

# CLINICAL SPORTS NUTRITION

5TH EDITION



LOUISE BURKE • VICKI DEAKIN

FIFTH EDITION

# CLINICAL SPORTS NUTRITION

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## Preface

*Clinical Sports Nutrition*, now in its fifth edition, continues to update the science and practice of sports nutrition. The text has been thoroughly revised by internationally recognised experts, incorporating the latest research and scientific principles relevant to the elite athlete. At the end of each chapter, experienced sports dietitians provide practical strategies for translating this theory into practice.

Topics include the physiology of sports; nutritional assessment of athletes; measuring physique; weight loss and weight making; post-exercise recovery; nutritional strategies before and during competition; iron depletion; micronutrient needs; eating disorders in athletes; gastrointestinal issues; supplements and sports foods; requirements for specific athletic populations (children, vegetarians and masters athletes); and considerations in different environmental conditions (travel, cold, heat and altitude).

New chapters have been added on periodisation of nutrition; gastrointestinal issues; food allergies and intolerances; immunity; infective illness and injury; and a revised approach to the female athlete triad. New commentaries include discussions on the molecular link with exercise; measuring energy availability; the physiological effects of exercise on gut function; antioxidant supplements; and updated fluid requirements.

This book is targeted at students interested in a career in sports nutrition. It is also for sports nutrition professionals who need to translate science into their practice with athletes and coaches. We wish all of you excellence in your endeavours and hope that *Clinical Sports Nutrition* can assist you on this pathway.

Louise Burke  
Vicki Deakin

## Acknowledgments

Thank you to our long-standing sports nutrition experts and to the emerging researchers in sports nutrition who have contributed their knowledge and experience in updating this edition. This edition has been an endurance event for all of us. Once again, we have had to shut ourselves away from the daily needs of our families, friends and workplaces to make this project happen. We thank many people for their understanding—in particular, the men in our lives—Lachlan Deakin, and John and Jack Hawley.

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Thank you also to our work colleagues. The team in the Department of Sports Nutrition at the Australian Institute of Sport undertakes a large variety of inspiring activities each day. To that we have added writing book chapters. All things are possible with the best team in the world.

Finally we thank all the coaches, athletes and other sport service providers with whom we have worked, and who continue to challenge us and keep us pursuing new opportunities to improve the performance, health and well-being of ourselves and our athletes through nutrition intervention.

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Louise has produced a number of education resources for athletes, coaches, students and practitioners, including best selling books. She was appointed Dietitian to the Australian Olympic Team for the 1996–2012 Summer Olympic Games, and is a Fellow of Sports Dietitians Australia, Sports Medicine Australia and the American College of Sports Medicine. In 2009 she received a Citation Award from the American College of Sports Medicine and the Medal of the Order of Australia (OAM) from the Australian Government in recognition of her work in sports nutrition.

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