

Reviewing the Paralympic Swimming Classification system & incorporating evidence base and validity.

Background

The Paralympic Games is one of the largest sporting events in the world. More than 1.6 million people went to see the Beijing games and many millions more watched television coverage. Competition in Paralympic sport is based on systems of classification. The purpose of classification is to minimise the impact that impairment has on the outcome of competition, so that the athletes who win are those who have the best combination of anthropometry, physiology, psychology and who have enhanced them to best effect through training and legal technical aids. To achieve this purpose requires a method for measuring and classifying impairments according to how much activity limitation they will cause in athletics.

Summit question/issue

Currently there is very little scientific literature that is useful for the purposes of classification, and classification methods are based exclusively on expert opinion. In the absence of research, reliance on expert opinion is absolutely necessary, however given the size and importance of the Paralympic games, the International Paralympic Committee would like to improve this situation. They have therefore recently endorsed a research plan which aims to develop a new method classifying athletes in the sport of athletics, that is based upon empirical scientific evidence. It is proposed a similar process be adopted for the sport of swimming.

One of the requirements for an evidence-based system of classification requires a battery of activity limitation tests. Activity limitation tests are tests that can be used in the classification process to provide an indication of how well trained an athlete is. An indication of training level is needed because the basis for assigning classes will be impairment severity, and although impairment assessments are largely training resistant, they are not entirely. For example, people with incomplete spinal cord injury and spastic

hypertonia can induce changes in strength measures through either chronic disuse or training over a period of time. Tests of activity limitation will facilitate differentiation between those athletes who are trained and those who are not, because for a given impairment score, an athlete who is well trained will perform commensurately better on tests of activity limitation than one who is untrained. Classifiers can use this information to ensure that athletes who have positively influenced their impairment scores through hard training will not be competitively disadvantaged by being placed into a more functional class. To commence this research the following principles will be required:

- which tests are reliable
- what are the performance norms on these tests;
- which ones are most highly correlated with swimming strokes (freestyle, backstroke, breaststroke and butterfly)
- which ones are likely to be of most use in classification

The tests that are the best predictors of performance are the ones that will subsequently be used in classification.