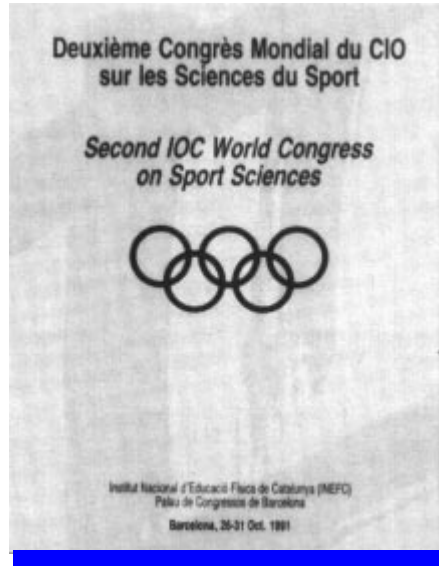


SCIENTISTS IN CONGRESS



The Second World Sports Science Congress was organized by the IOC Medical Commission, under the chairmanship of Prince Alexandre de Merode, and by COOB'92 in Barcelona from 26th to 31st October. Opened by H.R.H. Prince Felipe de Borbon, honorary president of the congress, in the presence of the IOC President, H.E. Juan Antonio Samaranch, and Prince Alexandre de Merode, this gathering of over 1,200 experts from round the world, sponsored by Mars, had a resolutely multi-disciplinary approach, covering recent research in biology, physics, psychology and social sciences, philosophy and medicine. An ideal forum for the interchange of information.

The conferences can be divided into three main groups, biological and biochemical sciences, physics and biomechanics and psychology and sociology, with the accent more on the first two. Strength, resistance, co-ordination and fatigue in the top athlete were the linking themes. The question of nutrition, for instance, which for the top athlete means above all water, iron and a high carbohydrate intake. This was the subject of Prof. Carol Meredith (USA), and of Prof. C. Williams, (GBR), who also dealt with the important role of nutrition in recovery. Prof. Newsholme (GBR) explained "The role of key amino acids in fatigue and immunosuppression in athletes and patients".

If Dr Andrew Pipe (CAN) was keen to stress that athletes are patients first and foremost, he nonetheless focused on their special medical requirements. Dr Antonio Pelliccia, from the Italian Olympic Committee and Dr Serra Grima (GBR) were concerned with the special cardiovascular care needed by athletes. In "Muscle Conditioning and Muscle Damage in Strength Training", Prof. Harm Kuipers (NED) showed that training benefits muscle flexibility but only up to a certain limit. Vladimir Zatsiorsky (Moscow) concluded that there is no optimum level of intensity in training to increase strength but that muscular potential and co-ordination are the vital factors.

How can biological principles be used to assess the force needed for a given exercise? A vast subject undertaken by Prof. Paaavo V. Komi (SWE) in "Strength and Power Training", which received a lot of attention. Professors Burggemann (GER) and Jesus Dapena presented biomechanics applications to training programmes and to high jump techniques. The risk of back injury was examined by Prof. R.W. Norman (CAN), and the acutely injured knee by Prof. W. Müller (SUI), who stressed the importance of on-the-spot accurate diagnosis.

In a completely different field, "Genetics and the Champion Athlete", presented by Prof. Claude Bouchard (CAN), showed that a favourable genetic profile, in terms of

morphology, biomechanics and psychology, is one of the factors, along with training, that create the top athlete. Identifying the genes will be the subject of future research.

Turning to psychology, it was shown that the more well-matched athletes are to their rivals, the more important psychological factors become. According to Dr Nideffer, having a close rival also adds to mental pressure, which he convincingly explained in his address on "Preparing for Olympic Competition". The major difference between a winner and a loser is the ability to recover from defeat. Another study, by Prof. William P. Morgan of Wisconsin on "Monitoring and Prevention of the Staleness Syndrome", established that about 60% of both men and women suffer from overtraining and its consequent disappointing results. The treatment is rest although the cure is prevention.

In "Young Athletes: The Passion for Sport", Dr Nuria Puig (ESP) spoke of sport as a controlled and socially acceptable way of releasing emotional energy. As for motivation, Dr Paddick (AUS) pronounced that the intrinsic value of the sporting effort was more important than the lure of benefits in sporting excellence. Prof. Anita White (GBR) pointed out that women are compared with men, that the male model prevails over the female, and that women's performances are often judged not on their own merits but in relation to those of the other sex. "Science, Sport and 21 st Century Relations" were the themes of Prof. John



Macaloon (USA) for whom the Olympic Movement has to become increasingly internationalist whilst continuing to celebrate cultural diversity. The President of the Association of Ibero-American Olympic Academies, Dr Conrado Durantez, also concentrated on cultural and humanistic aspects to sport.

The Congress was held in the brand new Institute of Higher Physical Education in Barcelona.

SECOND IOC WORLD SPORTS SCIENCE CONGRESS