Essentials of Strength Training and Conditioning Image Bank, Fourth Edition

<u>User Instructions</u> Credits

ISBN: 978-1-4925-0163-3

The blank PowerPoint template that is included with the *Essentials of Strength Training and Conditioning Image Bank, Fourth Edition*, is a stand-alone application delivered in Microsoft® PowerPoint® 2010.

Copyright © 2016 by Human Kinetics, Inc. Microsoft® PowerPoint® copyright © 1987-2010 by Microsoft Corporation. All rights reserved. Windows is a registered trademark of Microsoft Corporation. Microsoft is a registered trademark of Microsoft Corporation. The reproduction of this software is forbidden without the written permission of the publisher. Instructors and agencies that have either purchased *Essentials of Strength Training and Conditioning Image Bank, Fourth Edition*, or received it free upon adopting the textbook may display the images it contains in a classroom setting, or include them in handouts to students, without further permission from Human Kinetics, as long as the images are used in conjunction with the textbook.

All figures, tables, typeset figures, and photos included in this image bank are reprinted, with permission, from NSCA, 2016, *Essentials of Strength Training and Conditioning, Fourth Edition*, edited by G. Haff and T. Triplett, unless otherwise noted.

Permission notices for material reproduced in this image bank from other sources can be found on the Credits page of the How to Use the Image Bank file.

Acquisitions Editor: Roger W. Earle; Developmental Editor: Christine M. Drews; Managing Editor: Karla Walsh; Permissions Manager: Dalene Reeder; Graphic Designer: Nancy Rasmus; Photographs: Neil Bernstein, © Human Kinetics; Photo Asset Manager: Laura Fitch; Visual Production Assistant: Joyce Brumfield; Photo Production Manager: Jason Allen; Art Manager: Kelly Hendren; Associate Art Manager: Alan L. Wilborn; Art Style Development: Joanne Brummett; Illustrations: © Human Kinetics, unless otherwise noted

Minimum System Requirements

Microsoft® Windows®

- Windows® 2000/XP/Vista7
- Microsoft® PowerPoint® 2003 or higher
- Any image viewing software or web browser software that will open .jpg files
- A zip utility software that will allow you to unzip packaged files
- Adobe Reader

Macintosh®

- Mac OS X 10.x
- Microsoft® PowerPoint® for Mac 2004 or higher
- Any image viewing software or web browser software that will open .jpg files
- A zip utility software that will allow you to unzip packaged files
- Adobe Reader

This image bank is an ancillary to the textbook *Essentials of Strength Training and Conditioning, Fourth Edition*, published by Human Kinetics. If you need technical support for the *Essentials of Strength Training and Conditioning Image Bank, Fourth Edition*, please call 217-351-5076 Monday through Friday (excluding holidays) between 7 a.m. and 5 p.m. (CST). Or, e-mail us at support@hkusa.com.

When you call or e-mail, please provide the following information:

- The type of hardware you are using
- The version of the software you are currently using
- The exact wording of error messages or the message numbers appearing on screen
- A complete description of what happened and what you were doing when the error message appeared
- An explanation of how you tried to solve the problem

Human Kinetics End User License Agreement

NOTICE TO USER:

The installation and use of this product indicates your understanding and acceptance of the following terms and conditions. This license shall supersede any verbal, or prior verbal or written, statement or agreement to the contrary. This Human Kinetics End User License Agreement accompanies a Human Kinetics software product and related explanatory written materials ("Software"). The term "Software" shall also include any upgrades, modified versions, or updates of the Software licensed to you by Human Kinetics. If you do not understand or accept these terms, or your local regulations prohibit "after-sale" license agreements or limited disclaimers, you must cease and desist using this product immediately. Copyright laws supersede all local regulations.

Liability Disclaimer

This product and/or license is provided exclusively by Human Kinetics on an "as is" basis, without any representation or warranty of any kind, either express or implied, including without limitation any representations or endorsements regarding the use of, the results of, or performance of the product, its appropriateness, accuracy, reliability, or correctness. The entire risk as to the use of this product is assumed by the user and/or licensee. Human Kinetics does not assume liability for the use of this product beyond the original purchase price. In no event will Human Kinetics be liable for additional direct or indirect damages including any lost profits, lost savings, or other incidental or consequential damages arising from any defects, or the use or

inability to use this product, even if Human Kinetics has been advised of the possibility of such damages.

Restrictions

You may not use, copy, modify, translate, or transfer the product or any copy except as expressly defined in this agreement. You may not remove or modify any copyright notice, nor any "about" dialog or the method by which it may be invoked.

Operating License

You have the non-exclusive right to use the product only by a single person, on a single computer at a time. If the product permits, you may physically transfer the product from one computer to another, provided that the product is used only by a single person, on a single computer at a time. In group projects where multiple persons will use the product, you must purchase an individual license for each member of the group. Use over a local area network (within the same locale) is permitted provided that the product is used only by a single person, on a single computer at a time. Use over a wide area network (outside the same locale) is strictly prohibited under any and all circumstances. Any violation immediately cancels all distribution rights.

Backup and Transfer

You may make one copy of the software part of the product solely for backup purposes, as prescribed by Canadian, United States, and international copyright laws. You must reproduce and include the copyright notice on the backup copy. You may transfer the product to another party only if the other party agrees to the terms and conditions of this agreement and completes and returns registration information (name, address, etc.), including a signed license, to Human Kinetics, Inc. within 30 days of the transfer. If you transfer the product you must at the same time transfer the documentation and backup copy, or transfer the documentation and destroy the backup copy. You may not retain any portion of the product, in any form, under any circumstance.

Terms

This license is effective until terminated. You may terminate it by destroying the complete product and all copies thereof. This license will also terminate if you fail to comply with any terms or conditions of this agreement. You agree upon such termination to destroy all copies of the software and of the documentation, or return them to Human Kinetics for disposal.

Other Rights and Restrictions

All other rights and restrictions not specifically granted in this license are reserved by Human Kinetics.

Human Kinetics

Website: www.HumanKinetics.com

United States: Human Kinetics

P.O. Box 5076

Champaign, IL 61825-5076

800-747-4457

e-mail: humank@hkusa.com

Canada: Human Kinetics 475 Devonshire Road Unit 100 Windsor, ON N8Y 2L5 800-465-7301 (in Canada only) e-mail: info@hkcanada.com

Europe: Human Kinetics 107 Bradford Road Stanningley Leeds LS28 6AT, United Kingdom +44 (0) 113 255 5665 e-mail: hk@hkeurope.com

Australia: Human Kinetics 57A Price Avenue Lower Mitcham, South Australia 5062 08 8372 0999 e-mail: info@hkaustralia.com

New Zealand: Human Kinetics P.O. Box 80 Mitcham Shopping Centre, South Australia 5062 0800 222 062

e-mail: info@hknewzealand.com

E6373

Image Bank User Instructions

The Essentials of Strength Training and Conditioning Image Bank, Fourth Edition, includes more than 600 image files. These files represent most of the art, tables, and content photos from the textbook, as well as selected checklists and forms from the textbook.

Images are grouped first within chapter folders, with art and photo files being provided in jpg format and table files being provided in either jpg or PDF format (depending on the table size) and checklists and forms being provided in PDF format. Filenames for figures, tables, and content photos are the figure number or table number used in the print book. In cases where items are unnumbered in the print book, you'll find the images named by page number. For example, if a table did not have a table number in the print book, it would be saved with a filename like this in the image bank:

pg105_table2

where '105' is the page number and 'table2' is the second unnumbered table (reading from left to right) on that page in the print book.

A multipage table in the book is saved as one multiple-page PDF in the image bank. A longer checklist or form that appeared on multiple pages in the print book is also saved as one multiple-page PDF in the image bank.

You may reuse the images within your own PowerPoint templates to create your own custom presentations. To help you create your own presentation, we have also provided a blank PowerPoint template.

Unzipping an Image Bank Once It's on Your Computer

Before you can access the image banks files that you've downloaded to your computer, you will need to unzip them using a zip utility program such as WinZip or StuffIt Expander.

Follow these steps if you are using WinZip:

- 1. Save the chapter's zipped package of images to your desktop.
- 2. Launch the WinZip program.
- 3. From the File menu, select "Open Archive."
- 4. Locate the chapter's zipped package that you saved to your desktop, select it, and then click the "Open" button.
- 5. From the Actions menu, select "Extract."
- 6. Choose a location on your computer to which you want to save the extracted images and click the Extract button. The images will be extracted from the zipped package and saved to your computer in the location you selected. From this point forward, this is the location from which you can access the Image Bank files.

Follow these steps if you are using Stufflt Expander:

- 1. Save the chapter's zipped package of images by chapter to your desktop.
- 2. Double-click the zipped folder to open it, then click the "Expand All" button.
- 3. Choose a location on your computer to which you want to save the extracted images and click the OK button. The images will be extracted from the zipped package and saved to your computer in the location you selected. From this point forward, this is the location from which you can access the Image Bank files.

Using the Blank PowerPoint Template

The blank template includes these types of slides:

- Chapter opener slide
- Regular bulleted list slide

The following are instructions for some common tasks you might perform when using the blank template to create your own presentation.

Note: To manipulate the presentation content, you must have the full version of Microsoft PowerPoint 97 or higher.

How to Add a New Slide

- 1. Use the full version of Microsoft PowerPoint to open the chapter file where you wish to add a new slide.
- 2. To add a regular content slide, choose "Insert," from the toolbar menu, then "New Slide." A sidebar with slide layout options will appear. You can simply close this sidebar, or select one of the "Text Layouts" to further customize the slide. [In PowerPoint 2010, add a regular content slide by clicking on the Home tab and clicking on the New Slide button. From there slide type options will appear and you choose the slide type you wish to add.]
- 3. To add a chapter opener slide, click once in the left navigation bar (in the "Slides" tab) on the chapter opener slide. The slide will be outlined in blue. Choose "Insert" from the toolbar menu, then "Duplicate Slide." A copy of the slide will be created. Use the instructions under "How to Change the Order of Slides" to move the slide to your desired location. [To add a chapter opener slide in PowerPoint 2010, click once in the left navigation bar (in the "Slides" tab) on the chapter opener slide. The slide will be highlighted. Go to the Home tab, click the New Slide button, and then at the bottom of the popup box you'll see an option called "Duplicate Selected Slides." Click that line to copy the chapter opener slide. Use the instructions under "How to Change the Order of Slides" to move the slide to your desired location.]

How to Add Text to a Slide

- 1. Navigate to the slide you would like to modify. Click on the slide itself in the area where you would like to add text. You will see a cursor and the boundary of the text box will be displayed.
- 2. Type the text you would like to add. PowerPoint will automatically adjust the spacing and size of the text to fit the space on the slide.

- 3. Text will automatically format as a bulleted list. Use the "Increase Indent" and "Decrease Indent" buttons on the toolbar to adjust the outline level of text.
- 4. When you are finished, click anywhere outside of the text box you were working in.

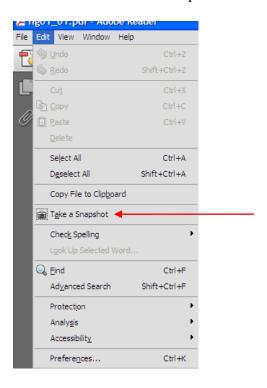
How to Insert jpg Images From the Image Bank Into PowerPoint

- 1. In PowerPoint, navigate to the slide that you want to add an image to.
- 2. Select the "Insert" menu.
- 3. Choose "Picture."
- 4. Find the location of the image files you unzipped.
- 5. Select the image you want to insert and then click the "Insert" button.

How to Insert Screen Captures From a PDF Into PowerPoint

Large tables and forms (those that are more than half of a page in the print book) don't fit well on a PowerPoint slide. However, you can create screen captures of small sections of a table or form. The instructions that follow are for Adobe Reader X; depending on what version of Adobe Reader is on your computer's operating system, the steps for creating a screen capture will be different.

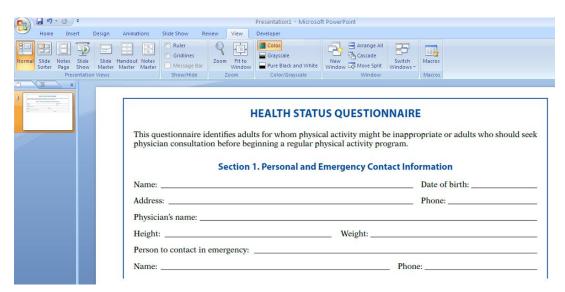
To create a screen capture, open the PDF of the item you want to include. Click the Edit button and then select "Take a Snapshot."



Use your cursor to select the information you want to include; you'll want to limit your selection to a block of text that will fit comfortably on a PowerPoint slide. The act of selecting information also copies that selection.

HEALTH STATUS QUESTIONNAIRE This questionnaire identifies adults for whom physical activity might be inappropriate or adults who should seek physician consultation before beginning a regular physical activity program. Section 1. Personal and Emergency Contact Information	
Name:	Date of birth:
Address:	Phone:
Physician's name:	
Height:	Weight:
Person to contact in emergency:	
Name:	Phone:

Open your PowerPoint presentation and paste the selection you made from the PDF into a slide.



Continue this process to include as many screen captures in your PowerPoint presentation as needed.

Credits

Figure 2.5

Reprinted, by permission, from B.A. Gowitzke and M. Milner, 1988. *Scientific bases of human movement*, 3rd ed. (Baltimore, MD: Lippincott, Williams & Wilkins), 184-185.

Figure 2.10

Reprinted, by permission, from E.A. Harman, M. Johnson, and P.N. Frykman, 1992. "A movement-oriented approach to exercise prescription," *NSCA Journal* 14(1): 47-54.

Figure 2.13

Reprinted from K. Jorgensen, 1976, Force-velocity relationship in human elbow flexors and extensors. In *Biomechanics A-V*, edited by P.V. Komi (Baltimore, MD: University Park Press), 147. By permission of P.V. Komi.

Figure 4.5

Reprinted from *Steroids*, Vol. 74(13-14), J.L. Vingren, W.J. Kraemer, et al., "Effect of resistance exercise on muscle steroid receptor protein content in strength trained men and women," pgs. 1033-1039, copyright 2009, with permission from Elsevier.

Figure 4.7

Adapted from W.J. Kraemer et al., 1998, "Hormonal responses to consecutive days of heavy-resistance exercise with or without nutritional supplementation," *Journal of Applied Physiology* 85(4): 1544-1555. Used with permission.

Table 5.3

Reprinted, by permission, from A. Fry, 1993, "Physiological responses to short-term high intensity resistance exercise overtraining," Ph.D. Diss., The Pennsylvania State University; R. Meeusen, M. Duclos, C. Foster, A. Fry, M. Gleeson, et al., 2013, "Prevention, diagnosis, and treatment of the over training syndrome: Joint consensus statement of the European College of Sports Science and the American College of Sports Medicine," *Medicine and Science in Sport and Exercise* 45: 186-205.

Figure 7.2

Reprinted, by permission, from A.D. Faigenbaum et al., 2013, "Youth resistance training: Past practices, new perspectives and future directions," *Pediatric Exercise Science* 25: 591-604.

Figure 8.1

Reprinted, by permission, from R.S. Weinberg and D. Gould, 2015, *Foundations of sport and exercise psychology*, 6th ed. (Champaign, IL: Human Kinetics), 79.

Figure 8.2

Reprinted, by permission, from B.D. Hatfield and G.A. Walford, 1987, "Understanding anxiety: Implications for sport performance," *NSCA Journal* 9(2): 60-61.

Figure 8.3

Adapted from R.M. Nideffer, 1976, "Test of attentional and interpersonal style," *J Pers Soc Psychol* 34: 394-404.

Figure 9.1

From USDA's Center for Nutrition Policy and Promotion.

Table 9.1

From U.S. Department of Agriculture and U.S. Department of Health and Human Services.

Table 9.2

From U.S. Department of Agriculture and U.S. Department of Health and Human Services.

Table 9.3

From Institute of Medicine (US).

Table 9.4

From U.S. Department of Agriculture, Agricultural Research Service.

Table 9.5

Based on F.S. Atkinson, K. Foster-Powell, and J.C. Brand-Miller, 2008, "International tables of glycemic index and glycemic load values: 2008," *Diabetes Care* 31(12): 2281-2283.

Table 9.6

Adapted, by permission, from K. Foster-Powell, S. Holt, and J.C. Brand-Miller, 2002, "International table of glycemic index and glycemic load values," *American Journal of Clinical Nutrition* 76: 5-56. © American Society for Nutrition.

Table 9.7

Reprinted from NIH. Available: www.nhlbi.nih.gov/health-pro/guidelines/current/cholesterol-guidelines/quick-desk-reference-html.

Table 9.10

Reprinted, by permission, from M.N. Sawka et al., 2007, "American College of Sports Medicine position stand. Exercise and fluid replacement," *Medicine and Science of Sport and Exercise* 39: 377-390.

Table 10.7

Reprinted from Centers for Disease Control.

Figure 11.2

Data from G.B. Forbes, C.R. Porta, B.E. Herr, and R.C. Griggs, 1992, "Sequence of changes in body composition induced by testosterone and reversal of changes after drug is stopped," *JAMA* 267: 397-399.

Figure 13.5

From E. Fox, R. Bowers, and M. Foss, 1993, *The physiological basis for exercise and sport*, 5th ed. (Dubuque, IA: Wm. C. Brown), 675. Reprinted with permission of McGraw-Hill Companies.

Figure 13.6

Adapted, by permission, from G.M. Gilliam, 1983, "300 yard shuttle run," *NSCA Journal* 5(5): 46.

Figure 13.11

Adapted, by permission, from D. Semenick, 1990, "Tests and measurements: The T-test," *NSCA Journal* 12(1): 36-37.

Figure 13.12

Adapted, by permission, from K. Pauole et al., 2000, "Reliability and validity of the T-test as a measure of agility, leg power, and leg speed in college age males and females," *Journal of Strength and Conditioning Research* 14: 443-450.

Figure 13.16

Reprinted, by permission, from M.P. Reiman, 2009, *Functional testing in performance* (Champaign, IL: Human Kinetics), 109.

Table 13.1

Adapted, by permission, from J. Hoffman, 2006, *Norms for fitness, performance, and health* (Champaign, IL: Human Kinetics), 36-37.

Table 13.2

Reprinted, by permission, from J. Hoffman, 2006, *Norms for fitness, performance, and health* (Champaign, IL: Human Kinetics), 36-37.

Table 13.3

Reprinted, by permission, from J. Hoffman, 2006, *Norms for fitness, performance, and health* (Champaign, IL: Human Kinetics), 38.

Table 13.5

Reprinted, by permission, from J. Hoffman, 2006, *Norms for fitness, performance, and health* (Champaign, IL: Human Kinetics), 58. Adapted from D.A. Chu, 1996, *Explosive power and strength* (Champaign, IL: Human Kinetics).

Table 13.6

Reprinted, by permission, from J. Hoffman, 2006, *Norms for fitness, performance, and health* (Champaign, IL: Human Kinetics), 58. Adapted from D.A. Chu, 1996, *Explosive power and strength* (Champaign, IL: Human Kinetics).

Table 13.8

Adapted from E. Fox, R. Bowers, and M. Foss, 1993, *The physiological basis for exercise and sport*, 5th ed. (Dubuque, IA: Wm. C. Brown), 676. Reprinted with permission of McGraw-Hill Companies.

Table 13.10

Reprinted, by permission, from American College of Sports Medicine, 2014, ACSM's guidelines for exercise testing and prescription, 9th ed. (Baltimore, MD: Lippincott, Williams, and Wilkins), 101.

Table 13.11

Source: Canadian Physical Activity, Fitness & Lifestyle Approach: CSEP-Health & Fitness Program's Appraisal & Counselling Strategy, Third Edition, © 2003. Reprinted with permission from the Canadian Society for Exercise Physiology.

Table 13.12

Data from U.S. Department of the Army, 1998, *Physical fitness training: Field manual no. 21-20.* (Washington, DC: Headquarters, Department of the Army).

Table 13.13

Adapted from YMCA, 2000, YMCA fitness testing and assessment manual. (Champaign, IL: Human Kinetics).

Table 13.14

Adapted from American College of Sports Medicine, 2014, *ACSM's guidelines for exercise testing and prescription*, 9th ed. (Baltimore, MD; Lippincott, Williams, and Wilkins).

Table 13.15

Adapted from American College of Sports Medicine, 2014, ACSM's guidelines for exercise testing and prescription, 9th ed. (Baltimore, MD; Lippincott, Williams, and Wilkins).

Table 13.16

Adapted from American College of Sports Medicine, 2014, ACSM's guidelines for exercise testing and prescription, 9th ed. (Baltimore, MD; Lippincott, Williams, and Wilkins).

Table 13.17

Adapted from American College of Sports Medicine, 2014 ACSM's guidelines for exercise testing and prescription, 9th ed. (Baltimore, MD; Lippincott, Williams, and Wilkins).

Table 13.18

Data from D.C. Nieman, 1995, Fitness and sports medicine. 3rd ed. (Palo Alto, CA: Bull), 504.

Table 13.19

Adapted, by permission, from American College of Sports Medicine, 2014, *ACSM's guidelines for exercise testing and prescription*, 9th ed. (Baltimore, MD; Lippincott, Williams, and Wilkins).

Table 13.22

Reprinted, by permission, from J. Hoffman, 2006, *Norms for fitness, performance, and health* (Champaign, IL: Human Kinetics), 113.

Table 13.24

Data from G.L. Iverson and M.S. Koehle, 2013, "Normative data for the balance error scoring system in adults," *Rehabil Res Pract* 2013: 846418.

Table 13.25

Adapted, by permission, from V.H. Heyward, 1998, *Advanced fitness assessment and exercise prescription*, 3rd ed. (Champaign, IL: Human Kinetics), 155.

Table 13.26

Adapted, by permission, from V.H. Heyward and L.M. Stolarczyk, 1996, *Applied body composition assessment* (Champaign, IL: Human Kinetics), 12.

Table 13.27

Data from D.C. Nieman, 1995, Fitness and sports medicine, 3rd ed. (Palo Alto, CA: Bull).

Table 16.1

Adapted, by permission, from D.T. McMaster, J. Cronin, and M. McGuigan, 2009, "Forms of variable resistance training," *Strength & Conditioning Journal* 31: 50-64.

Table 16.2

Adapted, by permission, from D.T. McMaster, J. Cronin, and M. McGuigan, 2010, "Quantification of rubber and chain-based resistance modes," *Journal of Strength and Conditioning Research* 24: 2056-2064.

Figure 17.1

Reprinted, by permission, from R.W. Earle, 2006, Weight training exercise prescription. In *Essentials of personal training symposium workbook* (Lincoln, NE: NSCA Certification Commission).

Figure 17.2

Reprinted, by permission, from R.W. Earle, 2006, Weight training exercise prescription. In *Essentials of personal training symposium workbook* (Lincoln, NE: NSCA Certification Commission).

Figure 18.1

Based on Albert, M. *Eccentric muscle training in sports and orthopaedics* (New York: Churchill Livingstone, 1995).

Figure 18.2

Based on K.E.Wilk, M.L. Voight, M.A. Keirns, V. Gambetta, J.R. Andrews, and C.J. Dillman, 1993, "Stretch-shortening drills for the upper extremities: Theory and clinical applications," *J Orthop Sports Phys Ther* 17: 225-239.

Figure 19.3

Reprinted, by permission, from K.P. Clark and P.G. Weyand, 2014, "Are running speeds maximized with simple-spring stance mechanics?" *Journal of Applied Physiology* 117(6): 604-615.

Figure 19.5

Adapted, by permission, from C.J. Dillman, 1975, "Kinematic analyses of running," *Exerc Sport Sci Rev* 3: 193-218.

Figure 19.9

Adapted, by permission, from R.V. Mann, 2011, *The mechanics of sprinting and hurdling* (Lexington, KY: CreateSpace), 89-125.

Figure 19.10

From C.A. Putnam and J.W. Kozey, 1989, Substantive issues in running, in *Biomechanics of sport*, edited by C.L. Vaughn (Boca Raton, FL: CRC Press), 1-33; G.A. Wood, 1987, Biomechanical limitations to sprint running, in *Medicine and sport science*, edited by M. Hebbelink, R.J. Shephard, B. Van Gheluwe, and J. Atha (Basel: Karger), 58-71.

Table 19.4

Adapted, by permission, from S. Nimphius, 2014, Increasing agility. In *High-performance training for sports*, edited by D. Joyce and D. Lewindon (Champaign, IL: Human Kinetics), 194.

Table 19.5

Adapted, by permission, from S. Nimphius, 2014, Increasing agility. In *High-performance training for sports*, edited by D. Joyce and D. Lewindon (Champaign, IL: Human Kinetics), 185-198.

Table 20.2

Reprinted, by permission, from NSCA, 2012, Aerobic endurance training program design, by P. Hagerman. In *NSCA's essentials of personal training*, 2nd ed., edited by J.W. Coburn and M.H. Malek (Champaign, IL: Human Kinetics), 395.

Table 20.3

Based on B.E. Ainsworth, W.L. Haskell, S.D. Herrmann, N. Meckes, D.R. Bassett Jr, C. Tudor-Locke, J.L. Greer, J. Vezina, M.C. Whitt-Glover, and A.S. Leon, 2011, "Compendium of physical activities: A second update of codes and MET values," *Medicine Sci Sports Exer* 43: 1575-1581.

Figure 21.1

Adapted, by permission, from G.G. Haff and E.E. Haff, 2012, Training integration and periodization. In *NSCA's guide to program design*, edited by J. Hoffman (Champaign, IL: Human Kinetics), 215.

Figure 21.2

Adapted, by permission, from G.G. Haff and E.E. Haff, 2012, Training integration and periodization. In *NSCA's guide to program design*, edited by J. Hoffman (Champaign, IL: Human Kinetics), 216.

Figure 21.3

Adapted, by permission, from G.G. Haff and E.E. Haff, 2012, Training integration and periodization. In *NSCA's guide to program design*, edited by J. Hoffman (Champaign, IL: Human Kinetics), 219.

Table 21.1

Adapted, by permission, from G.G. Haff and E.E. Haff, 2012, Training integration and periodization. In *NSCA's guide to program design*, edited by J. Hoffman (Champaign, IL: Human Kinetics), 220.

Figure 21.4

Reprinted, by permission, from G.G. Haff and E.E. Haff, 2012, Training integration and periodization. In *NSCA's guide to program design*, edited by J. Hoffman (Champaign, IL: Human Kinetics), 223; adapted from figure 11.7, p. 2239. Reprinted from *Weight training: A scientific approach*, 2nd ed., by Michael H. Stone and Harold St. O'Bryant, copyright © 1987 by Burgess.

Table 23.1

Adapted, by permission, from W. Kroll, 1991, "Structural and functional considerations in designing the facility, part I," *NSCA Journal* 13(1): 51-58.

Figure 23.5

From NSCA, 2015, *Essentials of strength training and conditioning*, 4th ed., edited by G. Haff and T. Triplett (Champaign, IL: Human Kinetics).

Figure 23.6

From NSCA, 2015, *Essentials of strength training and conditioning*, 4th ed., edited by G. Haff and T. Triplett (Champaign, IL: Human Kinetics). Adapted, by permission, from National Strength and Conditioning Association, 2004, *NSCA's essentials of personal training*, edited by R.W. Earle and T.R. Baechle (Champaign, IL: Human Kinetics), 604-606.

Table 24.1

Adapted, by permission, from NSCA, 2009, *Strength & conditioning professional standards and guidelines* (Colorado Springs, CO: NSCA), 17.

Figure 24.1

Based on D.J. Casa et al., 2012, "The inter-association task force for preventing sudden death in collegiate conditioning sessions: Best practices recommendations," *J Athl Train* 47(4): 477-480.

Figure 24.2

Adapted from B.D. Epley, 1998, *Flight manual* (Lincoln, NE: University of Nebraska Printing); R.W. Earle, 1993, *Staff and facility policies and procedures manual* (Omaha, NE: Creighton University).

Figure 24.3

Reprinted, by permission, from R.W. Earle, 1993, *Staff and facility policies and procedures manual* (Omaha, NE: Creighton University).

Figure 24.4

Adapted from J.H. Taylor, 2006, *Performance training program manual* (Las Cruces, NM: New Mexico State University).

Figure 24.5

Adapted from B.D. Epley, 1998, *Flight manual* (Lincoln, NE: University of Nebraska Printing); R.W. Earle, 1993, *Staff and facility policies and procedures manual* (Omaha, NE: Creighton University).

Figure 24.6

Adapted from R.W. Earle, 1993, *Staff and facility policies and procedures manual* (Omaha, NE: Creighton University); B.D. Epley, 1998, *Flight manual* (Lincoln, NE: University of Nebraska Printing); B.D. Epley, 1998, *Make the play* (Lincoln, NE: University of Nebraska Printing).

Table 24.2

Adapted, by permission, from NSCA, 2011, *Performance training center emergency policies and procedures manual* (Colorado Springs, CO: NSCA), 3.