



Coaching Healthy Lifestyle Change

AN INTEGRATIVE APPROACH FOR HEALTH PROFESSIONALS

second edition

Matthew J. Garver, Joe D. Bell, Libby E. McCurley

Coaching Healthy Lifestyle Change

AN INTEGRATIVE APPROACH
FOR HEALTH PROFESSIONALS

second edition

Matthew J. Garver, Joe D. Bell, Libby E. McCurley

Coaching Healthy Lifestyle Change

an integrative approach for health professionals

second edition

Authors:

Matthew J. Garver, Joe D. Bell, Libby E. McCurley

CEO Brian Rowe

PRESIDENT Jason Konesco

CFO Chris Moore

VP OF PRODUCT Jenn Rowe

EDITORIAL DIRECTOR Michael Thurston

CREATIVE DIRECTOR Erin Rae Saxena

IMPLEMENTATION MANAGER Jason Wiese

EXERCISE MODELS Christian Abilene University, Matthew Barber, Torren Davis, Courtney Flanary, Haley Kaczy, Cara Loveland, Kendra Morian, Kelly Odom, Sarah Taylor, Aaron Tobias, Amy Wages, Joshua Walters, Lexus Williams

Published by Perceivant

©2020 by Perceivant

All rights reserved. No part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written consent of Perceivant, LLC.

ISBN: 978-0-9972946-1-3

Because this page cannot legibly accommodate all acknowledgments for copyrighted material, credits appear at the end of the book and constitute an extension of this copyright page.



BRIEF

WELL-BEING AND YOU

An Introduction to Key Concepts and Yourself

MAPPING THE JOURNEY

Behavior Change and Goal Setting

HEART OF THE JOURNEY

Cardiorespiratory Fitness

STRENGTH FOR THE JOURNEY

Muscular Health

FLEXIBILITY ON THE JOURNEY

Stretching Your Horizons

13

33

53

83

115

FUEL FOR THE JOURNEY

Nutrition and Metabolism

PACKING LITE

Body Composition and Weight Control

BEHAVIOR CHANGE AND MOTIVATIONAL INTERVIEWING

Understanding All Dimensions of Your Patient

COACHING NUTRITION, WEIGHT MANAGEMENT, AND EXERCISE

133

167

201

223

ABOUT THE AUTHORS

Joe D. Bell, Ph.D.

Joe D. Bell, Ph.D. is an Associate Professor of the Department of Kinesiology and Nutrition at Abilene Christian University. He is Co-Director of ACU's Human Performance Laboratory. Dr. Bell teaches training program design, exercise physiology, cardiovascular physiology, motor behavior, and biomechanics. His primary research interests include applied and clinical exercise physiology and motor behavior. Dr. Bell is heavily involved in curriculum and program development.

Matthew J. Garver, Ph.D.

Matthew J. Garver, Ph.D. is an Assistant Professor of the Department of Kinesiology and Nutrition at Abilene Christian University. He teaches exercise physiology, physical activity and aging, and exercise testing and prescription. His research interests include exercise in geriatric patients, exercise intervention delivery strategies, and knee osteoarthritis. Dr. Garver received a Bachelor of Science degree from Lee University, a Master of Science in Exercise Science degree from Central Washington University, and a Ph.D. in Exercise Physiology from The Ohio State University.

Libby E. McCurley, Ph.D.

Libby E. McCurley, Ph.D. is an Assistant Professor of the Department of Kinesiology and Nutrition at Abilene Christian University. She teaches structural kinesiology, exercise physiology, cardiovascular physiology, and training program design. Dr. McCurley's primary research focus is on cardiovascular exercise training. Dr. McCurley received her Bachelor of Science and Master of Science degrees from Arkansas State University, and her Ph.D. from the University of Arkansas.

Pro-Change Behavior Systems, Inc

Pro-Change Behavior Systems, Inc. is an internationally recognized behavior change company that partners with wellness companies and institutions to produce award-winning programs that are designed to reduce multiple health risk behaviors and to enhance multiple domains of well-being while lowering health care costs and increasing productivity. As leaders in the development of behavior change programs, Pro-Change builds the most advanced science of behavior change into its programs. The Principals of Pro-Change have made major breakthroughs in the science and practice of behavior change. Drs. James O. Prochaska and Wayne F. Velicer have been named most-published authors in the field of health psychology.

The Pro-Change staff, comprised of primarily PhDs and MPHs, as well as MLISs with strong training in the Transtheoretical Model, focus on using the Model in a broad range of health behaviors, social issues, and organizational change initiatives.

CONTENTS

AN INTRODUCTION TO KEY CONCEPTS AND YOURSELF

FIND YOUR PATH TO WELL-BEING 13

- How Physically Active Are You?
- Do You Make Time to Exercise?
- What Is Your Confidence Level?
- How Motivated Are You To Exercise?
- Your Profile and Key Well-being Concepts

IDENTIFY YOUR DIMENSIONS OF WELL-BEING 17

- Well-being Requires Intentional Action
- Well-being Requires Time
- Modeling Well-being to Patients

CONSIDER HOW YOUR PERSPECTIVE, ATTITUDES, AND LIFESTYLE IMPACT WELL-BEING 19

- Mental Health Affects Well-being
- Lifestyle Choices Affect Well-being
- Stress Management
- Drug, Alcohol, and Tobacco Abuse
- Economic/Financial Stability
- Social Determinants of Well-being

LINK LIFESTYLE TO RISK OF DISEASES 26

- The Leading Causes of Death
- Genetics: “Shaper” Not “Dictator”

LIFESTYLE MEDICINE: USE IT AND LIVE IT 28

THE HEALTHY PEOPLE INITIATIVE 28

BEHAVIOR CHANGE AND GOAL SETTING

INDICATIONS OF YOUR JOURNEY’S DIRECTION 33

- The Many Destinations of Fitness: Dimensions of Wellness
- Physical Wellness: Lower Your Risk of Chronic Disease
- Mental and Emotional Wellness: Celebrate Your Self-Image
- Intellectual Wellness: Improve Your Academic Performance
- Occupational Wellness: Be More Successful on the Job
- Social Wellness: Play with Others
- Environmental Wellness: Enjoy the World Around
- Spiritual Wellness: Find Your Inner Peace

Motives, Motivators, and Barriers to Change 40

- The Power of Identifying Your Motives
- Motivators for Behavior Change
- Barriers to Change

Self-Regulatory Tools: Self-Monitoring and Goal Setting 45

- Self-Monitoring
- Goal Setting
- Using SMART Goals

Bringing It All Together: Summary of Self-Regulatory Tools 47

CARDIORESPIRATORY FITNESS

THE ROAD TO A HEALTHY HEART 53

- Improve Your Physical Abilities
- Reduce Your Risk of Cardiovascular Diseases
- Manage Your Weight
- Feel Good

EXERCISE IS MEDICINE® 57

- Healthcare Systems Module
- Community Resources Module
- Active Health Technology Module

WHAT IS GOING ON INSIDE YOUR CARDIOVASCULAR SYSTEM? 59

- Journey of Blood
- Measuring the Health of Your Cardiovascular System
- Strengthening Your Cardiorespiratory System
- Guidelines for Aerobic Exercise

THE BODY’S RESPONSE TO PHYSICAL ACTIVITY 64

- Metabolic Response to Exercise
- Respiratory Response to Exercise
- Cardiovascular Response to Exercise
- Long Term Responses to Exercise

FIND YOUR STARTING POINT: ASSESS YOUR CURRENT LEVEL OF FITNESS 68

- Should You Check with Your Doctor? PAR-Q and You
- Determining Your Current Cardiorespiratory Fitness: Maximal and Submaximal Tests
- Tests Available To Determine Your Coordinates

TRAVELING THE COURSE: CREATING A FITNESS PLAN 71

- Using the FITT Navigation System
- Self-Monitoring, Goal Setting, and Progression of Aerobic Exercise

MUSCULAR HEALTH

SO YOU THINK YOU KNOW MUSCLE? 83

RESISTANCE VS AEROBIC EXERCISE 84

JOINT HEALTH MAKES THE JOURNEY POSSIBLE 85

THE MECHANICS OF BODY MOVEMENT 86

- Isotonic and Isometric Contractions
- Lever Systems of the Body

MUSCLE PHYSIOLOGY: WHAT IS GOING ON INSIDE? 89

- Whole Muscle, Fascicles, and Muscle Fibers

Connective Tissue 90

- Muscle Fiber Structure
- How the Nervous System Controls the Muscle
- The Nerve Signal, Neuromuscular Junction, and the Neurotransmitter
- Excitation Is “Coupled” with Contraction
- Contraction: The Amazing Ability to Recruit Motor Units
- Putting It All Together
- Getting Stronger but Not Getting Bigger: Neuromuscular Adaptation
- Getting Stronger and Bigger: Muscle Hypertrophy

OUR MUSCLE FIBERS MAKE THE JOURNEY DIFFERENT! 95

- Velocity of Contraction: The Speed of the Fibers
- Oxidative Ability: Endurance versus Power
- What Makes the Difference in Velocity and Oxidative Ability?

YOU GET MANY BENEFITS FROM RESISTANCE EXERCISE... AND NOT JUST THE ONES YOU WANT 98

- Aesthetic Benefits
- Functional Benefits
- Metabolic Benefits
- Health-Related Disease Benefits

THE FITT NAVIGATION SYSTEM AND KEY PRINCIPLES FOR RESISTANCE EXERCISE 101

- Key Principles to Guide the Travels
- Frequency
- Intensity
- Time
- Type

PUTTING IT ALL TOGETHER 109

SELF-MONITORING, GOAL SETTING, AND PROGRESSION OF RESISTANCE EXERCISE 109

STRETCHING YOUR HORIZONS

FLEXIBILITY ON YOUR JOURNEY 115

TERMINOLOGY RELATED TO FLEXIBILITY 115

RANGE OF MOTION: WHAT DETERMINES THE TRAVEL PLANS OF EACH JOINT? 119

THE PHYSIOLOGY OF FLEXIBILITY 121

WHAT DOES FLEXIBILITY ADD TO YOUR JOURNEY? 122

THE FITT NAVIGATION SYSTEM FOR FLEXIBILITY TRAINING 123

- Frequency
- Intensity
- Time
- Type
- Stretching Video Examples

PUTTING IT ALL TOGETHER 128

MUSCULAR HEALTH: SELF-MONITORING, GOAL SETTING, AND PROGRESSION OF FLEXIBILITY EXERCISES 129

NUTRITION AND METABOLISM

WE ARE OBSESSED WITH OUR FOOD...FUEL? 133

GUIDELINES AND TOOLS FOR EATING WELL 134

- Recommended Daily Allowance
- Institute of Medicine Nutrition Recommendations
- USDA Dietary Guidelines and MyPlate
- Tools for Health Professionals

MACRONUTRIENTS: NUTRIENTS THAT PROVIDE ENERGY 136

- Carbohydrates
- Fats
- Proteins
- Where Do Calories Fit in the Discussion of Macronutrients?

BREAKING DOWN THE FOOD LABEL 142

- Serving Size
- Total Calories and Calories from Fat
- Daily Value %
- Updates to the Nutrition Facts Label

MICRONUTRIENTS 143

- Vitamins
- Minerals

WATER 146

METABOLISM AND THE ENERGY PRODUCING PATHWAYS 147

- How Food Fuels You
- Cellular Currency: ATP
- ATP Producing Pathways
- The Smooth Transition Between the Metabolic Pathways
- Enzymes

THE ENDOCRINE SYSTEM AND HORMONES 153

- Endocrine Organs and Key Hormones in Metabolism
- How Acute Exercise and Chronic Training Impact Hormone Release

FUEL FOR GENERAL HEALTH 155

- What Are the General Characteristics of a Healthful Diet?
- The Fuel Demands of Your Different Tissues
- Fuel for Rest and for Light, Moderate, and High Intensity

FUEL FOR FITNESS 158

- Nutrition for the General, Healthful Lifestyle
- Fuel for Endurance Exercise
- Fuel for Resistance Exercise

FUEL AND THE LINK TO DISEASE 161

- Obesity
- Diabetes
- Cholesterol
- Metabolic Syndrome
- Osteoporosis
- Anemia
- Why Proper Nutrition Matters: It's Not Just Your Food—It is Your Fuel!

BODY COMPOSITION AND WEIGHT CONTROL

BODY COMPOSITION AND WELLNESS 167

BODY IMAGE AND WELLNESS 167

- Overweight and Obesity: The Health Burden
- What Does It Mean to Be Overweight or Obese?

OBESITY: HISTORY AND CAUSES 170

- A Generation of Change
- The Current State of Weight
- Causes of Obesity

NUTRITION AND CHRONIC DISEASE 174

- Cardiovascular Diseases
- Cancer
- Diabetes

EATING DISORDERS 178

- Anorexia Nervosa
- Bulimia Nervosa
- Binge-Eating Disorder
- What Is a Healthy Range of Fat?

CHECK YOUR BODY FAT AND RISK TO DISEASE 181

- Methods for Assessing Disease Risk
- Methods for Assessing Body Composition
- Bioelectrical Impedance Analysis (BIA)
- Skinfold Measurement

ASSESSING YOUR BODY COMPOSITION 187

MANAGING YOUR WEIGHT 187

- How Can I Change My Body Composition?
- Your Path to Healthy Weight Loss
- Monitor the Amount You Eat
- Eat Good Foods
- Manage Your Weight Loss Over Time
- Burn as Many Calories as You Eat
- Resistance Training
- Monitor Your Eating Habits
- Guidelines for Healthy Weight Loss
- Determine Your Daily Energy Expenditure
- Determining Your Recommended Body Weight

DEVELOPING A WEIGHT MANAGEMENT PLAN 194

- Self-Monitoring
- Setting SMART Weight and Body Composition Goals

UNDERSTANDING ALL DIMENSIONS OF YOUR PATIENT

PATIENT LIFESTYLE AND THEIR HEALTH 201

- Evidence Shows that a Healthy Living Reduces Risk
- Healthy Behaviors May Mitigate Some Genetic Risk
- Few Americans Adopt and Adhere to Key Health Behaviors
- How Do You Motivate Patients to Change?

USING INTERPERSONAL SKILLS TO GET THE COACHING PROCESS STARTED 203

How Ready is Your Patient to Adopt Healthy Behaviors? 205

- The Transtheoretical Model
- Stages of Change
- Decisional Balance
- Self-Efficacy
- Processes of Change

Step-by-Step 210

- Step 1: Assess Readiness to Change
- Step 2: Tailor Interventions to the Patient's Readiness to Change

Pairing Motivational Interviewing with the TTM 212

- MI Guiding Principles
- MI Basic Skills
- MI Processes for Providers

PRECONTEMPLATION STAGE (NOT READY) 223

- Precontemplation: Key Intervention Strategies
- Sample Activities for Precontemplation

CONTEMPLATION STAGE (GETTING READY) 229

- Key Intervention Strategies
- Sample Activities for Contemplation

PREPARATION STAGE (READY) 233

- Key Intervention Strategies
- Sample Activities for Preparation

ACTION STAGE 237

- Key Intervention Strategies
- Sample Activities for Action

MAINTENANCE STAGE 240

- Key Intervention Strategies
- Sample Activities for Maintenance

RELAPSE PREVENTION 242

- Exercise
- Healthy Eating

PRACTICE COACHING SCENARIO 244

- Intervention Suggestions for Exercise (Precontemplation)
- Intervention Suggestions for Healthy Eating (Contemplation)

SUMMARY 246

