

# Curriculum Vitae

**Full name** SUSAN MARGARET SHIRREFFS

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**Qualifications** 1989-1993 **University of Aberdeen**  
BSc (Honours) Physiology 2.1

1993-1996 **University of Aberdeen**  
PhD thesis "Post-exercise rehydration in man".

## Employment history

### *Current*

Senior Lecturer. School of School of Sport & Exercise Sciences, Loughborough University, UK

### *Previous employment*

Lecturer. School of School of Sport & Exercise Sciences, Loughborough University, UK

Lecturer. Biomedical Sciences, University of Aberdeen, UK

Research fellow. Biomedical Sciences, University of Aberdeen, UK

Research fellow. Environmental & Occupational Medicine, University of Aberdeen, UK

## Teaching experience and student supervision

Contributions to undergraduate and postgraduate teaching across a number of degree programmes including:

- BSc Biomedical Sciences
- BSc Physiology
- BSc Sports and Exercise Science
- BSc Sports Studies
- MSc Sports Nutrition
- MSc Human Nutrition
- MSc Ergonomics
- MSc Occupational Hygiene
- MB ChB Medicine

Also, Distance Learning teaching experience in Saudi Arabia.

## Postgraduate research student supervision

Three PhD students completed and currently supervise 2 full-time PhD students.  
Currently supervise 2 full-time PhD students.

## **Organisation membership**

Member of The Physiological Society  
Member of The American College of Sports Medicine  
Member of The Medical Research Society  
Member of The Nutrition Society

## **Journal Editorial Board Membership**

Asian Journal of Exercise and Sports Science  
International Journal of Sports Nutrition and Exercise Metabolism  
Journal of Sports Sciences  
Medicine and Sciences in Sports and Exercise

## **Guest referee for:**

Acta Physiologica Scandinavica  
Asian Journal of Exercise and Sports Science  
American Journal of Physiology  
British Journal of Sports Medicine  
Canadian Journal of Applied Physiology  
Ergonomics  
European Journal of Applied Physiology  
European Journal of Epidemiology  
Experimental Physiology  
International Journal of Sports Nutrition and Exercise Metabolism  
Journal of the American College of Nutrition  
Journal of Applied Physiology  
Journal of Human Nutrition and Dietetics  
Journal of Sports Sciences  
Journal of Science and Medicine in Sport  
Medicine and Science in Sports and Exercise  
Pflugers Archives. European Journal of Physiology  
Physiology and Behaviour  
Sports Medicine  
Stress  
Trends in Food Science and Technology

## **Research grants awarded:**

In the order of £600,000.00 since 1996.

## **Representative Publications**

### **Papers**

1994

1. Shirreffs SM, Maughan RJ. (1994) The effect of posture change on blood volume, serum potassium and whole body electrical impedance. *European Journal of Applied Physiology* 69: 461-463
2. Maughan RJ, Owen JH, Shirreffs SM, Leiper JB. (1994) Post-exercise rehydration in man: effects of electrolyte addition to ingested fluids. *European Journal of Applied Physiology* 69: 209-215

1995

3. Shirreffs SM, Maughan RJ (1995) Exercise-induced sweat loss and its replacement during and following exercise. *Medicina Sportiva Bohemica & Slovaca* 4: 33-37

4. Maughan RJ, Shirreffs SM, Galloway SDR, Leiper JB. (1995) Dehydration and fluid replacement in sport and exercise. *Sports Exercise and Injury* 1: 148-153

#### 1996

5. Shirreffs SM, Taylor AJ, Leiper JB, Maughan RJ. (1996) Post-exercise rehydration in man: effects of volume consumed and sodium content of ingested fluids. *Medicine and Science in Sports and Exercise* 28: 1260-1271
6. Maughan RJ, McArthur M, Shirreffs SM. (1996) Influence of menstrual status on fluid replacement after exercise-induced dehydration in untrained healthy young women. *British Journal of Sports Medicine* 30: 41-47
7. Maughan RJ, Leiper JB, Shirreffs SM. (1996) Restoration of fluid balance after exercise-induced dehydration: effects of food and fluid intake. *European Journal of Applied Physiology* 73: 317-325
8. Maughan RJ, Leiper JB, Shirreffs SM (1996) Rehydration and recovery after exercise. *Sports Science Exchange* 9 (3): 1-5

#### 1997

9. Shirreffs SM, Maughan RJ. (1997) Whole body sweat collection in man: an improved method with preliminary data on electrolyte content. *Journal of Applied Physiology* 82: 336-341
10. Shirreffs SM, Maughan RJ. (1997) Restoration of fluid balance after exercise-induced dehydration: effects of alcohol consumption. *Journal of Applied Physiology* 83: 1152-1158
11. Galloway SDR, Shirreffs SM, Leiper JB, Maughan RJ. (1997) Exercise in the heat: factors limiting exercise capacity and methods for improving heat tolerance. *Sports Exercise and Injury* 3: 19-24
12. Maughan RJ, Shirreffs SM (1997) Preparing athletes for competition in the heat: developing an effective acclimatization strategy. *Sports Science Exchange* 10 (2): 1-4
13. Maughan RJ, Shirreffs SM. (1997) Recovery from prolonged exercise: restoration of water and electrolyte balance. *Journal of Sports Sciences* 15: 297-303
14. Maughan RJ, Leiper JB, Shirreffs SM. (1997) Factors influencing the restoration of fluid and electrolyte balance after exercise in the heat. *British Journal of Sports Medicine* 31: 175-182
15. Maughan RJ, Shirreffs SM. (1997) The formulation of sports drinks. *Chemistry and Industry* 2: 48-52

#### 1998

16. Shirreffs SM, Maughan RJ. (1998) Volume repletion following exercise-induced volume depletion in man: replacement of water and sodium losses. *American Journal of Physiology*, 274: F868-F875
17. Shirreffs SM, Maughan RJ. (1998) Urine osmolality and conductivity as indices of hydration status in athletes living and training in the heat. *Medicine and Science in Sports and Exercise*, 30: 1598-1602
18. Shirreffs SM. (1998) Effects of ingestion of carbohydrate-electrolyte solutions on exercise performance. *International Journal of Sports Medicine*, 19 (Supplement no 2): S117-S120

#### 1999

19. Shirreffs SM. (1999) Heat stress, thermoregulation and fluid balance in women. *British Journal of Sports Medicine*, 33, 225
20. Maughan RJ, Shirreffs SM. (1999) Rehydration and recovery after exercise. *Acta Kinesiologiae Universitatis Tartuensis* 4, 27-46

## 2000

21. Shirreffs SM. (2000) Markers of hydration status. *Journal of Sports Medicine and Physical Fitness*. 40, 80-84
22. Van Hall G, Shirreffs SM, Calbet JAL. (2000) Muscle glycogen resynthesis during recovery from cycle exercise: no effect of additional protein ingestion. *Journal of Applied Physiology*, 88: 1631-1636
23. Shirreffs SM, Maughan RJ. (2000) Rehydration and recovery of fluid balance after exercise. *Exercise and Sports Science Reviews*, 28: 27-32
24. Maughan RJ, Shirreffs SM, Baxter-Jones ADG. (2000) Nutrition and the young athlete. *Medicina Sportiva Polonica*, 4, 51-58

## 2001

25. Shirreffs SM. (2001) Restoration of fluid and electrolyte balance after exercise. *Canadian Journal of Applied Physiology*, *Canadian Journal of Applied Physiology*. 26 (Supplement), S228-S235

## 2003

26. Shirreffs SM. (2003) The optimal sports drink. *Sportmedizin und Sporttraumatologie*, 51, 25-29
27. Shirreffs SM. (2003) Markers of hydration status. *European Journal of Clinical Nutrition*, 57 (Suppl 2), S6-S9.

## 2004

28. Shirreffs SM, Armstrong LE, Chevront SN. (2004) Fluid and electrolyte needs for preparation and recovery from training and competition. *Journal of Sports Sciences*, 22, 57-63
29. Shirreffs SM, Merson SJ, Fraser SM, Archer DT. (2004) Effect of fluid restriction on hydration status in man. *British Journal of Nutrition*, 91, 951-958
30. Maughan RJ, Merson SJ, Broad NP, Shirreffs SM. (2004) Fluid and electrolyte intake and loss in elite soccer players during training. *International Journal of Sports Nutrition and Exercise Metabolism*, 14, 333-346
31. Watson R, Shirreffs SM, Maughan RJ. (2004) The effect of acute branched-chain amino acid supplementation on prolonged exercise capacity in a warm environment. *European Journal of Applied Physiology*, 93, 306-314
32. Atkinson G, Watson P, Maughan RJ, Shirreffs SM, Nevill AM, Nybo L, Nielsen B, Blomstrand E, Møller K, Secher N. (2004) A spurious correlation. *J Appl Physiol*, 97: 792 - 793.
33. Maughan RJ, Shirreffs SM. Exercise in the heat: Challenges and opportunities. *Journal of Sports Sciences* 22: 917-927

## 2005

34. Maughan RJ, Shirreffs SM, Merson SJ; Horswill CA. (2005) Fluid and electrolyte balance in elite male football (soccer) players training in a cool environment *Journal of Sports Sciences*, 23, 73-79
35. Shirreffs SM, Aragon-Vargas LF, Chamorro M, Maughan RJ, Serratoso L, Zachwieja JJ. (2005) The sweating response of elite professional soccer players to training in the heat. *International Journal of Sports Medicine*, 26, 90-95
36. Shirreffs SM. (2005) The importance of good hydration for work and exercise performance. *Nutrition Reviews*, 63, S14-S21
37. Watson P, Shirreffs SM, Maughan RJ. (2005) Blood-brain barrier integrity may be threatened by exercise in a warm environment. *American Journal of Physiology*, 288: R1689 - R1694

## Books and book chapters

1995

1. Maughan RJ, Vist GE, Shirreffs SM, Leiper JB. (1995) Fluid and electrolyte loss and replacement in exercise. In JJ Strain (editor) Nutrition and Sport. SCI, London, 21-31.

1996

2. Maughan RJ, Galloway SDR, Pitsiladis Y, Shirreffs SM, Leiper JB. (1996) Thermoregulation and fluid balance as possible limiting factors in prolonged exercise in humans. In JM Steinacker, SA Ward (editors). The Physiology and Pathophysiology of Exercise Tolerance. Plenum Press, New York, 102-112
3. Maughan RJ, Shirreffs SM (editors) (1996). Biochemistry of Exercise IX. Human Kinetics, Champaign
4. Maughan RJ, Shirreffs SM. (1996) Nutrition for young athletes. In VA Rogozkin, Maughan RJ (editors). Current research into sports sciences: an international perspective. Plenum Press, New York, 41-46

1998

5. Shirreffs SM, Maughan RJ. (1998) Electrolytes (a) Water-Electrolyte Balance. In M Sadler, B Caballero, S Strain (editors). Encyclopaedia of Human Nutrition. Academic Press, London, 635-641
6. Shirreffs SM, Maughan RJ. (1998) Control of blood volume: long term and short term regulation. In Maurice J Arnaud (editor) Hydration Throughout Life. John Libby Eurotext, France, 31-39
7. Maughan RJ, Shirreffs SM. (1998) Fluid and electrolyte loss and replacement in exercise. In M Harries, C Williams, WD Stanish, LJ Micheli. Oxford Textbook of Sports Medicine (2nd Edition). Oxford University Press, Oxford

2000

8. Maughan RJ, Shirreffs SM, Leiper JB. (2000) Fluids and electrolytes during exercise. In WE Garret (editor). Textbook of Sports Medicine. Williams & Wilkins, Philadelphia.
9. Shirreffs SM. (2000) Rehydration and recovery after exercise. In The Encyclopaedia of Sports Medicine VII Nutrition in Sport. Edited by RJ Maughan, Blackwell Science, Oxford.
10. Shirreffs SM. (2000) Post-exercise rehydration and recovery. In Sports drinks: Basic science and practical aspects. Edited by R Murray and RJ Maughan, CRC Press Limited.
11. Shirreffs SM, Maughan RJ. (2000) Water turnover and regulation of fluid balance. In Sports drinks: Basic science and practical aspects. Edited by R Murray and RJ Maughan, CRC Press Limited.

2001

12. Shirreffs SM. (2001) Heat generation, accumulation and dissipation: effects on core temperature and fatigue. In Marathon Medicine 2000. Edited by D Tunstall Pedoe, The Royal Society of Medicine Press Limited, London.

2002

13. Shirreffs SM. (2002) Expert comment. The composition of sweat In Sports Nutrition. Handbook of sports medicine and science. Edited by RJ Maughan, LM Burke, Blackwell Science, Oxford.

14. Shirreffs SM, Maughan RJ. (2002) Expert comment. Is there a perfect formula for a sports drink? In Sports Nutrition. Handbook of sports medicine and science. Edited by RJ Maughan, LM Burke, Blackwell Science, Oxford.
15. Shirreffs SM. (2002) Expert comment. Postexercise rehydration: is there an ideal rehydration drink? In Sports Nutrition. Handbook of sports medicine and science. Edited by RJ Maughan, LM Burke, Blackwell Science, Oxford.

### 2003

16. Maughan RJ, Shirreffs SM. (2003) Thermoregulation and fluid balance. In Physiological Bases of Sports Performance. Pp59-78. Edited by M Hargreaves and J Hawley, McGraw Hill, Australia. ISBN 0074711016