

The European Sprints and Hurdles Conference

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The Radisson Edwardian Hotel at London Heathrow, England, played host to the 2010 European Sprints and Hurdles Conference in conjunction with UK Athletics, England Athletics and the Ron Pickering Memorial Fund. The conference, which was a part of the 2010 European Athletics Coaching Summit Series, brought together a host of top-class speakers from around the world for a discussion on the interplay between mechanics and injury prevention.

The headline speaker was Dr Ralph Mann, sports biomechanist for USA Track and Field who got the conference out of the blocks with a detailed presentation on the biomechanics of sprinting. Mann began by highlighting the importance of vertical force production during both the start and maximal-velocity running. He then went on to present data that shows top sprinters improve primarily through an increase in stride rate rather than stride length. This is achieved through an emphasis on 'front side mechanics', i.e. the mechanical emphasis is shifted towards what is happening during the forward elements of the stride. This includes ending hip extension early, which permits a decrease in ground contact time, as well as a delaying flexion off the ground so maximum hip flexion is achieved later in the recovery cycle.

Mann was followed by UKA Lee Valley Training Centre Director Dan Pfaff who detailed the training of Donovan Bailey in the three months leading up to his Gold and World Record setting performance at the 1996 Olympic Games in Atlanta.

The presentation highlighted Bailey's extensive therapy regiment, which included soft tissue and joint manipulation as well as acupuncture and hydrotherapy. Pfaff also provided examples of weekly training schedules both during preparation and competition and discussed the content of every workout.

In a separate breakout session, Malcolm Arnold, UKA National Event Coach for Sprints and Hurdles, talked about planning for the 400m Hurdles using examples from David Greene's 2010 preparation, which culminated in gold medals at both the 2010 European Championships and Commonwealth Games. During his presentation Arnold emphasised the importance of hurdling all year around and provided video footage and biomechanical data from Greene's key races during the season.

After lunch, in his second talk of the day, Arnold went back in time to discuss what he learned as a young coach working in Uganda during the 60s and 70s. His take home message was to keep training simple and positive at all times. He also emphasised the importance of making athletes responsible for their own training, while pointing out the advantages of coaches simultaneously learning from their athletes.

Next up was an enlightening presentation by Dutch coaching guru Henk Kraaijenhof, who looked at the individual training differences between two of his most famous athletes, former 60m WR holder Nelli Cooman and multiple international medallist Merlene Ottey. Kraaijenhof started out by profiling the individual charac-

teristics of these top athletes using everything from data on muscle fibre composition to brainwave activity to paint a picture of the individual differences between the two. He then went on to emphasise the importance of tailoring training to the individual athletes rather than following a rigid system. Without individualised training, he explained, an athlete may never reach his or her true potential.

On the hurdles side of the conference Swedish coach Benke Blomkvist talked about the key features of developing young hurdlers, using examples of his experience with the Kallur twins. Together with a comprehensive analysis of hurdling technique he also discussed the importance of getting female athletes to engage in regular strength and power training from a young age in order to develop the capacities they will need as senior athletes.

Day one was rounded off by a live rendition of Dan Pfaff's now famous 'Classroom to track' video series from the Canadian Athletics Coaching Centre. During this presentation Dan went frame by frame through vintage training footage of Carl Lewis practicing sprint starts and pointed out key biomechanical concepts along the way. The session was well received and the discussion continued late into the evening at the conference Gala Dinner hosted by the Ron Pickering Memorial fund, which saw British Coaching Legend Tom McNab provide a fascinating insight into the history of coaching in athletics.

Day two began with a second keynote presentation from Mann, this time on the biomechanics of hurdling. His presentation included a detailed breakdown of David Oliver's 12.93 sec performance at the 2010 USA National Trials. From this video footage Mann highlighted several key areas in which Oliver could improve including decreasing the lead leg knee flexion angle at take off to allow him to maintain a bent lead leg and faster barrier clearance.

During the breakout sessions UKA Therapist Dr Gerry Ramogida discussed some common mechanical faults seen in sprinters and

hurdlers and how they eventually lead to injury. He emphasised that good mechanics reduce the chance of injury by safely disseminating forces through appropriate tissue as well as improving performance by maximising force production and minimising energy expenditure. He also said that to ensure optimal performance we cannot wait for pain before taking action and that in this respect coaches' are the front line to injury prevention. Their coaching eye can be used to spot and correct bad mechanics during both technical and physical preparation and as such coaches play a major role in preventing injury and preserving the health and longevity of an athlete.

Blomkvist continued the hurdles stream with presentations on the women's and men's short hurdles. This included a discussion of the key challenges posed by each event after which he provided practical examples of exercises and drills to help overcome the major issues. Some of the more novel factors discussed in his talk included the importance of muscle stiffness in hurdling and the use of a constraints based approach to teaching technical skills.

One of the highlights of the afternoon was a question and answer session with Tony Lester (Nicola Sanders), Lloyd Cowan (Christine Ohuruogu) and Kevin Tyler (Tyler Christopher) on championship preparation for the 400m, hosted by England Athletics National Coach Mentor Tony Hadley. The fast paced session underscored both the similarities and differences in coaching philosophy between the three successful coaches and ended with highlight reel footage of the respective athletes in action.

The conference was drawn to a close by Kraaijenhof who recounted his research and experience training Dutch sprinter Troy Douglas who continued to improve late into his career, setting personal bests in his last two years of training before he retired at 39 years of age. This included data on the importance of strength training for older athletes and the use of vibration training to improve explosive

strength without subjecting the joints to high forces normally encountered when athletes perform plyometrics. Kraaijenhof's insights into training the older athlete were backed up by data illustrating how as Douglas got older his rest requirements increased. This realisation lead to extensive efforts to find the ideal training to rest ratio that culminated in a personal best of 20.14 sec in the 200m at 38 years old.

Overall the conference was well accepted by all the coaches in attendance. Its success will be followed by the upcoming European

Endurance Conference scheduled for the 8-9 October 2011 in London. Visit 'conferences.uka.org.uk' or contact zweeks@englandathletics.org for further details.

Reported by Tom Crick

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London, 13.11.10. RALPH MANN (USA) speaking at the European Sprints and Hurdles Conference. photograph by Mark Shearman