4.6 Athletes must declare any change in their optical correction to World Para Athletics before any Competition. Upon any such declaration, if the Athlete has a Sport Class Status Review with Fixed Review Date (FRD) or Confirmed (C), the Athlete's Sport Class Status will be changed to Review (R). The Athlete will then undergo the Evaluation Session prior to the next Competition under the provisions of these Rules. Failure to do so may result in an investigation of Intentional Misrepresentation (see Article 32).

4.7 Any Athlete Support Personnel accompanying an Athlete during an Evaluation Session must remain out of sight of the visual acuity charts during the assessment.

4.8 Under the current provisions set out in this Appendix, Observation in Competition Assessment does not apply to Athletes with Vision Impairment.

4.9 World Para Athletics will inform the local organising committee of the Competition of the equipment and room requirements for the assessment of Athletes with Vision Impairment after the Classification Panels have been appointed. It is the local organising committee's responsibility to provide all equipment required by World Para Athletics.

4.10 Failure to provide all equipment required by World Para Athletics may result in the Classification decisions not being accepted by World Para Athletics.

# 5 Sport Classes Profiles for Athletes with Vision Impairment

5.1 Sport Class T/F11

Visual acuity is less than LogMAR 2.60.

5.2 Sport Class T/F12

visual acuity ranges from LogMAR 1.50 to 2.60 (inclusive); and/or
the visual field is constricted to a diameter of less than 10 degrees.



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## 5.3 Sport Class T/F13

visual acuity ranges from LogMAR 1.40 to 1 (inclusive); and/or
the visual field is constricted to a diameter of less than 40 degrees.



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# Appendix Three: Athletes with an Intellectual Impairment

This Appendix details the Sport Classes that are to be allocated to Athletes with Intellectual Impairment who wish to compete in World Para Athletics.

## 1 Introduction

1.1 World Para Athletics has designated a Sport Class – Sport Class T/F20 – for Athletes with activity limitations that result from an Intellectual Impairment. These Athletes are referred to as 'Athletes with Intellectual Impairment'.

1.2 The processes detailed in this Appendix apply to the Athlete Evaluation for Athletes with Intellectual Impairment.

## 2 Eligible Impairment Types

| Eligible Impairment |
| --- |
| **Intellectual Impairment**<br>Athletes with an intellectual Impairment have a restriction in intellectual functioning and adaptive behaviour that affects conceptual, social and practical adaptive skills required for everyday life. This Impairment must be present before the age of 18. |

## 3 Eligibility Criteria

3.1 Prior to Athlete Evaluation, an Athlete must comply with the following Eligibility Criteria set by World Para Athletics:

- the Athlete must have met the INAS eligibility criteria (as outlined on the INAS website) prior to completing the registration process with Worla Para Athletics: and
- the Athlete must have completed the Training History and Sport Limitation Questionnaire (TSAL-Q) provided by World Para Athletics (which must have been completed in the last twelve (12) months).

## 4 Assessment Methods and Minimum Impairment Criteria

4.1 The process of Athlete Evaluation requires an Athlete to undergo the



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- Sport Cognition Test Battery; and
- Technical Assessment for each discipline the Athlete wishes to compete in.

4.2 Athlete Support Personnel are not permitted to provide instructions to an Athlete unless expressly permitted to do so by the Classification Panel in its sole discretion. Unauthorised instructions provided to an Athlete during Athlete Evaluation, may be subject to further investigation of Intentional Misrepresentation (see Article 32).

4.3 **Sport Cognition Test Battery**

4.3.1 The Sport Cognition Test Battery consists of a series of tests on five (5) different components of sport cognition: memory and learning; executive functioning; visual perception and fluid intelligence; and processing speed and attention-concentration skills. Additionally, visual-motor ability is assessed for in a separate test.

4.3.2 The following table outlines each of these five (5) tests.

| Component | Tests | Task | Scoring | Cut–off Score |
|---|---|---|---|---|
| Processing Speed & Attention-Concentration Skills | Flanker Test | To react as fast as possible to four different stimuli, with the corresponding arrow key, while ignoring the distractors | Number of correct responses in 30 seconds, | 41 |
| Memory and Learning | Corsi | To remember a sequence of blocks and to repeat the sequence in the same order | Average length of a sequence | 6.69 |
| Visual-motor skills | Finger Tapping | To tap the spacebar for ten (10) seconds as fast as possible with the dominant and non-dominant hand. | / | / |
| Executive Functioning | Tower of London | To copy the frame structure by moving balls in the least number of moves possible | Number of items solved correctly | 12.43 |
| Visual Perception & | Block | To copy patterns with white/red | Raw total performance | 58.31 |



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| Component | Tests | Task | Scoring | Cut–off Score |
|---|---|---|---|---|
| Fluid Intelligence | Design | cubes | score | |
| | Matrix Reasoning | To indicate out of 5 pictures which one belongs at the place of the question mark in the matrix | Amount of items solved correctly | 28.91 |

## 4.4 Technical Assessment for Shot Put

4.4.1 Shot-put Athletes perform:

4.4.1.1 Two (2) two-handed full-effort backward throws to determine explosive strength of the Athlete. The Athlete is instructed to throw at best performance.

4.4.1.2 Two (2) shot puts with a competition weight shot. Maximum effort is required, using the competition technique.

## 4.5 Technical Assessment for Horizontal Jumps (Long Jump/Triple Jump)

4.5.1 Athletes competing in Long-Jump perform:

4.5.1.1 Two (2) full effort standing broad jumps (the Athlete is required to jump with two (2) feet together, from stand-still, as fast as possible); and

4.5.1.2 Two (2) full effort jumps from the Athlete's regular approach distance.

## 4.6 Technical Assessment for Track and Road Events

4.6.1 The Athlete will be asked to run two (2) 400m runs at a set pace of 80% of the Athlete's personal best performance on the 1500m. For Athletes who do not have a 1500m personal best time, conversion formula is used and calculated by the Classification Panel. Auditory pacing signals will be given at 20m, 40m, 60m, 80m, 120m, 160m, and 200m marks, prompting the Athlete to keep the pace of 80% of his personal best. The Athlete needs to reach the cones at the time of the auditory signal, running at a steady pace, and continue to run the last 200m at that pace without further auditory pacing signal. Athletes will have a 5m run-up to the start line before timing begins.



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### 4.7 Minimum Impairment Criteria

4.7.1 For each test of the Sport Cognition Test Battery, the following scoring mechanism applies:

- A score of 1 is given if the individual score for the Athlete is higher than the cut-off score.
- A score of 0 is given if the individual score for the Athlete is lower or equal to the cut-off score.

4.7.2 An Athlete fails the Sport Cognition Test Battery, if the total score is 2/5 or higher.

4.7.3 Athletes meet the T/F20 Sport Class Profile with a Sport Cognition Test Battery score of 0/5 or 1/5, in combination with Technical Assessment outcomes as follows:

4.7.3.1 **Shot put:** Technical Assessment performance and outcomes must match with the findings of the Sport Cognition Test Battery.

4.7.3.2 **Horizontal Jumps:** Technical Assessment performance and outcomes must match with the findings of the Sport Cognition Test Battery.

4.7.3.3 **Track and Road:** The second 200m section split time must be within a range of ±1sec to ±4sec of the target time for at least one (1) out of two (2) runs. The Technical Assessment criteria is not met, if the results of both runs fall outside the set range (i.e. score 2/2 on the Classification sheet).

4.7.4 Any Athlete who does not meet the criteria of the Sport Cognition Test Battery and/or the Technical Assessment must not be entitled to enter the respective Event.

## 5 Observation in Competition Assessment

5.1 All Athletes undergoing Athlete Evaluation in respect to the Sport Classes T/F20 shall undergo Observation in Competition Assessment.

5.2 Observation in Competition Assessment takes place during First Appearance, and is specific to one Event. An Athlete will undergo Observation in Competition Assessment for every Event he competes in.



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# 6 Sport Class and Sport Class Status Allocation

6.1 The Classification Panel must consider the information from the TSAL-Q, the Sport Cognition Test Battery and Technical Assessment to allocate a Sport Class. It is at the discretion of the Classification Panel to also match the Athlete presentation with the INAS eligibility file or findings from previous Athlete Evaluation.

6.2 If the Athlete meets the criteria of the Sport Cognition Test Battery and the relevant Technical Assessment, the Athlete is allocated the following Sport Class:

- Shot Put: F20
- Horizontal Jumps: T20 (HozJ)
- Track and Road: T20 (TaR)

6.3 Sport Class Status Confirmed (C) for the Sport Classes T/F20 is only allocated if the Athlete has undergone Athlete Evaluation in respect of these Sport Classes at least twice, within a minimum of a six (6) month interval. World Para Athletics, in its sole discretion, may permit exceptions to this six (6) months interval.

6.4 The Sport Classes T/F20 and the Sport Class Status are specific to one Event. It is possible that an Athlete is Eligible for one Event and Not Eligible (NE) for another Event, or that the Sport Class for one Event is designated with a Sport Class Status Confirmed (C) before a Sport Class in another Event.

6.5 The Classification Panel may determine that an Athlete is Not Eligible (NE) to compete in the respective Event, if the Classification Panel finds that:

an Athlete fails to meet the criteria of the Sport Cognition Test Battery and/ or the Technical Assessment; and/ or

there are inconsistencies between the Sport Cognition Test Battery, the Technical Assessment, the TSAL-Q, findings from any previous Athlete Evaluation or the INAS eligibility file.

6.6 If a Classification Panel determines that an Athlete is Not Eligible (NE), the provisions in Article 18 apply.

6.7 For the avoidance of doubt, the Sport Class Not-Eligible (NE) is a decision on the Athlete's Eligibility in respect of one Event in Sport Class T/F20 only.



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# Appendix Four: Non Eligible Impairment Types

## 1 Non-Eligible Impairment Types for all Athletes

Examples of Non-Eligible Impairments include, but are not limited to the following:

- Pain;
- Hearing impairment;
- Low muscle tone;
- Hypermobility of joints;
- Joint instability, such as unstable shoulder joint, recurrent dislocation of a joint;
- Impaired muscle endurance;
- Impaired motor reflex functions;
- Impaired cardiovascular functions;
- Impaired respiratory functions;
- Impairment metabolic functions; and
- Tics and mannerisms, stereotypes and motor perseveration.

## 2 Health Conditions that are not Underlying Health Conditions for all Athletes

A number of Health Conditions do not lead to an Eligible Impairment and are not Underlying Health Conditions. An Athlete who has an Underlying Health Condition (including, but not limited to, one of the Underlying Health Conditions listed in the above Appendices :

Appendix One , Appendix Two and/or Appendix Three) but who does not have an Underlying Health Condition will not be eligible to compete in Para sport.

Health Conditions that primarily cause pain; primarily cause fatigue; primarily cause joint hypermobility or hypotonia; or are primarily psychological or psychosomatic in nature do *not* lead to an Eligible Impairment.

Examples of Health Conditions that primarily cause pain include myofascial *pain*-dysfunction syndrome, fibromyalgia or complex regional pain syndrome.
An example of a Health Condition that primarily causes fatigue is chronic fatigue syndrome.
An example of a Health Condition that primarily causes hypermobility or hypotonia is Ehlers-Danlos syndrome.
Examples of Health Conditions that are primarily psychological or psychosomatic in nature include conversion disorders or post-traumatic stress disorder.



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# Appendix 5: Maximum Allowable Standing Height formulas for Athletes with Multiple Dysmelia

## Male



**Table 4** Regression equations on male sample

| Code | $R^2$ | RMSE | PE | Stature (cm)= |
|---|---|---|---|---|
| M $1_m$ | 0.978 | 1.41 | 1.54 | 1.346+1.023 * lower leg+0.957 * sitting height+0.530 * thigh+0.493 * upper arm+0.228 * forearm |
| M $2_m$ | 0.978 | 1.43 | 1.54 | 1.575+1.087 * lower leg+0.969 * sitting height+0.532 * thigh+0.551 * upper arm |
| M $3_m$ | 0.978 | 1.44 | 1.47 | 0.947+0.135 * arm span+0.914 * sitting height+0.545 * thigh+1.067 * lower leg |
| M $4_m$ | 0.975 | 1.53 | 1.50 | 2.630+0.992 * sitting height+1.245 * lower leg+0.609 * thigh+0.216 * foot |
| M $5_m$ | 0.974 | 1.54 | 1.49 | 2.590+1.027 * sitting height+1.302 * lower leg+0.613 * thigh |
| M $6_m$ | 0.969 | 1.69 | 1.77 | 2.354+0.179 * arm span+0.948 * sitting height+1.376 * lower leg |
| M $7_m$ | 0.963 | 1.84 | 1.85 | 4.866+1.753 * lower leg+1.109 * sitting height |
| M $8_m$ | 0.961 | 1.89 | 1.91 | −5.272+0.998 * sitting height+0.855 * thigh+0.882 * upper arm+0.820 * forearm |
| M $9_m$ | 0.955 | 2.03 | 2.03 | −6.059+1.059 * sitting height+0.953 * thigh+1.233 * upper arm |
| M $10_m$ | 0.936 | 2.43 | 2.62 | −5.857+1.116 * sitting height+1.435 * upper arm+1.189 * forearm |
| M $11_m$ | 0.931 | 2.52 | 2 | −7.517+1.283 * sitting height+1.439* thigh |
| M $12_m$ | 0.928 | 2.57 | 2.82 | 29.795+0.333 * arm span+0.935 * lower leg+0.673 * thigh+0.771 * foot |
| M $13_m$ | 0.927 | 2.60 | 2.49 | −9,049+ 0.527* arm span+0.973 * sitting height |
| M $14_m$ | 0.923 | 2.65 | 2.88 | 31.768+0.411 * arm span+1.043 * lower leg+0.673 * thigh |
| M $15_m$ | 0.922 | 2.67 | 2.97 | −7.217+1.231 * sitting height+2.075 * upper arm |
| M $16_m$ | 0.920 | 2.72 | 2.91 | 36.224+0.979 * lower leg+0.856 * upper arm+1.183 * foot+0.723 * thigh+0.402 * forearm |
| M $17_m$ | 0.918 | 2.73 | 2.85 | 37.010+1.075 * lower leg+0.954 * upper arm+1.270 * foot+0.729 * thigh |
| M $18_m$ | 0.910 | 2.87 | 2.97 | 34.937+0.479 * arm span+1.426* lower leg |
| M $19_m$ | 0.908 | 2.91 | 2.98 | 41.771+1.421 * lower leg+1.518 * foot+0.887 * thigh |
| M $20_m$ | 0.903 | 2.98 | 2.98 | 41.642+1.493 * lower leg+1.238 * upper arm+1.360 * foot |
| M $21_m$ | 0.890 | 3.19 | 3.38 | 31.176+1.382 * upper arm+1.123 * thigh+1.068 * forearm+1.123 * hand |
| M $22_m$ | 0.884 | 3.25 | 3.18 | 50.870+1.899 * lower leg+1.559 * upper arm |
| M $23_m$ | 0.883 | 3.23 | 3.61 | 37.026+1.507 * upper arm+1.164 * thigh+1.451 * forearm |
| M $24_m$ | 0.883 | 3.27 | 3.16 | 49.629+2.099 * lower leg+1.732 * foot |
| M $25_m$ | 0.862 | 3.55 | 3.66 | 40.422+ 2.232 * upper arm+1.382 * thigh |
| M $26_m$ | 0.844 | 3.79 | 3.88 | 35.854+2.203 * upper arm+1.577 * forearm+1.400 * hand |
| M $27_m$ | 0.834 | 3.91 | 4.15 | 43.424+ 2.398 * upper arm+2.083 * forearm |

Code M $n°_m$: M, multiple regression equation; n°, serial number; m: male. RMSE: root mean square error. PE: pure error

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## Female

**Table 5** Regression equations on female sample

| Code | $R^2$ | RMSE | PE | Stature (cm)= |
|---|---|---|---|---|
| M $1_f$ | 0.959 | 1.57 | 1.25 | 1.772+0.159 * arm span+0.957 * sitting height+0.424 * thigh+0.966 * lower leg |
| M $2_f$ | 0.959 | 1.57 | 1.34 | 2.305+1.013 * lower leg+0.970 * sitting height+0.451 * thigh+0.513 * upper arm +0.253 * foot |
| M $3_f$ | 0.958 | 1.59 | 1.34 | 2.907+1.062 * lower leg+1.005 * sitting height+0.453 * thigh+0.529 * upper arm |
| M $4_f$ | 0.955 | 1.65 | 1.33 | 3.326+1.007 * sitting height+1.219 * lower leg+0.523 * thigh+0.299 * foot |
| M $5_f$ | 0.954 | 1.67 | 1.31 | 4.082+1.285 * lower leg+1.049 * sitting height+0.528 * thigh |
| M $6_f$ | 0.951 | 1.71 | 1.45 | 1.815+0.212 * arm span+0.975 * sitting height+1.173 * lower leg |
| M $7_f$ | 0.940 | 1.89 | 1.55 | 5.192+1.711 * lower leg+1.116 * sitting height |
| M $8_f$ | 0.936 | 1.96 | 1.73 | −0.126 +1.022 * sitting height+0.698 * thigh+0.899 * upper arm+0.779 * forearm |
| M $9_f$ | 0.929 | 2.06 | 1.92 | −0.686+1.061 * sitting height+0.814 * thigh+1.237 * upper arm |
| M $10_f$ | 0.918 | 2.22 | 2.14 | −4.102+0.509 * arm span+0.966 * Sitting height |
| M $11_f$ | 0.911 | 2.3 | 2.04 | −0.559+1.094 * sitting height+1.325 * upper arm+1.229 * forearm |
| M $12_f$ | 0.892 | 2.54 | 2.34 | −1.663+1.184 * sitting height+2.039 * upper arm |
| M $13_f$ | 0.894 | 2.51 | 2.23 | 0.685+1.246 * sitting height+1.306 * thigh |
| M $14_f$ | 0.875 | 2.74 | 2.68 | 35.709+0.328 * arm span+0.803 * lower leg+0.535 * thigh+0.973 * foot |
| M $15_f$ | 0.866 | 2.84 | 2.96 | 40.436+1.009 * lower leg+1.359 * foot+0.627 * thigh+0.939 * upper arm |
| M $16_f$ | 0.864 | 2.86 | 2.66 | 41.582+0.417* arm span+0.888 * lower leg+0.522 * thigh |
| M $17_f$ | 0.852 | 2.98 | 2.77 | 42.556+0.489 * arm span+1.142 * lower leg |
| M $18_f$ | 0.851 | 2.99 | 3.13 | 45.104+1.399 * lower leg+1.526 * foot+0.776 * thigh |
| M $19_f$ | 0.825 | 3.24 | 3.10 | 42.361+1.240 * upper arm+0.934 * thigh+1.239 * hand+0.973 * forearm |
| M $20_f$ | 0.822 | 3.26 | 3.36 | 50.489+2.047 * lower leg+1.693 * foot |
| M $21_f$ | 0.815 | 3.33 | 3.20 | 41.502+1.578 * upper arm+1.075 * thigh+1.645 * hand. |
| M $22_f$ | 0.795 | 3.50 | 3.49 | 52.044+2.077 * upper arm+1.154 * thigh |
| M $23_f$ | 0.780 | 3.63 | 3.36 | 46.344+1.870 * upper arm+1.630 * forearm+1.278 * hand |
| M $24_f$ | 0.769 | 3.71 | 3.57 | 53.970+2.105 * upper arm+1.966 * forearm |

Code M $n°_m$: M, multiple regression equation; n°, serial number; f, female. RMSE: root mean square error. PE: pure error

(Canda, A. (2009). Stature estimation from body segment lengths in young adults: Application to people with physical disabilities. Journal of Anthropology, 28(2):71-82)



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**World Para Athletics**

Adenauerallee 212-214
53113 Bonn, Germany

Tel. +49 228 2097-200
Fax +49 228 2097-209

**info@worldparaathletics.org**
**www.worldparaathletics.org**

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