

Equine Exercise Physiology

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Foreword

Research into exercise physiology has been largely responsible for the dramatic improvements in human athletic performance over the last 25 years. In contrast, equine exercise physiology is still in its infancy. Although some excellent studies were carried out by the English and German groups at the end of the last century, there was then a large interval before studies were recommenced in Sweden in the mid-nineteen sixties. The development of specialized high speed treadmills has enabled Swedish workers to perform a variety of sophisticated techniques to assess physiological responses to exercise and training in Standardbred horses.

More recently, there has been an upsurge in research throughout the world into all aspects of equine exercise physiology and biochemistry. Horses are required to compete in a variety of events ranging from short sprinting type exercise to long distance endurance competitions.

It has been recognized by veterinarians and horse trainers that basic understanding of the physiological processes associated with differing forms of exercise and scientific evaluation of traditional training programmes are necessary if improvement in performance and minimization of injuries are to be achieved.

With this background, the First International Conference on Equine Exercise Physiology was conceived and brought to fruition in Oxford in September 1982. The response to a call for papers was overwhelming — so much so that extensive poster sessions were included to permit all the material to be presented over a three day period. In addition to the scientific papers, review papers on the important aspects within the area of exercise physiology were presented. This enabled experts in various fields to present an overview and provide ideas for future direction. The meeting was opened by Sir William Henderson, Chairman of the Veterinary Advisory Committee of the Horserace Betting Levy Board, who informed participants on the financing of equine research in the United Kingdom. An introductory paper was presented by Professor Bengt Saltin, of the August Krogh Institute, University of Copenhagen.

The large attendance of 150 delegates from 21 countries confirmed the widespread interest in equine exercise physiology and enabled research workers and practising veterinarians to exchange views. We hope that this conference will stimulate further research work, so that at the next meeting in California, scheduled for August 1986, further mysteries of the equine athlete may be revealed.

These Proceedings contain most of the papers presented at the conference, although unfortunately some could not be included as the authors were unable to meet the deadlines set for publication, and others had to be excluded because they did not meet the scientific criteria of the referees.

The preparation of these Proceedings would not have been possible without the secretarial assistance of W. Boyle and P. Diver.

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