Title page
To come
Contents

Preface vii
About eBookPLUS viii
Acknowledgements ix

PRELIMINARY CORE 1
BETTER HEALTH FOR INDIVIDUALS 1

1 What does health mean to individuals? 3
Meanings of health 4
Definitions of health 4
Dimensions of health 5
Relative and dynamic nature of health 9
Perceptions of health 12
Perceptions of our health 12
Perceptions of the health of others 13
Implications of different perceptions of health 15
Perceptions of health as social constructs 17
Impact of the media, peers and family 20
Health behaviours of young people 26
The positive health status of young people 26
Protective behaviours and risk behaviours 31

2 Influences on the health of individuals 55
The determinants of health 56
Individual factors 57
Sociocultural factors 61
Socioeconomic factors 69
Environmental factors 75

The degree of control individuals can exert over their health 84
Modifiable and non-modifiable health determinants 85
Changing influence of determinants through different life stages 89
Health as a social construct 93
The interrelationship of determinants 93
Challenging the notion that health is solely an individual's responsibility 94

3 Strategies to promote the health of individuals 99
What is health promotion? 100
Responsibility for health promotion 102
Individuals 103
Community groups and schools 105
Non-government organisations 108
Government 109
International organisations 113
Health promotion approaches and strategies 115
Lifestyle and behavioural approaches 115
Preventative medical approaches 117
Public health approaches 118
The ottawa charter as an effective health promotion framework 123
Developing personal skills 124
Creating supportive environments 125
Strengthening community actions 125
Reorienting health services 126
Building healthy public policy 126
Principles of social justice 129
Equity 129
Diversity 131
Supportive environments 131
### PRELIMINARY CORE 2

#### THE BODY IN MOTION 135

<table>
<thead>
<tr>
<th>4 Body systems and movement</th>
<th>137</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skeletal system</td>
<td>138</td>
</tr>
<tr>
<td>Major bones involved in movement</td>
<td>140</td>
</tr>
<tr>
<td>Structure and function of synovial joints</td>
<td>142</td>
</tr>
<tr>
<td>Joint actions</td>
<td>144</td>
</tr>
<tr>
<td>Muscular system</td>
<td>147</td>
</tr>
<tr>
<td>Major muscles involved in movement</td>
<td>149</td>
</tr>
<tr>
<td>Muscle relationship</td>
<td>152</td>
</tr>
<tr>
<td>Types of muscle contraction</td>
<td>153</td>
</tr>
<tr>
<td>Respiratory system</td>
<td>155</td>
</tr>
<tr>
<td>Structure and function</td>
<td>155</td>
</tr>
<tr>
<td>Lung function</td>
<td>157</td>
</tr>
<tr>
<td>The exchange of gases</td>
<td>158</td>
</tr>
<tr>
<td>Effect of physical activity on respiration</td>
<td>159</td>
</tr>
<tr>
<td>Circulatory system</td>
<td>160</td>
</tr>
<tr>
<td>Components of blood</td>
<td>160</td>
</tr>
<tr>
<td>Structure and function of the heart, arteries, veins and capillaries</td>
<td>162</td>
</tr>
<tr>
<td>Pulmonary and systemic circulation</td>
<td>166</td>
</tr>
<tr>
<td>Blood pressure</td>
<td>167</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6 The biomechanics of human movement</th>
<th>223</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate physiological responses to training</td>
<td>211</td>
</tr>
<tr>
<td>Heart rate</td>
<td>212</td>
</tr>
<tr>
<td>Ventilation rate</td>
<td>213</td>
</tr>
<tr>
<td>Stroke volume</td>
<td>214</td>
</tr>
<tr>
<td>Cardiac output</td>
<td>215</td>
</tr>
<tr>
<td>Lactate levels</td>
<td>217</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5 Physical fitness, training and movement efficiency</th>
<th>175</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health-related components of physical fitness</td>
<td>176</td>
</tr>
<tr>
<td>Cardiorespiratory endurance</td>
<td>177</td>
</tr>
<tr>
<td>Muscular strength</td>
<td>181</td>
</tr>
<tr>
<td>Muscular endurance</td>
<td>183</td>
</tr>
<tr>
<td>Flexibility</td>
<td>185</td>
</tr>
<tr>
<td>Body composition</td>
<td>187</td>
</tr>
<tr>
<td>Skill-related components of physical fitness</td>
<td>190</td>
</tr>
<tr>
<td>Power</td>
<td>190</td>
</tr>
<tr>
<td>Speed</td>
<td>192</td>
</tr>
<tr>
<td>Agility</td>
<td>193</td>
</tr>
<tr>
<td>Coordination</td>
<td>195</td>
</tr>
<tr>
<td>Balance</td>
<td>197</td>
</tr>
<tr>
<td>Reaction time</td>
<td>198</td>
</tr>
<tr>
<td>Aerobic and anaerobic training</td>
<td>204</td>
</tr>
<tr>
<td>Aerobic training</td>
<td>204</td>
</tr>
<tr>
<td>FITT principle</td>
<td>205</td>
</tr>
<tr>
<td>Anaerobic training</td>
<td>208</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPTIONS 259</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>7 First aid</th>
<th>261</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting priorities for managing a first aid situation and assessing the casualty</td>
<td>262</td>
</tr>
<tr>
<td>Situational analysis</td>
<td>262</td>
</tr>
<tr>
<td>Priority assessment procedures</td>
<td>263</td>
</tr>
<tr>
<td>DRSABCD</td>
<td>264</td>
</tr>
<tr>
<td>STOP regime</td>
<td>270</td>
</tr>
<tr>
<td>Crisis management</td>
<td>272</td>
</tr>
<tr>
<td>CPR</td>
<td>272</td>
</tr>
<tr>
<td>Bleeding</td>
<td>272</td>
</tr>
<tr>
<td>Shock</td>
<td>272</td>
</tr>
<tr>
<td>Neck and spinal injury</td>
<td>273</td>
</tr>
<tr>
<td>Moving the casualty</td>
<td>273</td>
</tr>
</tbody>
</table>
Contents

Medical referral 274
Care of the unconscious casualty 274
Management of injuries 275
Applying bandages, slings and splints 277
Management of medical conditions 279
Physical environment 282
Traffic accidents 282
Water environment 283
Electricity 283
Infection control and protection 284
HIV/AIDS 284
Blood-borne viruses (hepatitis B and C) 285
Legal and moral dilemmas 285
Legal implications 285
Moral obligations 287
Commonsense versus heroics 288
Support following first aid situations 288
Debriefing 288
Counselling 289

8 Composition and performance 291
Composition and movement mediums 2
Space 3
Direction 3
Level 4
Dimension 5
Patterns and formations 6
Dynamics 7
Force 8
Flow 9
Time and rhythm 10
Musical applications 10
Duration 12
Momentum 13
Self-paced versus externally paced 14
Timing 15
Relationships 16
Other people 16
Apparatus and equipment 17
Team formations, positional play and partner work 18
The process of creating movement 20
Defining the purpose or motivating factors 20
Generating movement relevant to the purpose 22
Exploring variations 23
Improvisation 25
Combining and arranging movements 26
Rules and conventions of the medium 26
Sequencing 29
Transitions 30
Repetition 30
Variation 30
Appraisal 31
Ways of appraising 31
Aspects of appraisal 34
Establishing and applying criteria 35

9 Fitness choices 291
Meanings of exercise 292
Exercise as a form of physical activity 293
Exercise and its relationship to fitness 296
The value that people place on exercise and fitness 298
Changing attitudes to fitness 298
Fitness as a commodity 300
Individual fitness activities 303
Power walking 304
Running 304
Swimming 305
Cycling 305
Weight training programs 307
Tai chi 308
Pilates 309
Yoga 309
Emerging individual fitness activities 309
Group fitness activities 311
Aerobics 311
Aquarobics 311
Pump classes 312
Step classes 313
Spin classes 313
Circuit training 313
Team games 314
Exercise for specific groups 315
Emerging group fitness activities 318
Settings for exercise 318
Exercise at home 319
Community facilities 319
Fitness centres and personal trainers 319
Exercise clubs 323
Cultural groups 324
Advertising and promotion 324
How do you know who to believe? 325
Promotional techniques 325
Accuracy of information 325
Ethics of advertising 326
Motivators and barriers to participation 327
Access to facilities 327
Convenience of use 327
Cost 328
Feelings about fitness and exercise 328
Exercise as a priority 328
Influence of other responsibilities 328

10 Outdoor recreation 331
Reasons for participation in outdoor recreation 332
Stress management and relaxation 332
Enjoyment, challenge and excitement 333
Social interaction 335
Appreciation of the environment 335
Health and fitness 336
Planning skills 336
Environmental planning 337
Emergency management planning 337
Food and water considerations 341
Resources for safe participation 344
Legal and administrative requirements 344
Camp site selection 349
Geographic, environmental and climatic considerations for establishing a camp site 349
Tree fall evaluation 351
Conservation skills 352
‘Leave no trace’ camping 354
Minimal impact practices 354
Ethical issues 355
Navigational skills 357
Check list for navigation 357
Map reading 357
Grid bearings 360
Magnetic bearing 361
Measuring distance 364
Natural navigation 364
Emergency management skills 365
Wilderness first aid 365
What to do when you are lost 367
Bushfire procedures 367
Lightning 368
Flooded rivers 368
Skills needed for other outdoor activities relevant to the experience 369
Leadership styles 371
Understanding group dynamics 372
Conflict resolution 373
Team building 373
Cooperation 373
Facilitation skills 374
Communication skills 374
Decision making 374
Flexibility 374
Understanding strengths and weaknesses 376
Participant readiness 376
Self-efficacy 376
Balancing challenge and safety 376
Pushing the comfort zone 377

APPENDIX 1 381
Ottawa Charter for Health Promotion 381

APPENDIX 2 385
Syllabus key words 385

Glossary 381
Index 387
Preface

This fourth edition of Outcomes 1: Preliminary Course covers the Preliminary Course as outlined in the 2009 Stage 6 PDHPE Syllabus. In this edition, the content has been revised with a particular focus on updating data and statistics, especially throughout Core 1. Important updates in the First Aid option have also been incorporated. Snapshots and case studies have also been updated and new inquiry questions have been written.

The text continues to focus on the most recent trends and practices in health and physical performance and provides the most relevant information to help you complete the course successfully and enjoy your studies along the way.

Additional online resources accompany this edition to take the Outcomes package to a new level. Online student resources, such as video eLessons, weblinks, chapter quizzes and revision tests, are available in your eBookPLUS (see page viii). For teachers, the eGuidePLUS provides a range of support material.

The structure of the textbook mirrors the structure and content ‘dot points’ of the 2009 Stage 6 PDHPE Syllabus. The first part of this book covers the two Preliminary core strands, which represent 60 per cent of course time, followed by chapters covering the three of the four option topics, of which you will study two for the remaining 40 per cent of the course. The fourth option, Composition and Performance, can be accessed only via the eBook in this edition.

This full-colour text places a strong emphasis on critical inquiry exercises and practical applications as fundamental learning tools to engage you with the content and reinforce understanding. The inquiry exercises challenge your thinking and inspire deeper research, while the applications invite you to put theory into practice with individual and group tasks.

Key terms are defined in context to enhance understanding, as well as in a comprehensive glossary at the end of the book.

New ideas are included for the use of ‘thinking tools’ to assist you in gathering and analysing information, answering questions and solving problems. You will also be prompted to use ICT for presenting your work and sharing your research findings. Weblinks are provided to encourage you to explore contemporary issues in greater depth or to access the latest available data.

Revision and extension questions at the end of each chapter link to the most relevant syllabus outcomes and aim to consolidate your understanding of the topics. Mark allocations indicative of those allocated in HSC examinations have been added as a guide. Appendixes include the Ottawa Charter for Health Promotion and definitions of the syllabus key words.

A range of contemporary snapshots and case studies feature throughout the chapters — a popular feature of the Outcomes series as these enhance the content and help you to appreciate the relevance and importance of health and physical activity issues for Australians in today’s world.
This book features eBookPLUS: an electronic version of the entire textbook and supporting multimedia resources. It is available for you online at the JacarandaPLUS website (www.jacplus.com.au).

Using the JacarandaPLUS website
To access your eBookPLUS resources, simply log on to www.jacplus.com.au using your existing JacarandaPLUS login and enter the registration code. If you are new to JacarandaPLUS, follow the three easy steps below.

Step 1. Create a user account
The first time you use the JacarandaPLUS system, you will need to create a user account. Go to the JacarandaPLUS home page (www.jacplus.com.au), click on the button to create a new account and follow the instructions on screen. You can then use your nominated email address and password to log in to the JacarandaPLUS system.

Step 2. Enter your registration code
Once you have logged in, enter your unique registration code for this book, which is printed on the inside front cover of your textbook. The title of your textbook will appear in your bookshelf. Click on the link to open your eBookPLUS.

Step 3. View or download eBookPLUS resources
Your eBookPLUS and supporting resources are provided in a chapter-by-chapter format. Simply select the desired chapter from the drop-down list. Your eBookPLUS contains the entire textbook's content in easy-to-use HTML. The student resources panel contains supporting multimedia resources for each chapter.

Once you have created your account, you can use the same email address and password in the future to register any JacarandaPLUS titles you own.

Using eBookPLUS references
eBookPLUS logos are used throughout the printed books to inform you that a multimedia resource is available for the content you are studying.

Searchlight IDs (e.g. INT-0001) give you instant access to multimedia resources. Once you are logged in, simply enter the searchlight ID for that resource and it will open immediately.

Minimum requirements
JacarandaPLUS requires you to use a supported internet browser and version, otherwise you will not be able to access your resources or view all features and upgrades. Please view the complete list of JacPLUS minimum system requirements at http://jacplus.desk.com/customer/portal/articles/463717.

Troubleshooting
• Contact John Wiley & Sons Australia, Ltd.
  Email: support@jacplus.com.au
  Phone: 1800 JAC PLUS (1800 522 7587)
Acknowledgements

The authors and publisher would like to thank the following copyright holders, organisations and individuals for their permission to reproduce copyright material in this book.

Images
Australian Bureau of Statistics: 68, 327 © ABS data used with permission from the Australian Bureau of Statistics, Constraints on participants in sport and physical recreation, 2005–06 ‘Participation in Sports and Physical Recreation’, cat. no. 41770, 2005–06, p. 11 • Australian Federation of AIDS: 128 (middle)/Australian Federation of AIDS Organisations (AFDAO), AFAO HIV & STI Prevention and Health Promotion Program © Arone Meeks • Australian Institute of Health and Welfare: 26/ Fig. 2.29 from Young Australians: their health and wellbeing 2007, p. 64 • Australian National Preventive Health Agency: 86 (top) • BoysTown: 82/ Reproduced with permission Kids Helpline • Carol Graham: 342 (top left), 342 (top right) • Corbis Australia: 335/Robert Garvey • Creative Commons: 29 (figs 1.16 and 1.17), 39/41/Australian secondary school students use of tobacco, alcohol, over-the-counter and illicit substances in 2011 report, December 2012 © Australian Government • 94/ Department of Health and Ageing: 116/ Health warning image © Professor Laurence J Welsh, The University of Queensland • Digital Stock: 199 • Digital Vision: 6 (top centre) • Getty Images: 73/© CSA Plastock; 90/Digital Vision; 189 (bottom)/SPL/Jay Conley; 224/ AFP/Olivier Morin; 228/Stuart Hannagan; 249/Ian Hitchcock; 297 (bottom)/Daniel Berehulak • Glaxosmithkline: 156 (top) • Headspace: 60 (top), 108/ Heart Foundation: 32/Sourced from Healthy Kids at www.healthykids.nsw.gov.au • Human Kinetics: 212, 214 (bottom), 216/Reprinted with permission from J-H. Wilmore and D. L. Costill, 2004, Physiology of Sport and Exercise, 3rd ed., (Champaign, IL: Human Kinetics) p. 230, figs 7.15a, b and c • Image Disk Photography: 128 (top) • Image 100: 60 (bottom) • iStockphoto.com: 15/arthbjulie; 64 (top)/David_Ahn; 128 (second from bottom)/GlobalStock; 247 (bottom right)/dwphotos; 356/noticeli; 370 (bottom)/searagen; 370 (top left)/carlofranco • John Wiley & Sons Australia: 57, 264/Photo by Renee Bryon; 78 (top)/Photo by Kari-Ann Tapp; 168 (bottom right); 338/Photo by Carol Graham; 170, 182 (2 images), 189 (top and middle), 191 (3 images)/Photo by Jo Patterson; 343 (top, middle and second from bottom)/Photo by Catherine Spedding; 351 (top)/Photo by Paul Graham • Kobal Collection, The: 61 (top)/© Universal/Reed, Eli • Lippincott Williams and Wilkins: 217/W. McArdle, F. Katch and V. Katch, Exercise Physiology, Lippincott, Williams and Wilkins, 2006, p. 357. Reproduced by permission © McGraw-Hill USA: 159, 214 (top)/ from The Physiological Basis of Physical Education and Athletics, 3rd Edition, by E. L. Fox and D. K. Matthews, 1981, p. 168 © The McGraw-Hill Companies, Inc.; 294 (fig 9.3), 295/ from Concepts of Fitness & Wellness: A Comprehensive Lifestyle Approach, 5E by Corbin, Welk, Lindsey & Corbin, 2004 © The McGraw-Hill Companies, Inc. *Newspix: 48/Alan Pryke; 105/Justin Lloyd; 107/Renee Nowtarger; 129/Vanessa Hunter; 131/John Fotiadis; 177/Troy Bendeth; 193/Colleen Petch; 297 (top left)/AFP/Antonio Scorzera • NSW Department of Health: 4; 33, 35 (fig 1.21), 36 (figs 1.22 and 1.23)/Reproduced with the permission of the NSW Department of Health from NSW Schools Physical Activity and Nutrition Survey (SPANS) 2004, Summary Report and Short Report; 34/Reproduced by permission, NSW Ministry of Health © 2014, 37/Graph — Percentage of students who ate dinner in front of TV at least once a week, by school year, NSW Schools Physical Activity and Nutrition Survey (SPANS) 2010 Full report, Sydney, NSW Ministry of Health, Nov 2011; 299 (fig 9.7)/Trends in physical activity in NSW, 1998–2005, NSW Centre for Physical Activity and Health, University of Sydney, Jan. 2007, p. 5 • Photodisc: 6 (top left, top right, bottom left, bottom right), 45, 88, 95 (3 images), 112, 190, 223, 232, 237 (3 images), 315, 343 (second from top) • Picture Media: 254/Reuters/Kim Kyung-Hoon • Ron Tandberg: 355 • Shutterstock.com: 1/michaeljung; 3, 99/oliveromg; 8 (bottom left)/photomatiz; 12/© Yuri Arcurs, 2009; 14 (bottom left)/© Kuzma, 2009; 14 (bottom right)/Daniel Korzeniewski; 14 (top centre)/© michaeljung, 2010; 14 (top left)/fritzi16; 20/Chinaview; 24/Maxim Blinkov; 25/Andrey Armyagov; 40, 299 (bottom)/Kzenon; 49, 71, 187/Monkey Business Images; 50/Tyler Olson; 55/Dmitry Kalinovsky; 59/ Jacek Chrabrzeszewski; 61 (bottom)/Olesia Bilkei; 64 (bottom left)/s_bukley; 64 (bottom right)/Jaguar PS; 72/© Keith Spencer, 2009; 75/Alexander Tihonov; 77/Milosz _M; 78 (bottom)/Visun Khankasem; 83/© place-to-be, 2009; 91/Andy Dean Photography; 101, 291/Syda Productions; 104/kurhan; 125/Mat Hayward; 126/© Lisa F. Young; 128/ (bottom)/Ivelin Radkov; 128 (second from top)/Pablo Hidalgo; 137/Pressmaster; 153 (bottom left)/Greg Epperson; 175/Nicholas Piccillo; 181, 183/William Perugini; 185/S. M. Beagle; 197/Ipatov; 198/Kaliva; 205/© Aaron Bedford; 209/© holbox; 209/Pete Niesen; 240/© Chen Wei Seng, 2009; 263/Warren Goldswain; 270/Dario Lo Presti; 282/© James E. Knopf, 2009; 292 (bottom left)/jordache; 292 (top left), 306, 313/ wavebreakmedia; 302/© daife, 2009; 307 (bottom right)/Minerva Studio; 310/arek_malang; 311/AMA; 316/Vladislav Gagic; 317/ StockLite; 323/Visionei; 326 (left)/CandyBox Images; 326 (right)/pi03; 331/Diego Cervo; 343 (bottom)/Janet Faye Hastings; 351 (bottom)/Dmitry Naumov; 370 (top right)/Einherjar • St John Ambulance: 269 • Stockdisc: 342 (bottom) • Transport for NSW:
Text


Every effort has been made to trace the ownership of copyright information. That information will enable the publisher to rectify any error or omission in subsequent editions will be welcome. In such cases, please contact the Permissions Section of John Wiley & Sons Australia, Ltd.