GB Paralympic swimming squad: physiological preparations for 2012

The GB Paralympic swimming squad captured the hearts of Britain’s public with their record breaking performances at the Beijing Olympics in 2008. As one of the country’s largest and most competitive paralympic sports prepare for the 2012 Games, Claire-Marie Roberts catches up with Catherine Gilby, English Institute of Sport Physiologist, to find out more about their preparations.

After achieving the 2008 medal target in Beijing, the expectations of the squad will be inevitably higher for London 2012. What lessons did we learn from the squad’s performance in the Beijing Olympics?

Beijing was a successful Paralympics for the swimming team and the biggest lesson from the experience is not to be complacent. The team’s year: the coaching team, the squad, and the base camp were all incredibly useful in terms of performance in the pool as well as the support team that have in place. As a team, there were a number of lessons learned from the Beijing experience that have been converted into key action points for the squad moving forward to London 2012. Getting the basics right, e.g., achieving trainability and leading an athlete’s lifestyle; maximising performance opportunities (e.g., achieving trainability and leading an athlete’s lifestyle); maximising performance opportunities (e.g., setting athletes the task of using every training session and identified competition to enhance performance.

What does this mean in terms of your involvement in 2012?

In terms of my involvement, it necessitates multidisciplinary team work in order to support athletes effectively especially given some of the key physiological challenges that a number of our athletes face. However, it’s not just about setting up the squad and the focus is always on the ability of the individual I am working with. Of course it is crucial to be aware of the physiological challenges that a number of our athletes face, however, this forms part of the initial needs analysis of any athlete on the programme. It has challenged some of the more traditional training and physiology concepts that were taught during my University years but it continues to keep the support work stimulating, with the need to look for creative and innovative solutions to problems.

For example, my learning at University covered a large amount of practical laboratory testing with athletes. It covered key concepts such as the rationale behind including work/rest intervals of a specific duration and the key physiological measures that should be taken during an incremental test in order to assess and then manipulate the work and rest intervals to ensure that they are completing sufficient work at this intensity. This also ensures that appropriate modifications are made to each training set or monitoring a training set to evaluate its efficacy.

How do you ensure as a member of the support team that all of your involvement has a positive impact on the athlete?

One of the key constructs of our team is that the support is coached. Everything that we do is done in conjunction with the coach as we are critical in adopting a positive impact on performance. I am part of an excellent sport science support that are value more valuable to the athlete group I was working with.

What do you think are the key physiological support and performance benefits that are unique to Paralympic athletes?

For example, certain medications can significantly affect their performance. These considerations extend to other sport scientists working with disabled athletes. This somehow makes our support role to their own taper. Due to the key differences between athletes regardless of their being a Paralympian or not, to run a team taper would be inherently flawed. Achieving success with some athletes and not with others was work on an individual basis with the athlete-coach units on the programme to emphasise the importance of research based on the information we have on each athlete. Some proposed changes to a taper would be trialled at a smaller competition or other sport scientists working with disabled athletes. Individuals may rely on different support disciplines to different degrees, but that is the nature of being an individual.

Finally, what advice would you give to physiologists or other sport scientists working with disabled athletes?

Focus on the athlete’s ability! It is also crucial that we work in a collaborative relationship with coaches and other sport scientists who work with disabled athletes. This somehow makes our support role to their own taper. There is a lot to be learnt from the creative and innovative work that has been conducted in Paralympic sport as well as learning from those individuals working in Olympic sports. It can help us understand the importance of research based on different disabilities, and the effects this has on their physiological performance. As well as the normal channels of reviewing work, understanding how their disability affects them will always be the best place to start.

Box 1. Disability classifications

Classification is the process of grouping disabled athletes into specific categories for the purposes of competition. The purpose of classification is to ensure that disabled athletes compete on a ‘level playing field’.

(a) SN1 classification relates to swimmers with a physical impairment, specifically a high dependency in the hip joint, minor limb loss, or part of a limb.

(b) SN10 classification relates to swimmers with a physical impairment, specifically a minimal weakness in legs, restriction of movement in the hip joint, minor limb loss, or part of a limb.

Claire-Marie Roberts

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Rebecca Roberts, PA to Communication Manager at the English Institute of Sport and Nicholas Diaper, Head of Sport Science & Sports Medicine for British Disability Swimming for assisting with setting up the interview.

Catherine Gilby has been a BASES accredited sport and exercise scientist working with the GB Paralympic Swimming Team and a current working toward BASES High Performance Accreditation for submission in July.

The bigger picture element relies heavily on physiological input to ensure that the training cycle/year is structured well and an optimal taper is in place to peak at the identified competition for that year. With regard to any competition on our annual plan, athletes and coaches work to their own taper. Due to the key differences between athletes regardless of their being a Paralympian or not, to run a team taper would be inherently flawed. Achieving success with some athletes and not with others was work on an individual basis with the athlete-coach units on the programme to emphasise the importance of research based on the information we have on each athlete. Some proposed changes to a taper would be trialled at a smaller competition or other sport scientists working with disabled athletes. Individuals may rely on different support disciplines to different degrees, but that is the nature of being an individual.

In your opinion, are there any aspects of sport science support that are value more valuable to Paralympic athletes than others?

I don’t believe that there is one particular area of sport science support that is more valuable to Paralympic athletes. What is important is that the support team around each athlete works in an integrated manner to ensure that solutions to performance-related problems consider all areas relating to that individual, including their disabilities. I have always taken the view that individuals may rely on different support disciplines to different degrees, but that is the nature of being an individual.

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