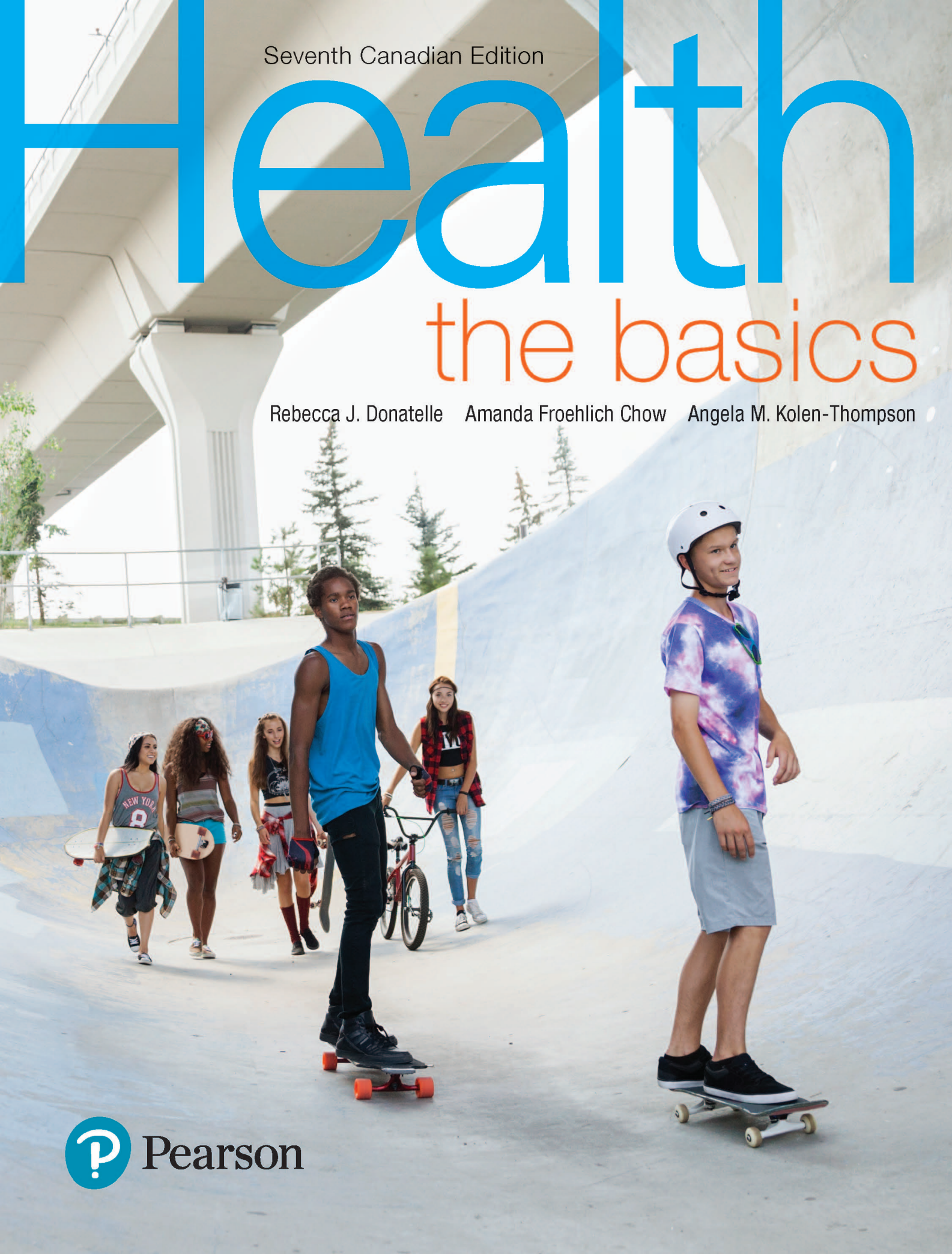


Seventh Canadian Edition

# Health

## the basics

Rebecca J. Donatelle   Amanda Froehlich Chow   Angela M. Kolen-Thompson



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the basics

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## the basics

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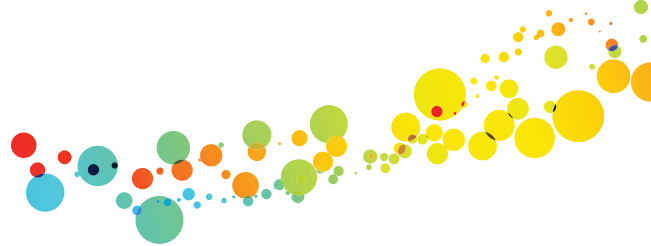
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# BRIEF CONTENTS



## **PART 1** FINDING RHYTHM 1

---

- 1 Discovering Your Personal Rhythm for Healthy Living 1
- 2 Promoting and Preserving Your Psychosocial Health 27
- 3 Understanding and Coping with Life's Stressors 53

**FOCUS ON SPIRITUAL HEALTH 76**

## **PART 2** CHOOSING HEALTHY LIFESTYLES 85

---

- 4 Engaging in Physical Activity for Health, Fitness, and Performance 85
- 5 Eating for Optimal Health and Performance 116
- 6 Managing Your Weight: Finding a Healthy Balance 149

**FOCUS ON BODY IMAGE 177**

## **PART 3** CREATING HEALTHY AND CARING RELATIONSHIPS 188

---

- 7 Committing to Relationships and Sexual Health 188
- 8 Considering Your Reproductive Choices 221

**FOCUS ON SEXUALLY TRANSMITTED INFECTIONS (STIs) 253**

## **PART 4** LIMITING RISKS FROM POTENTIALLY HARMFUL HABITS 260

---

- 9 Recognizing Use, Misuse, Abuse, and Addiction to Drugs and Behaviours 260
- 10 Using Alcohol and Caffeine Responsibly and Refraining from Tobacco Use 281
- 11 Understanding Illicit Drugs 312

**FOCUS ON IMPROVING YOUR SLEEP 330**

## **PART 5** PREVENTING AND MANAGING DISEASE 340

---

- 12 Reducing Risk for Cardiovascular Disease and Cancer 340
- 13 Controlling Risk for Infectious and Noninfectious Conditions 371

**FOCUS ON DIABETES 411**

## **PART 6** FACING LIFE'S CHALLENGES 419

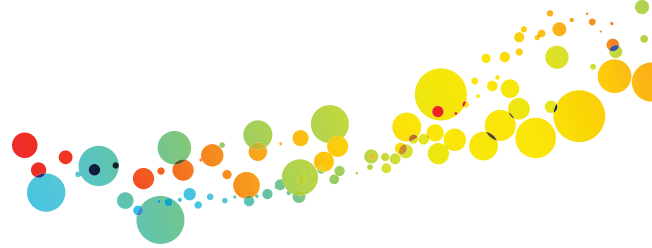
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- 14 Choosing Healthy Living for the Environment 419
- 15 Preventing Violence, Abuse, and Injury 439
- 16 Becoming a Wise Consumer of Health Services 461
- 17 Preparing for Aging, Dying, and Death 481

**FOCUS ON FINANCIAL HEALTH 504**

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# CONTENTS



Preface xv

## **PART 1** FINDING RHYTHM 1

### **1** Discovering Your Personal Rhythm for Healthy Living 1

#### **WHAT IS HEALTH? 2**

Health and Sickness: Defined by Extremes 2  
Health: More Than Not Being Sick 2  
Health as Wellness: Putting Quality into Years 3  
Health Promotion: Helping You Stay Healthy 5  
Prevention: The Key to Future Health 6

#### **SEX DIFFERENCES 7**

##### **IMPROVING YOUR HEALTH 7**

Benefits of Achieving Optimal Health 7  
Preparing for Behaviour Change 8

##### **STUDENT HEALTH TODAY 9**

Factors Influencing Behaviour Change 9  
Your Beliefs and Attitudes 13  
Do Beliefs and Attitudes Influence Behaviours? 13  
Your Intentions to Change 14

##### **POINT OF VIEW 15**

Significant Others as Change Agents 15

##### **BEHAVIOUR CHANGE TECHNIQUES 17**

Shaping: Developing New Behaviours in Small Steps 17  
Visualizing: The Imagined Rehearsal 17  
Modelling 18  
Controlling the Situation 18  
Reinforcement 18  
Changing Self-Talk 18

##### **MAKING BEHAVIOUR CHANGE 19**

Self-Assessment: Antecedents and Consequences 19  
Analyzing the Behaviours You Want to Change 19  
Decision Making: Choices for Change 19

##### **ASSESS YOURSELF 21**

### **2** Promoting and Preserving Your Psychosocial Health 27

#### **DEFINING PSYCHOSOCIAL HEALTH 28**

Intellectual Health: The Thinking You 29  
Emotional Health: The Feeling You 30  
Social Health: Interactions with Others 31  
Spiritual Health: An Inner Quest for Well-Being 31

#### **FACTORS INFLUENCING PSYCHOSOCIAL HEALTH 34**

External Influences 34

Internal Influences 35

Resiliency and Developmental Assets 37

#### **ENHANCING PSYCHOSOCIAL HEALTH 37**

Developing and Maintaining  
Self-Esteem and Self-Efficacy 37

##### **POINT OF VIEW 38**

Forming Realistic Expectations 38  
Getting Adequate Sleep 39  
Understanding the Mind–Body Connection 40

#### **UNDERSTANDING MOOD DISORDERS 41**

Depression 42  
Seasonal Affective Disorder 44  
Anxiety Disorders 44  
Schizophrenia 45

#### **SEX ISSUES IN PSYCHOSOCIAL HEALTH 45**

Depression and Sex 45  
PMS: Physical or Mental Disorder? 46

#### **SUICIDE: GIVING UP ON LIFE 46**

Warning Signals of Suicide 46

##### **STUDENT HEALTH TODAY 47**

Taking Action to Prevent Suicide 47

#### **WHEN MOOD DISORDERS AND SUBSTANCE USE DISORDERS MIX 48**

##### **SEEKING PROFESSIONAL HELP 48**

Types of Mental Health Professionals 49  
Choosing a Therapist: Key Factors to Consider 49  
What to Expect When You Begin Therapy 50

##### **ASSESS YOURSELF 51**

### **3** Understanding and Coping with Life's Stressors 53

#### **WHAT IS STRESS? 54**

The Mind–Body Connection: Physical Responses 55  
Stress and Impaired Immunity 55

##### **STUDENT HEALTH TODAY 56**

#### **THE GENERAL ADAPTATION SYNDROME 57**

Alarm Phase 57  
Resistance Phase 59  
Exhaustion Phase 59

#### **SOURCES OF STRESS 59**

Psychosocial Sources of Stress 59  
Other Forms of Psychosocial Stress 61  
Environmental Stress 61  
Self-Imposed Stress 61

#### **STRESS AND THE POST-SECONDARY STUDENT 63**

##### **POINT OF VIEW 64**



## **STRESS MANAGEMENT 65**

- Dealing with Stress 65
- Managing Emotional Responses 68
- Learning to Laugh and Cry 68
- Managing Social Interactions 68
- Making the Most of Support Groups 69
- Taking Mental Action 69
- Taking Physical Action 70
- Learning Time Management 71
- Using Alternative Stress Management Techniques 72

### **ASSESS YOURSELF 73**

## **FOCUS ON SPIRITUAL HEALTH 76**

### **ASSESS YOURSELF 84**

## **PART 2 CHOOSING HEALTHY LIFESTYLES 85**

### **4 Engaging in Physical Activity for Health, Fitness, and Performance 85**

#### **PHYSICAL ACTIVITY FOR HEALTH, FITNESS, AND PERFORMANCE 86**

#### **BENEFITS OF REGULAR PHYSICAL ACTIVITY 88**

- Improved Cardiorespiratory Endurance 88
- Improved Bone Health 89
- Improved Weight Management 89
- Improved Quantity and Quality of Life 90
- Improved Mental Health and Stress Management 90

#### **IMPROVING CARDIORESPIRATORY ENDURANCE 91**

#### **CARDIORESPIRATORY FITNESS PROGRAMS 91**

- Determining Exercise Frequency 91
- Determining Exercise Intensity 91
- Determining Exercise Time 93
- Determining Exercise Type 93
- The Recovery 93

#### **IMPROVING MUSCULAR STRENGTH AND ENDURANCE 93**

- Principles of Strength Development 93
- Types of Muscle Contractions 94
- Methods of Providing Resistance 95
- Getting Started 96

#### **IMPROVING YOUR FLEXIBILITY 97**

- Types of Stretching Exercises 97

#### **YOGA, TAI CHI, AND PILATES 97**

#### **POINT OF VIEW 98**

- Yoga 98
- Tai Chi 99
- Pilates 100

## **BODY COMPOSITION 100**

### **PLANNING YOUR PHYSICAL FITNESS TRAINING PROGRAM 100**

- Identifying Your Physical Fitness Goals and Designing Your Program 100

### **STUDENT HEALTH TODAY 101**

#### **FITNESS-RELATED INJURIES 102**

- Causes of Fitness-Related Injuries 102
- Prevention 102
- Common Overuse Injuries 103
- Exercising in the Heat 104
- Exercising in the Cold 105
- Your Movement Journey 105

#### **ASSESS YOURSELF 106**

#### **ASSESS YOURSELF 107**

### **5 Eating for Optimal Health and Performance 116**

#### **HEALTHY EATING 117**

- Dietary Patterns Around the Globe 117
- In Canada 117

#### **EATING WELL WITH CANADA'S FOOD GUIDE 118 THE DIGESTIVE PROCESS 119**

- Dietary Reference Intake vs. Recommended Nutrient Intake 122

#### **OBTAINING ESSENTIAL NUTRIENTS 122**

- Calorie 122
- Water 123
- Proteins 123

#### **CARBOHYDRATES 124**

- Simple Carbohydrates 125
- Complex Carbohydrates: Starches and Glycogen 125
- Complex Carbohydrates: Fibre 125
- Fats 126
- Vitamins 128
- Minerals 131
- Sex Differences in Nutritional Needs 134

#### **VEGETARIANISM 135**

### **STUDENT HEALTH TODAY 136**

#### **EATING WELL AS A STUDENT 136**

- Fast Foods: Eating on the Run 137
- Understanding Nutrition and Health Claims 138
- Healthy Eating on a Budget 140
- Healthy Eating in Residence 140

#### **FOOD SAFETY CONCERNS 141**

- Food-Borne Illness 141
- Food Additives 142
- Food Allergies 142
- Choosing Organic 143
- Locally Grown Foods 143
- Genetically Modified Food Crops 143

POINT OF VIEW 144  
ASSESS YOURSELF 145

## 6 Managing Your Weight: Finding a Healthy Balance 149

Health Risks of Overweight and Obesity 150

### OVERWEIGHT AND OBESITY 151

#### POINT OF VIEW 153

Determining the Right Weight for You 154

Assessing Your Body Fat Content 155

### MANAGING YOUR WEIGHT 156

Keeping Weight Loss in Perspective 156

What Is a Calorie? 157

Physical Activity 157

Is Dieting Healthy? 158

Improving Your Eating Habits 159

Choosing to Eat Well 159

“Miracle” Diets 160

Low-Carbohydrate Diets 160

Trying to Gain Weight 161

### RISK FACTORS FOR OBESITY 161

Heredity and Genetic Factors 162

Endocrine Influences: The Hungry Hormones 162

Hunger, Appetite, and Satiety 163

Developmental Factors 163

Metabolic Rates and Weight 163

Psychosocial Factors 164

Eating Cues 164

Dietary Myth and Misperception 165

Lifestyle 165

### SOCIAL BIAS AGAINST THE OVERWEIGHT 165

#### STUDENT HEALTH TODAY 166

### THINKING THIN: BODY IMAGE DISORDERS 166

#### EATING DISORDERS 167

Anorexia Nervosa 167

Bulimia Nervosa 167

Binge Eating Disorder 168

Eating Disorder Not Otherwise Specified 168

Disordered Eating 168

Anorexia Athletica 169

Who Is at Risk? 169

Treating Eating Disorders 169

Helping Someone with an Eating Disorder 169

### CREATING A PERSONALIZED PLAN FOR ACHIEVING YOUR HEALTHY WEIGHT 170

ASSESS YOURSELF 172

## FOCUS ON BODY IMAGE 177

ASSESS YOURSELF 187

## PART 3 CREATING HEALTHY AND CARING RELATIONSHIPS 188

## 7 Committing to Relationships and Sexual Health 188

### COMMUNICATING: A KEY TO ESTABLISHING RELATIONSHIPS 189

Communicating How You Feel 189

Improving Communication Skills 189

### CHARACTERISTICS OF INTIMATE RELATIONSHIPS 191

#### FORMING INTIMATE RELATIONSHIPS 192

Families: The Ties That Bind 192

Today's Family Unit 192

Establishing Friendships 193

Significant Others, Partners, Couples 194

This Thing Called Love 194

### GENDER ISSUES 196

Why the Differences? 197

Picking Partners: Similarities and

Differences between Genders 197

### BARRIERS TO INTIMACY 197

Dysfunctional Families 197

Jealousy in Relationships 198

### COMMITTED RELATIONSHIPS 199

Marriage 199

Cohabitation 199

Gay and Lesbian Partnerships 200

### SUCCESS IN COMMITTED RELATIONSHIPS 200

Partnering Scripts 200

The Importance of Self-Nurturance 200

Elements of Good Relationships 201

### STAYING SINGLE 201

#### HAVING CHILDREN 202

#### ENDING A RELATIONSHIP 202

The Warning Signs 202

Seeking Help: Where to Look 202

Trial Separations 203

Why Relationships End 203

Deciding to End Your Relationship 203

Coping with Loneliness 204

### YOUR SEXUAL IDENTITY 204

Gender Identity and Roles 205

### REPRODUCTIVE ANATOMY AND PHYSIOLOGY 205

Female Reproductive Anatomy and Physiology 205

Male Reproductive Anatomy and Physiology 209

## **EXPRESSING YOUR SEXUALITY 210**

Human Sexual Response 210  
Sexual Orientation 211  
Developing Sexual Relationships 212  
Sexual Expression:  
    What Are Your Options? 212  
What Is Right for Me? 214  
Variant Sexual Behaviour 214

## **DIFFICULTIES THAT CAN HINDER SEXUAL FUNCTIONING 214**

### **STUDENT HEALTH TODAY 215**

Sexual Desire Disorders 215  
Sexual Arousal Disorders 215  
Orgasm Disorders 216  
Sexual Pain Disorders 216  
Drugs and Sex 216

**ASSESS YOURSELF 217**

## **8 Considering Your Reproductive Choices 221**

### **MANAGING YOUR FERTILITY 222**

Reversible Contraception 222

**POINT OF VIEW 225**

### **STUDENT HEALTH TODAY 228**

Oral Contraceptives for Men? 231  
Fertility Awareness Methods (FAM) 231  
Permanent Contraception 232

### **ABORTION 234**

Methods of Abortion 234

### **PLANNING A PREGNANCY 235**

Emotional Health 235  
Maternal Health 235  
Paternal Health 236  
Financial Evaluation 236  
Contingency Planning 236  
Decision Making about  
    Unplanned Pregnancy 237

### **PREGNANCY 237**

Prenatal Care 237  
Alcohol and Drugs 238  
A Woman's Reproductive Years 241  
Pregnancy Testing 241  
The Process of Pregnancy 242  
Prenatal Testing and Screening 243

### **CHILDBIRTH 244**

Where to Have Your Baby 244  
Labour and Delivery 244  
Prenatal Education 245  
Drugs in the Delivery Room 245  
Breastfeeding and the  
    Postpartum Period 245  
Complications 246

## **INFERTILITY 248**

Causes in Women 248  
Causes in Men 248  
Treatment 248  
Surrogate Motherhood 249

**ASSESS YOURSELF 250**

## **FOCUS ON SEXUALLY TRANSMITTED INFECTIONS (STIs) 253**

**ASSESS YOURSELF 258**

## **PART 4 LIMITING RISKS FROM POTENTIALLY HARMFUL HABITS 260**

### **9 Recognizing Use, Misuse, Abuse, and Addiction to Drugs and Behaviours 260**

#### **DRUG USE, MISUSE, AND ABUSE 261**

Individual Response: Set and Setting 261

#### **DEFINING ADDICTION 262**

The Physiology of Addiction 263  
The Addictive Process 263  
Signs of Addiction 264

#### **ADDICTIVE BEHAVIOURS 264**

Gambling 264  
Shopping and Borrowing 265  
Exercise Addiction 266  
Technology Addictions 266

#### **MANAGING AN ADDICTION 266**

#### **DRUG DYNAMICS 267**

#### **TYPES OF DRUGS 268**

Routes of Administration of Drugs 269

#### **DRUG INTERACTIONS 270**

**POINT OF VIEW 272**

#### **PRESCRIPTION DRUGS 272**

Types of Prescription Drugs 273  
Use of Generic Drugs 274

#### **OVER-THE-COUNTER (OTC) DRUGS 274**

Types of OTC Drugs 274

**ASSESS YOURSELF 277**

### **10 Using Alcohol and Caffeine Responsibly and Refraining from Tobacco Use 281**

#### **ALCOHOL: AN OVERVIEW 282**

Alcohol and the Post-Secondary Student 283  
Rights versus Responsibilities 285

**THE PRODUCTION OF ALCOHOL 286**  
**PHYSIOLOGICAL AND BEHAVIOURAL**  
**EFFECTS OF ALCOHOL 286**

Behavioural Effects 286  
Absorption and Metabolism 287  
Immediate Effects 289  
Long-Term Effects 289  
Fetal Alcohol Spectrum Disorders 291  
Drinking and Driving 292

**ALCOHOLISM 292**

How, Why, Whom? 293  
The Causes of Alcoholism 293  
Effects of Alcoholism on the Family 294  
Costs to Society 294  
Women and Alcoholism 295

**RECOVERY 295**

The Family's Role 295  
Treatment Programs 295  
Relapse 297

**SMOKING 297**

Tobacco and Its Effects 298  
Smoking—A Learned Behaviour 299  
Smokeless Tobacco 299  
Environmental Tobacco Smoke 300

**QUITTING 300**

Breaking the Nicotine Addiction 300  
Breaking the Habit 301  
Benefits of Quitting 301

**CAFFEINE 302**

**STUDENT HEALTH TODAY 303**

Caffeine Addiction 304  
The Health Consequences of  
Long-Term Caffeine Use 305

**POINT OF VIEW 307**

**ASSESS YOURSELF 308**

**11 Understanding Illicit Drugs 312**

**ILLICIT DRUGS 313**

Cocaine 314  
Amphetamines 316  
Marijuana (Cannabis) 317  
Opiates 319

**POINT OF VIEW 320**

**STUDENT HEALTH TODAY 321**

Psychedelics 322  
Deliriants 324  
Designer Drugs 324  
Steroids 325

**SOLUTIONS TO THE PROBLEM 326**

Harm Reduction 326

**ASSESS YOURSELF 327**

**FOCUS ON IMPROVING YOUR SLEEP 330**

**ASSESS YOURSELF 339**

**PART 5 PREVENTING AND MANAGING**  
**DISEASE 340**

**12 Reducing Risk for Cardiovascular**  
**Disease and Cancer 340**

**CARDIOVASCULAR DISEASES 341**

**UNDERSTANDING YOUR CARDIOVASCULAR**  
**SYSTEM 341**

**TYPES OF CARDIOVASCULAR DISEASES 343**

Atherosclerosis 343  
Coronary Heart Disease 343  
Stroke 345

**STUDENT HEALTH TODAY 346**

Hypertension 346  
Arrhythmia, Congestive Heart Failure, and  
Congenital and Rheumatic Heart Disease 347

**CONTROLLING YOUR RISKS FOR**  
**CARDIOVASCULAR DISEASES 348**

Risks You Can Control 348  
Obesity 350  
Risks You Cannot Control 351

**WOMEN AND CARDIOVASCULAR DISEASE 351**

Risk Factors for Heart Disease in Women 351  
Recognizing Heart Disease in Women 352

**NEW WEAPONS AGAINST**  
**HEART DISEASE 352**

Techniques of Diagnosing Heart Disease 352  
Angioplasty versus Bypass Surgery 353  
Thrombolysis 353

**CANCER INCIDENCE AND MORTALITY 353**

What Is Cancer? 355  
What Causes Cancer? 356  
Risks for Cancer 357

**POINT OF VIEW 359**

**TYPES OF CANCER 360**

Lung Cancer 360  
Breast Cancer 361  
Colorectal Cancers 363  
Prostate Cancer 363  
Skin Cancer 363  
Testicular Cancer 364  
Ovarian Cancer 365  
Uterine Cancer 365  
Leukemia 366  
Oral Cancer 366

## **FACING CANCER 366**

Detecting Cancer 366  
New Hope in Cancer Treatments 366  
Life after Cancer 367

### **ASSESS YOURSELF 368**

## **13 Controlling Risk for Infectious and Noninfectious Conditions 371**

### **INFECTIOUS DISEASE RISK FACTORS 372**

Risk Factors You Cannot Control 373  
Risk Factors You Can Control 373

#### **THE PATHOGENS:**

#### **ROUTES OF INVASION 373**

Bacteria 374  
Viruses 376

#### **YOUR BODY'S DEFENCES: KEEPING YOU WELL 379**

Physical and Chemical Defences 379  
The Immune System: Your Body Fights Back 379  
Fever 380  
Pain 380  
Vaccines: Bolstering Your Immunity 380

### **SEXUALLY TRANSMITTED INFECTIONS 382**

#### **POINT OF VIEW 383**

Possible Causes: Why Me? 384  
Modes of Transmission 385  
Chlamydia 385  
Pelvic Inflammatory Disease (PID) 386  
Gonorrhoea 387  
Syphilis 387  
Pubic Lice 389  
Venereal Warts 389

### **STUDENT HEALTH TODAY 390**

Candidiasis (Moniliasis) 391  
Trichomoniasis 391  
General Urinary Tract Infections 391  
Herpes 392

### **ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS) 393**

How HIV Is Transmitted 394  
Reducing Your Risks for HIV 395  
Symptoms of the Disease 396  
Testing for HIV Antibodies 396  
Preventing HIV Infection 396

### **NONINFECTIOUS DISEASES 397**

#### **RESPIRATORY DISORDERS 397**

Allergy-Induced Problems 397  
Hay Fever 398  
Asthma 398  
Emphysema 399  
Chronic Bronchitis 399

#### **NEUROLOGICAL DISORDERS 399**

Headaches 399  
Seizure Disorders 400

### **SEX-RELATED DISORDERS 401**

Fibrocystic Breast Disease 401  
Premenstrual Syndrome (PMS) 401  
Endometriosis 402

### **DIGESTION-RELATED DISORDERS 402**

Diabetes 402  
Colitis and Irritable Bowel Syndrome (IBS) 403  
Diverticulosis 403  
Peptic Ulcers 403  
Gallbladder Disease 404

### **MUSCULOSKELETAL DISEASES 404**

Arthritis 404  
Fibromyalgia 405  
Systemic Lupus Erythematosus (SLE) 405  
Low Back Pain (LBP) 405

### **OTHER MALADIES 406**

Chronic Fatigue Syndrome (CFS) 406  
Job-Related Disorders 407

### **ASSESS YOURSELF 408**

## **FOCUS ON DIABETES 411**

### **ASSESS YOURSELF 417**

## **PART 6 FACING LIFE'S CHALLENGES 419**

## **14 Choosing Healthy Living for the Environment 419**

### **OVERPOPULATION 421**

#### **AIR POLLUTION 422**

Sources of Air Pollution 422  
Smog 423  
Acid Rain 423  
Indoor Air Pollution 424  
Ozone Layer Depletion 426  
Global Warming 427

#### **POINT OF VIEW 428**

Reducing Air Pollution 428

#### **WATER POLLUTION 429**

Water Contamination 429  
Chemical Contaminants 430

#### **NOISE POLLUTION 432**

#### **LAND POLLUTION 432**

Solid Waste 432  
Hazardous Waste 432

#### **RADIATION 432**

#### **STUDENT HEALTH TODAY 433**

Ionizing Radiation 433  
Nonionizing Radiation 434  
Nuclear Power Plants 434

#### **FOOD QUALITY 434**

### **ASSESS YOURSELF 436**

## 15 Preventing Violence, Abuse, and Injury 439

### **VIOLENCE IN CANADA 440**

- Homicide 441
- Suicide 442
- Youth Violence 444
- The Violence of Hate 444
- Violence against Women 445
- Domestic Violence 446
- Violence against Children 447

### **STUDENT HEALTH TODAY 449**

- Violence against Men 449
- Violence against Older Adults 449

### **SEXUAL VICTIMIZATION 450**

- Sexual Assault 450

### **PREVENTING PERSONAL ASSAULTS 452**

- Self-Defence against Sexual Assault 452
- Preventing Assaults in Your Home 454
- Preventing Assaults When  
You Are Away from Home 455

### **VIOLENCE AND HEALTH 455**

- Injury Prevention 456
- Who Are the Victims of Unintentional Injury? 456

### **POINT OF VIEW 457**

### **ASSESS YOURSELF 458**

## 16 Becoming a Wise Consumer of Health Services 461

### **MAKING INFORMED HEALTH-CARE CHOICES 463**

- Evaluating Online Medical Resources 463
- Financing Health Care 463
- Accepting Responsibility  
for Your Health Care 463
- Why Some False Claims  
May Seem True 464

### **SELF-CARE 464**

- When to Seek Help 465
- Being Proactive in Your Health Care 465

### **STUDENT HEALTH TODAY 466**

- Assessing Health Professionals 468

### **CHOICES OF MEDICAL CARE 468**

- Traditional (Allopathic) Medicine 468
- Allied Professionals 469
- Complementary and  
Alternative Medicine 469

### **TYPES OF MEDICAL PRACTICES 475**

- Hospitals and Clinics 475

### **PROMISES AND PROBLEMS OF CANADA'S HEALTH-CARE SYSTEM 476**

- Access 476

- Quality Assurance 476
- Detecting Fraud and Abuse in the System 476
- POINT OF VIEW 477**

### **HEALTH SERVICE ORGANIZATIONS: A NEW MODEL OF HEALTH CARE 477**

### **ASSESS YOURSELF 478**

## 17 Preparing for Aging, Dying, and Death 481

### **REDEFINING AGING 482**

### **WHAT IS NORMAL AGING? 482**

### **WHO ARE THE ELDERLY? 483**

### **THEORIES ON AGING 483**

- Biological Theories 483
- Psychosocial Theories 483

### **CHANGES IN THE BODY AND MIND 484**

- Physical Changes 484
- Mental Changes 488

### **HEALTH CHALLENGES OF OLDER CANADIANS 490**

- Alcohol Use and Abuse 490
- Prescription Drug Use: Unique  
Problems for Older Canadians 490
- Over-the-Counter Remedies 490
- Physical Activity 490

### **STUDENT HEALTH TODAY 491**

- Dietary Concerns 491
- Gender Issues: Caring  
for Older Canadians 491

### **UNDERSTANDING DEATH AND DYING 492**

- Defining Death 492
- Denying Death 493

### **THE PROCESS OF DYING 494**

- Coping Emotionally with Death 494
- Social Death 495
- Near-Death Experiences 495
- Coping with Loss 495
- What Is "Normal" Grief? 496
- Coping with Grief 497
- Worden's Model of Grieving Tasks 497
- When an Infant or a Child Dies 497

### **QUASI-DEATH EXPERIENCES 497**

### **LIFE-AND-DEATH DECISION MAKING 498**

- Palliative Care 498
- POINT OF VIEW 499**

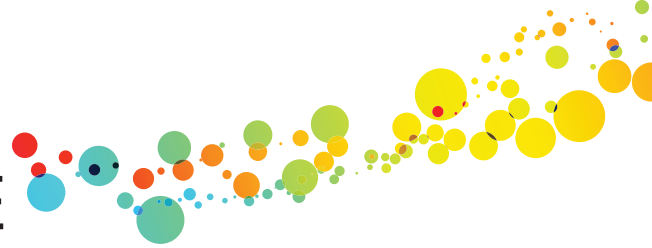
### **ASSESS YOURSELF 501**

## **FOCUS ON FINANCIAL HEALTH 504**

- Notes 508
- Index 531

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# PREFACE



## A LETTER TO OUR READERS

Dear Readers,

We are pleased to present you with the seventh Canadian edition of *Health: The Basics*. Please know that we revised this textbook with you in mind—you, the postsecondary student.

Some of the health challenges you face today are different than when we entered university years ago. However, some are the same—managing stress, eating well, being physically active, protecting yourself from sexually transmitted infections, using the health-care system wisely, to name a few similarities.

Although we likely now know more about what it takes to live healthily, we also seem to face more challenges in doing so. We know we should be physically active, and we are well aware of the importance of eating a balanced diet—focusing on vegetables and fruits—each day, and yet many of us cannot manage to do either. Some of us choose to drive short distances when walking or cycling would be a healthier—and the more environmentally friendly—option. Many believe that we must work out to benefit from physical activity. Food choices can be perplexing, especially given the abundance and availability of fast and convenient foods; media and advertising messages convince us that such foods will save us time.

Many of us also have an “all-or-nothing” way of thinking. In other words, we may not recognize that each lifestyle choice—whether physical or mental—is important and contributes to our overall health and wellness. Further, our health results from a culmination of many factors and influences with each playing its own role. Sometimes we think of and manage only the components related to our physical health, neglecting our social, emotional, intellectual, and spiritual dimensions.

You may be studying Human Kinetics or Kinesiology, Physical Education, Nursing, Health Sciences, Business, or General Arts or Science. Regardless of your program of study, we invite you to engage with this textbook, your classmates, and your professor. Please read and think about how each opening scenario, introductory section, and detailed presentation of various Canadian statistics is relevant to you. How does each topic apply to you? Do you invest time thinking about a particular topic? Why or why not?

We challenge you to question the choices you make and the attitudes you have toward your health and wellness. Are they the best for you, for right now? How can you make better decisions? When will you make better choices? We also encourage you to question contemporary thinking about many health issues; for example, binge drinking. Why is it socially acceptable and expected to drink heavily in your college and university years? You might also query the societal and media pressures regarding body image. Why do we expect men and women to look a certain way? Why do we judge people based upon how they look? Question contemporary thinking about many issues, not just those we bring up here.

We encourage you to read and to reflect deeply. Learning can only happen with reflection. Further, we urge you to ask questions that will help you to better understand yourself, questions that will help you to better understand health and wellness, questions that will encourage you to choose more wisely now while you are a student and later when you are not.

Finally, we suggest you approach this textbook with a sense of optimism and hopefulness, as well as an opportunity to be selfish. Reading this textbook, participating in class, and completing your assignments provide you with the chance to think about yourself and what is best for you and your health. As you read through this book, you will understand why we suggest you have a sense of optimism and hopefulness—that is a choice we all make.

Wishing you all the best and success in your studies!

Sunshine and smiles,  
Angie and Amanda



In developing *Health: The Basics*, we listened to the comments and concerns of Canadian personal health educators and learned that we share the following goals for a personal health textbook:

- To prepare students to lead healthy lives, now and in the future, by providing knowledge, tools, and strategies to make responsible and appropriate decisions regarding their health.
- To include “high-interest” topics not always included in health texts, such as multicultural and sex-specific perspectives on health.
- To include current Canadian research, material, and statistics.
- To recognize that students learn in many ways and require strong pedagogical elements to help them synthesize information and build healthy attitudes and behaviours.
- To include practical, real-life applications to encourage students to think critically about their health and to apply the material to their own lives.
- To encourage self-awareness, integrity, respect, self-responsibility, and gratitude in the reader.

## INSIDE THE BOOK

- **Decision making through critical thinking** is the cornerstone of every chapter, beginning with the introduction of the **DECIDE model for decision making**, **Prochaska and DiClemente’s Stages of Change model**, and various behaviour change techniques in Chapter 1.
- **Personal reflection**, a hallmark feature woven throughout, includes *Consider This . . .* scenarios and reflective questions, *Student Health* and *Point of View* boxed features, and *Taking Charge* sections with the opportunity to *Assess Yourself* at the end of each chapter.
- An overriding **philosophy of self-responsibility**, including a better understanding and self-awareness behind the reasons why we do what we do (or do not do) in regards to our health and wellness, appears throughout each section of this book.
- Each part of the textbook concludes with **Focus On**, a three- to five-page feature that provides additional information on an engaging topic relevant to university and college students and their health.
- **Coverage of sex issues in health** is integrated throughout the text. Topics include sex bias in mental health treatment; women and heart disease; and how sex and gender roles can affect stress, stress management, and a person’s ultimate health status.
- Updated references in APA format help the reader connect more easily to the research and to the thinking that leads to making better choices regarding his or her health.
- Each chapter applies a **pedagogical framework** that stresses building health skills consistently. Students can personalize each chapter through the *Student Health* and *Point of View* textboxes within each chapter, as well as through the *Assess Yourself* and *Taking Charge* boxes at the end of each chapter.

## NEW TO THE SEVENTH CANADIAN EDITION

Building on a strong foundation, the seventh Canadian edition of *Health: The Basics* continues to reflect and exemplify self-awareness, integrity, respect, self-responsibility, and gratitude. Key changes to each chapter include the following:

**Chapter 1** features a new figure illustrating the Socio Ecological Model. Updated figures illustrating the leading causes of death in Canada have also been incorporated.

We have incorporated updated information about volunteer rates, mental illness, and depression in Canada into **Chapter 2**. Also included is updated information on LGBT Youth and Suicide prevention. A new section discusses what happens when mood disorder and substance use disorders mix.

**Chapter 3** includes updated and clarified material on the general adaptation syndrome (GAS). In addition, information and statistics on technostress have been updated.

The introduction to **Chapter 4** has been heavily revised and reframed and now incorporates material on physical literacy. There is an updated and revised section on physical activity for health, and a new discussion talks about doctors prescribing physical activity for treating and preventing disease. The section on identifying your physical fitness goals and designing your physical fitness program has been revised, and a new exercise called the “your movement journey” (physical activity and physical literacy in your life so far) has been incorporated.

New to **Chapter 5** is the *First Nations, Inuit, and Métis Food Guide*, including a new table with estimated daily calorie needs. This chapter also includes a completely revised section on carbohydrates, and a new section on choosing organic or locally grown foods, and the slow food movement.

**Chapter 6** includes updated statistics and discussion of overweight and obesity in Canada

**Chapter 7** includes updates to the discussion and terminology related to gender and sex, including an updated gender differences diagram. Selected activities have been updated to incorporate social orientation, and a new figure on gender-specific communication patterns has been added. This chapter also includes an updated and revised discussion of sexual orientation.

**Chapter 8** incorporates updated statistics and information on paternal health and sperm damage.

**Chapter 9** includes updated material on gambling addiction.

In **Chapter 10** information on alcohol use and Low Risk Drinking Guidelines have been updated. Material on alcohol sales by province has also been updated. New figures have been added that illustrate reported heavy drinking by age, the physiological and behavioural effects of increased blood alcohol concentration, and compare a healthy liver to a cirrhotic liver. A new figure and example of the use of the decision support framework have been incorporated. Information on smoking rates in Canada has been updated, and a new Student Health Today box dealing with the dangers of e-cigarettes and a new application activity has been added.

**Chapter 11** includes updates to material on use of illicit drugs in Canada and self-reported use of marijuana.

Clarified and updated material on heart disease and heart function have been added to **Chapter 12**. Updated information on cancer incidence and mortality, including updated information on the incidences of specific types of cancer has been incorporated, and a new figure on the geographic distribution of new cancer cases across Canada has been added. We have also added new figures on the percent distribution of estimated new cancer cases, by sex, and the process of metastasis.

New to **Chapter 13** is a figure illustrating the epidemiological triad of disease. A number of updates have been made to the chapter including updated information on worldwide rates of tuberculosis, instances of hepatitis C in Canada, and instances of death from measles worldwide. Updated information on the instances of chlamydia in Canada and the rate of gonorrhoea in Canada has also been included, along with updated information regarding HIV/AIDS.

Updated and revised material on overpopulation and fertility is presented in **Chapter 14**, along with a new figure illustrating global fertility rates by region.

**Chapter 15**, features new figures illustrating homicide rates by province and female homicide rates by Indigenous group. Updated information on youth violence, domestic violence, violence against children, and violence against older adults are also include, along with an updated figure illustrating suicide rates by sex and age group. Lastly, a new figure illustrating incidents of elder abuse has been added.


New to **Chapter 16** is the introduction to section on self-care. Material on the number of physicians and nurses in Canada has been updated, and a new section has been added on complementary and alternative medicine.

**Chapter 17** has been revised to include an updated discussion of the proportion of Canadians who are 65 years of age or older. Moreover, a new figure illustrates the normal effects of aging on the body.

# HALLMARK PEDAGOGICAL FEATURES

In addition to the features noted above, *Health: The Basics* continues to employ the following pedagogical features.

- Learning Objectives:** Each chapter begins with learning outcomes that provide a learning path of the important topics covered within the chapter.
- Consider This . . . Chapter-Opening Scenarios:** These practical, real-life scenarios introduce concepts covered in the chapter and can be a springboard to stimulating discussions. End-of-Chapter Application Exercises provide further discussion of the topic.



PART 2 CHOOSING HEALTHY LIFESTYLES

## CHAPTER 4 ENGAGING IN PHYSICAL ACTIVITY FOR HEALTH, FITNESS, AND PERFORMANCE

© iStockphoto.com/Steve Weber

**CONSIDER THIS . . .**

While in high school, Laura participated in many physical activities, including organized sports such as volleyball, soccer, swimming, and track. Among the many lifestyle changes she encountered during her first year of post-secondary studies was the need to spend time alone in sedentary scenarios such as reading, writing, and studying. Laura had seen some of her friends struggle to include any physical activity or exercise in their student lives. Despite the academic demands of her first semester at school, Laura was determined to make time for exercise and worked out daily, alternating physical activities focused on cardiorespiratory endurance and muscular strength and endurance each day. She studied for long solitary hours and got high grades, though she averaged less than six hours of sleep a night. By the end of each week, Laura usually felt lonely and tired and was not sure she could continue this routine.

**LEARNING OUTCOMES**

- Discuss physical activity and exercise for health, physical fitness, and performance.
- Define the components of a health-related physical fitness program and describe the exercise frequency, intensity, time, and type to build and/or maintain fitness in each component.
- Identify and discuss the recommendations for physical activity promoted in Canada's Physical Activity Guide for Healthy Active Living.
- Discuss common barriers to students' physical activity participation and methods to overcome them.
- Describe common physical fitness-related injuries as well as methods to reduce your risk of these injuries.

**85**

- Point of View boxes:** Each chapter features a *Point of View* box that offers perspectives on a controversial health issue and provokes students to consider where they stand.

### point of view

#### OBESITY: Is It a Disability?

There is no question that obesity can lead to health problems and difficulty performing activities of daily living. A person who is 50 to 100 kilograms overweight can have difficulty walking, running, getting out of a chair, and doing simple daily tasks. But does that mean that his or her level of obesity constitutes a disability? Although obesity was recently classified as a disease in the United States, it is generally not considered a disability under the federal Americans with Disabilities Act (ADA), which defines disability as "a physical or mental impairment that substantially limits one or more of the major life activities of [an] individual." To be covered by the ADA, a person who is obese must be at least 45 kilograms overweight or have a body mass index (BMI) of over 40, as well as an underlying disorder that caused the obesity. These strict criteria mean that the ADA currently receives few complaints. However, some people believe obesity should be considered a disability that legally entitles individuals to health benefits and other accommodations. Other people believe that labelling obesity as a disability would add to its stigma and create more problems than it would solve.

In 2007, the Supreme Court of Canada ruled that disability is no longer predicated on no responsibility for the disability or an inability to change the circumstances of that disability. Thus under this ruling those considered to be obese (BMI of 30 or more) are considered to have a disability (Obesity Network of Canada, 2009).

**ARGUMENTS FAVOURING DISABILITY STATUS FOR PEOPLE WHO ARE OBESE**

- Labelling obesity as a disability provides individuals who are obese with better medical insurance (more of an issue in the United States).
- A disability label would protect the rights of individuals who are obese against discrimination based on their weight.
- Obesity can involve physical disability. A person who is obese can have many related medical conditions including arthritis, elevated blood pressure, type 2 diabetes, diabetic-related vascular diseases, and a weakened cardiovascular system. All of these conditions can lead to the need for walkers, wheelchairs, and other mobility devices, as well as special health accommodations at home or in the workplace.

**ARGUMENTS OPPOSING DISABILITY STATUS FOR PEOPLE WHO ARE OBESE**

- Doctors are worried that defining obesity as a disability would make them vulnerable to lawsuits from patients who are obese and do not want their weight discussed. The threat of such lawsuits would prevent doctors from discussing obesity with their patients and recommending specific actions (again, more of an issue in the United States).
- Rather than labelling obesity as a disability and adding to its stigma, issues of unfair insurance or job practices could be handled with antidiscrimination laws.
- Not all people who are obese are disabled by their weight, so labelling them as such would be discriminatory.

**Where Do You Stand?**

In your opinion, what positive results could come from classifying individuals who are obese as disabled?

What negative consequences do you foresee from classifying individuals who are obese as disabled?

How would you determine whether an individual is disabled because of his or her weight?

Are there legitimate situations where a person who is obese should be labelled as disabled?

Do you think labelling obesity as a disability would alter the way our society behaves toward and perceives individuals who are obese? If so, in what way?

**CHAPTER 6 MANAGING YOUR WEIGHT: FINDING A HEALTHY BALANCE**

**163**

- **Student Health Today boxes:** A *Student Health Today* box stimulates critical and personal thinking through the presentation of a student-related issue relevant to the chapter's topic.

**Student Health TODAY**

**LGBTQ Youth and Suicide Prevention**

According to U.S. research among lesbian, gay, bisexual, transgender, and queer (LGBTQ) people, up to 40 percent of youth in grades 9 to 12 have considered suicide, compared with just over 10 percent of their heterosexual peers. Moreover, a study of 350 LGBTQ youth in Canada, the United States, and New Zealand found that over 4 out of 10 had considered suicide, and 1 in 3 had attempted suicide.

LGBTQ youth who come from highly rejecting families are more than eight times as likely to have attempted suicide as LGBTQ peers who reported no or low levels of rejection.

- Loss of a relationship
- Access to firearms and other lethal means

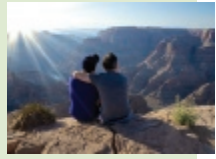
Protective factors to reduce suicide attempts include:

- Support through ongoing medical and mental health relationships
- Coping, problem-solving, and conflict-resolution skills
- Restricted access to highly lethal means of suicide
- Strong connections to family
- Family and parental acceptance of sexual orientation and/or gender identity
- School safety, support, connectedness and peer groups such as gay-straight alliances, LGBTQ groups, and so on
- Community support
- Positive role models and self-esteem

LGBTQ youth can experience unique challenges that may lead to depressive or attempting suicide.

LGBTQ organizations, and encourage consideration of how suicide prevention can be advanced within the context of each organization's mission and activities.

Sources: Board on Health Care Workforce, 2013; RHO Fact Sheet: LGBTQ Youth Suicide. Retrieved on October 11, 2016 from <http://www.carbonhealth.org>



- **Assess Yourself:** Every chapter and *Focus On* feature ends by encouraging the reader to “take charge” of his or her health. These textboxes include *Assess Yourself* questionnaires, a personal self-assessment tool.

**assess YOURSELF**

**TAKING CHARGE: Creating Better Relationships**

After reading this chapter, it should be apparent that relationships involve complex interactions between individuals. To create strong and effective relationships, you must carefully assess the values you put on friendships, significant others, and other forms of interpersonal interactions. Healthy relationships involve developing intimacy in several dimensions. It may be helpful for you to take a personal inventory of your relationships. To determine how healthy they are, consider the questions below:

- What relationships are most important to you right now?
- How have these relationships affected your relationships with others? Are you giving enough time to your relationships?
- Have you thought about how good your relationships are from an emotional perspective? A psychological perspective? A physical perspective? A spiritual perspective? Which of these factors is the most important to you? Why?
- What would an ideal set of relationships look like for you? How many close interactions would you want to make time for? What would be the nature and extent of these relationships?
- Are you comfortable with yourself sexually? Are you satisfied with your current choice(s) of sexual expression?
- What do you expect in a committed relationship? What would you be willing to accept in terms of attitudes and/or behaviours from your committed partner? What do you expect of yourself?
- What do you think are the three most important attributes of a friend? Do you display these attributes with your friends?
- How are you limited or bound by gender-role stereotypes?
- Have you considered your values or beliefs about what is most important to you in a prospective lifelong partner? Are you asking for the same attributes that you would be able to give to a partner?
- Do you make a habit of putting yourself in the other person's shoes when discussing how your actions may have made that person feel or how that person may be feeling in general?
- Do you take time to listen to your friends? Your parents? Your acquaintances? Your professors? Do you find yourself thinking about your own problems, thoughts, or issues when someone is trying to tell you about his or her problems?
- Do you reach out to friends who are having problems in their relationships?
- Are you supportive of couples having problems in their relationship without being judgmental or taking sides?
- Do you try to work through your problems with others, or do you run from, avoid, or get angry rather than try to talk through your difficulties?
- Are you supportive of counselling services and other campus and community services that offer help for people who have troubled relationships?
- Do you listen carefully to what your legislators propose in the way of family and individual policies and programs that may unfairly harm others?

**Is It Love or Infatuation?**

In the early stages, love and infatuation can be very similar. They both produce a characteristic rush of excitement as well as a strong desire to have more of the loved one's time, energy, and physical contact. The primary difference is that, with love, the feelings grow deeper as you get to know the person better and come to appreciate him or her more. With infatuation or a crush, you realize that Ms. or Mr. Right was not all you had thought. Taking the following test may help you determine whether it is the real thing or an infatuation. Respond honestly YES or NO to the following statements.

*(continued)*

**focus On**

# Diabetes



Like many college and university students, as well as most Canadian adults, Nora is overweight. She used to think it was no big deal—after all, there are lots of students like her and some are fatter! Nora planned to eat better and be more physically active as soon as she graduated and started to live “a normal life.” But last week, her mom called and told Nora that she just found out that she has type 2 diabetes. Her mother's voice sounded shaky as she told Nora about her own mother's death from kidney failure—a complication of diabetes—at age 52, a few months before Nora was born. When Nora got off the phone, she searched online for information about diabetes. What she discovered made her feel scared, too: her Aboriginal ethnicity, family history, high stress level and lack of sleep, excessive weight, and sedentary lifestyle all increased her own risk for diabetes.

The next morning, Nora stopped off at the campus health centre and made an appointment for diabetes screening. She was instructed to fast the night before and was scheduled for an appointment first thing in the morning. At her visit, the nurse practitioner took a blood sample. A few days later, she called with the news: Nora has prediabetes, and needs to make changes to reduce her risk for developing type 2 diabetes like her mom.

**DIABETES: INCIDENCE AND MORTALITY**

**Diabetes mellitus** is a disease characterized by a persistently high level of sugar—technically glucose—in the blood. Another characteristic sign is the production of an unusually high volume of glucose-laden urine, a fact reflected in its name—*diabetes* is derived from a Greek word meaning “to flow through,” and *mellitus* is the Latin word for “sweet.” The high blood glucose levels—**hyperglycaemia**—seen in diabetes can lead to a variety of serious health problems and even premature death. Diabetes is actually a group of diseases, each with its own mechanisms. Diabetes is a serious, widespread and costly chronic disease and if left untreated results in numerous health problems, including blindness, amputation, and kidney dysfunction, and ultimately, death.

Over the past 20 years, the number of Canadians 12 years and older diagnosed with diabetes has more than doubled. Current estimates (2012, the latest data available) indicate that 6.5 percent of the Canadian population has diabetes (Statistics Canada, 2013). At all ages except for 20 to 34 years, males are more likely to be diagnosed with diabetes than females. Further, diagnoses increase with age, with 8.6 percent of people between the ages of 45 and 64 years and 18.1 percent of all individuals over the age of 65 years having a positive diagnosis.

**Diabetes mellitus** A group of diseases characterized by elevated blood glucose levels.

**Hyperglycaemia** Elevated blood glucose level.

Alamy/Corbis/Outlines

**CHAPTER 13 CONTROLLING RISK FOR INFECTIOUS AND NONINFECTIOUS CONDITIONS 411**

- **Running Glossary of Key Terms:** Key terms are boldfaced in the text and defined in the margins on the page where they first appear.
- **Discussion Questions:** These questions encourage critical thinking about important concepts presented from a variety of angles.
- **Focus On:** After the last chapter of each part, these three- to five-page features present in-depth information relevant to the topic(s) of the section, including spiritual health, body image, STIs, sleep, diabetes, and financial health.

## INSTRUCTOR SUPPLEMENTS

Designed to facilitate lecture preparation and learning, a comprehensive set of ancillary material accompanies *Health: The Basics*, Seventh Canadian Edition. These instructor supplements are available for download from a password-protected section of Pearson Canada's online catalogue (<http://www.pearsoncanada.ca/highered>). Navigate to your book's catalogue page to view a list of those supplements that are available. Speak to your local Pearson sales representative for details and access.

### *Instructor's Manual*

This comprehensive manual, filled with material to enhance the course, includes chapter outlines; discussion questions; student activities including individual, community, and diverse population/nontraditional categories; and additional references for further information.

### *Computerized Test Bank*

Pearson's computerized test banks allow instructors to filter and select questions to create quizzes, tests, or homework. Instructors can revise questions or add their own, and can choose print or online options. These questions are also available in Microsoft Word format.

### *PowerPoint Slides*

Every chapter features a Microsoft PowerPoint® slide deck that highlights, illuminates, and builds on key concepts for lecture or online delivery. Educators can tailor each deck to their specifications.

### *Image Libraries*

Image libraries help with the creation of vibrant lecture presentations. Most figures, tables, charts, photos, and *Assess Yourself* features from the text are provided in electronic format, organized by chapter for convenience. These images can be imported easily into Microsoft PowerPoint®.

### *Learning Solutions Managers*

Pearson's Learning Solutions Managers work with faculty and campus course designers to ensure that Pearson technology products, assessment tools, and online course materials are tailored to meet your specific needs. This highly qualified team is dedicated to helping schools take full advantage of a wide range of educational resources, by assisting in the integration of a variety of instructional materials and media formats. Your local Pearson Canada sales representative can provide you with more details on this service program.

### *MasteringHealth*

MasteringHealth ([www.masteringhealthandnutrition.com](http://www.masteringhealthandnutrition.com) or [www.pearsonmastering.com](http://www.pearsonmastering.com)) is an online homework, tutorial, and assessment product designed to improve student performance. MasteringHealth coaches students through the toughest health topics. A variety of Coaching Activities guide students through key health concepts with interactive mini-lessons, complete with hints and wrong-answer feedback. Reading Quizzes ensure students have completed the assigned reading before class. ABC News videos stimulate classroom discussions and include multiple-choice questions with feedback for students. Assignable Behaviour Change Video Quiz and Which Path Would You Take? activities ensure students complete and reflect on behaviour change and health choices. NutriTools in the nutrition chapter allow students to combine and experiment with different food options and learn firsthand how to build healthier meals. MP3 Tutor Sessions relate to chapter content and come with multiple-choice questions that provide wrong-answer feedback. Learning Catalytics provides open-ended questions students can answer in real time. MasteringHealth also includes the Behavior Change Log Book.

### *Pearson eText*

The Pearson eText gives students access to their textbook anytime, anywhere. In addition to note taking, highlighting, and bookmarking, the Pearson eText offers interactive and sharing features. Instructors can share their comments or highlights, and students can add their own, creating a tight community of learners within the class.

## STUDENT SUPPLEMENTS

### *The Study Area of MasteringHealth*

The Study Area of MasteringHealth™ is organized by learning areas. *Read It* houses the Pearson eText as well as the Chapter Objectives and up-to-date health news. *See It* includes ABC News videos and the Behaviour Change videos. *Hear It* contains MP3 Tutor Session files and audio-based case studies. *Do It* contains the choose-your-own-adventure-style Interactive Behaviour Change Activities—Which Path Would You Take?, interactive NutriTools activities, critical-thinking Points of View questions, and Web links. *Review It* contains Practice Quizzes for each chapter, Flashcards, and Glossary. *Live It* will help jump-start students' behaviour change projects with interactive Assess Yourself Worksheets and resources to plan change.

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Micromonkey/Fotolia

# CHAPTER 1

## DISCOVERING YOUR PERSONAL RHYTHM FOR HEALTHY LIVING

### ← CONSIDER THIS . . .

Jonah is a 22-year-old, fourth-year university student who engages in very little physical activity, eats a lot of fast food, and is 20 kilograms overweight. A sensitive, caring young man, he has many close friends and volunteers at various agencies that help people in need. He enjoys nature and the inner peace he derives from sitting on the beach listening to the rolling surf or a quiet night by a campfire in the wilderness. He is a strong advocate for social justice and the preservation of the environment.

Gamesha is a 19-year-old, first-year university student who lives off campus. She tries to eat well most of the time, thinks she is fat, and walks two to four kilometres per day. She is shy and has not made many friends since coming to university. During a typical day, she goes to class, studies, watches TV or a movie, texts with her high-school friends and family, and spends time on Facebook. She likes cycling and usually rides each weekend on her own.

**D**o you know people similar to either Jonah or Gamesha? Who do you think is healthier? Why? What factors might contribute to their current attitudes and behaviours regarding their health? What actions might you suggest to help them achieve a more balanced “healthstyle” or one that is more in rhythm with what they are doing?

### LEARNING OUTCOMES

- Identify and define the seven dimensions of health and wellness.
- Discuss the goals and objectives of the Pan-Canadian Healthy Living Strategy.
- List the lifestyle behaviours related to living longer.
- Compare and contrast behaviour-change techniques that identify not only when, but how and why to change.
- Describe the role of decision making in making behaviour changes.



If you and your close friends listed the most important things in your lives, you might be surprised by what the others have to say. Some would likely include family, love, financial security, significant others, and happiness. Others might list health. Raised on a steady stream of clichés and slogans—“If you have your health, you have everything,” “Be all that you can be,” “Use it or lose it,” “Just do it!”—most of us readily acknowledge that good health is desirable. However, many of us struggle to define health, let alone good health. What does it mean to be healthy? How do you ‘get’ healthy? How can you maintain and enhance the positive attitudes and behaviours you already have toward your health and wellness? How can you change your not-so-good, health-detracting attitudes and behaviours?

This text provides you with health information consistent with making positive lifestyle decisions that support who you are and what you want to be. You can learn how to change your attitudes and behaviours to not only reduce your risk for many physical and mental health issues, but equally, or even more importantly, to positively influence how you feel right now. For the risk factors beyond your control, you can learn to react, adapt, and make optimal use of the resources available to you to create the best situation for you. Further, by making informed, rational decisions, you will be able to improve the quality—and quantity—of your life.

## WHAT IS HEALTH?

Although we use the term *health* widely, few people understand the broad scope of the word. For some, health simply means the antithesis of sickness or to be without disease. To others, it means being in good physical shape or having the ability to resist disease and illnesses. Still others include in the terms *wellness* or *well-being* a wide array of factors that lead to positive health status. Why all the definitions? Partly because of the different perceptions of an increasingly enlightened view of health that has evolved over time. As our understanding of illness has improved, so has our ability to understand the many nuances of health.

### Health and Sickness: Defined by Extremes

Before the late 1800s, people viewed health simply as the absence of diseases. A person was healthy if he or she was not suffering from a life-threatening infectious disease.

When deadly epidemics such as bubonic plague, pneumonic plague, influenza, tuberculosis, and cholera killed millions of

people, survivors were considered healthy and congratulated themselves on their good fortune. In the late 1800s and early 1900s, researchers discovered that the victims of these epidemics were not simply people who were unhealthy but rather victims of microorganisms found in contaminated water, air, and human waste. Public health officials moved swiftly to sanitize the environment, and, as a result, many people began to think of health as good hygiene. Practices such as sanitary disposal of wastes, hand washing, and other behaviours that promoted hygiene then became the harbingers of good health.

### Health: More Than Not Being Sick

Once scientists learned about the microorganisms that caused infectious diseases, dramatic changes occurred in the sickness profile of the Canadian population. In the early 1900s, the leading causes of death were infectious diseases such as tuberculosis, pneumonia, and influenza, and the average life expectancy at birth was only 58.8 years for men and 60.6 years for women (Statistics Canada, 1997). Improved sanitation brought about remarkable changes in life expectancy, and the development of vaccines and antibiotics added years to the average life span. According to **mortality** (death rate) statistics, people live longer now than at any other time in our history. Further, **morbidity** (illness) rates indicate that people are also sick less often from the common infectious diseases that devastated previous generations. Today, because most childhood diseases are curable and multiple public health efforts are aimed at reducing the spread of infectious diseases, many people are living well into their 70s, 80s, and even 90s. The average Canadian child born between 2007 and 2009 (the latest data available) has a life expectancy of 81.1 years—78.8 years for men and 83.3 years for women (Statistics Canada, 2012). There are approximately 5825 persons in Canada over the age of 100 (Statistics Canada, 2011). Also, the gender gap is slowly decreasing as men’s life



lrmphoto/Fotolia

*Good health refers to more than living long; it also means living well.*

**Mortality** Death rate.

**Morbidity** Illness rate.

expectancy increases at a greater rate than women's (Statistics Canada, 2012). However, although fewer people are dying from infections caused by bacteria, the number of people dying from chronic diseases continues to rise. Scientists have expressed concern that children born today may live a shorter life span than their parents, most likely because of higher rates of obesity (Daniels, 2006; Franks et al., 2010).

Just because we are living longer and not getting sick as often does not necessarily mean we are healthier. Further, there is more to enjoying life than simply prolonging it by doing whatever it takes to avoid disease or delay its onset. Quality of life is important too; living for the moment, making healthier choices, and feeling good now.

The World Health Organization (WHO), whose objective is "the attainment by all peoples of the highest possible level of health"\* (Beckington, 1975), defined **health** as ". . . complete physical, mental, and social well-being, not merely the absence of disease or infirmity" (World Health Organization, 1947). For the first time, health was defined as more than the absence of disease or a vital statistic indicating low mortality or morbidity rates. Although there is recognition given to factors beyond physical health with the inclusion of mental, social, occupational, environmental, and spiritual contributions to quality and quantity of life, some critics still argue that health is more than what is listed in the WHO's definition. Regardless of the various components included, health can be limited by income, education, occupation, access to medical care, environmental pollution, age, and sex. Since education is considered a determinant of health, increasing your knowledge may bring you one step closer to obtaining an optimal level of health.

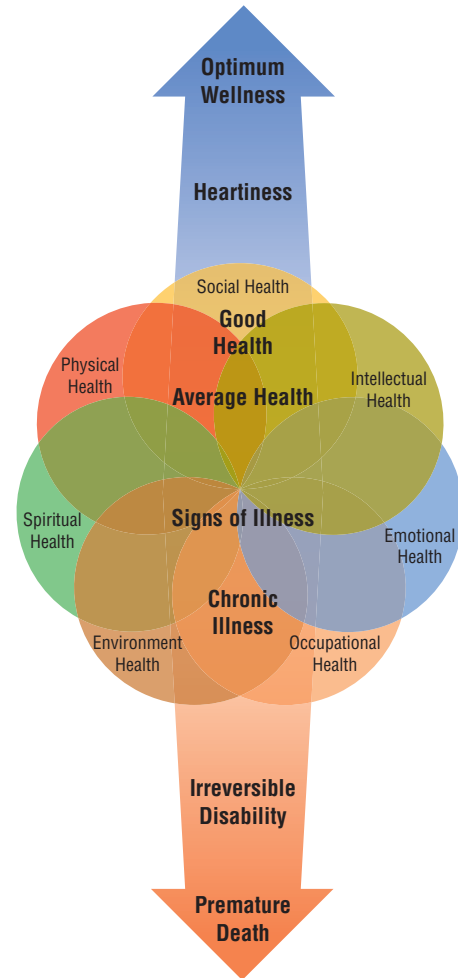
## Health as Wellness: Putting Quality into Years

Biologist and philosopher Rene Dubos provided a multi-dimensional definition of health, noting that it "involves social, emotional, mental, spiritual, and biological fitness on the part of the individual, which results from adaptations to the environment" (Dubos, 1968). The concept of adaptability or the ability to successfully cope with life's ups and downs is a key element of this definition. In recent decades, the term **wellness** has become popular. It includes the previously mentioned elements and implies as well that there are levels to obtain in each category: to achieve a high level of wellness, a person attempts to move progressively higher on a continuum of positive health indicators. Today, *health* and *wellness* are often used interchangeably to refer to the dynamic, ever-changing process of trying to achieve one's individual potential in each of

\* From "Our mission, our work," <http://www.searo.who.int/about/mission/en/>. Published by World Health Organization, © 2016.

**FIGURE 1.1**

The Dimensions of Health and the Wellness Continuum



the interrelated dimensions. These dimensions typically include those presented in Figure 1.1.

- **Physical health.** Includes physical characteristics such as body size and shape, sensory acuity, susceptibility to disease and disorders, body functioning, and recuperative ability. The definition also encompasses the ability to perform activities of daily living, such as getting out of bed in the morning, bending to tie shoes, and shoulder checking while driving. To obtain optimal physical health, you need to make good choices regarding your physical activity; dietary intake; sleep, alcohol, and tobacco consumption; and health care.

**Health** Dynamic, ever-changing process of trying to achieve individual potential in the physical, social, intellectual, occupational, emotional, environmental, and spiritual dimensions.

**Wellness** Similar to health, a dynamic, ever-changing process in which a person attempts to reach his or her potential in each of health's components.

- **Social health.** Refers to the capacity for satisfying interpersonal relationships, interacting with others, and adapting to various social situations. It also includes communication skills and other daily activities. To obtain optimal social health, you make choices regarding the social activities you engage in, becoming a better communicator—listener and speaker—and thinking before you speak.
- **Intellectual health.** Refers to the ability to think clearly, reason objectively, analyze critically, and use brain power effectively to meet life’s challenges. It includes learning from successes and failures and making responsible decisions. To obtain optimal intellectual health, you should learn from the mistakes you have made, think before you act, manage your time well, and so on.
- **Occupational health.** Refers to the satisfaction a person gets from his or her career or stage of career development. It also involves attaining and maintaining a satisfying balance between work and leisure. Part of obtaining optimal occupational health involves choosing a career that will fulfill you rather than simply provide a paycheck. As a student, you should view this dimension in terms of the satisfaction you experience as a result of your education in preparation for your future career.
- **Emotional health.** Refers to the “feeling” or emotional component of health and the ability to effectively and appropriately express those feelings. Feelings of self-esteem, self-confidence, self-efficacy, trust, love, and others are part of emotional health. To obtain optimal emotional health, you should learn how to express your feelings or emotions effectively, limit your worrying, and be receptive to change.
- **Environmental health.** Refers to an appreciation of the external environment and the role individuals play in maintaining, preserving, protecting, and improving it. Biophilia specifically refers to the instinctive bond between people and their environment (Barbiero, Berto, & Pasini, 2011). It also includes a student’s personal studying environment—the desk, room, lighting, noise level, comfortable emotional atmosphere, and so on. To obtain optimal environmental health, make choices regarding personal use as well as responsibility for advocating to others regarding preserving the environment.
- **Spiritual health.** Your spirit refers to the deepest or innermost part of you, the part that provides meaning, purpose, transcendence, connectedness and energy to your life (Polzer Casarez & Engbretson, 2012). We draw strength and hope from spirituality. It is through understanding our spiritual selves that we know who we are, what we value, and what our specific purpose is. Spiritual health may or may not involve a belief in a supreme being, or a specified way of living prescribed by a particular religion. Regardless of whether you believe in a higher entity, spiritual health relates to your personal relationships with others and/or being at peace with nature. Reflecting about who you are and who you want to be, your values and beliefs, and whether or not the choices you make reflect your values and beliefs is part of obtaining optimal spiritual health.



George S. de Blonsky/Alamy Stock Photo

*Having the motivation to improve the quality of life within the framework of your unique capabilities and limitations is part of achieving optimal health and wellness.*

Whether the term used is *health*, or *wellness*, or *health and wellness*, the focus is on personal attitudes and behaviours to achieve optimal well-being within a realistic framework of individual potential. In Figure 1.1, in addition to the dimensions of health and wellness, there is a continuum from illness to optimal well-being. Where you are on this continuum may vary slightly from day to day, week to week, month to month, and year to year. That said, if you persist in your attempts to change attitudes and behaviours to reduce risk and/or improve health, your chances of remaining on the positive end of the continuum greatly increase. Each of us must try to achieve this optimal level of being in a sometimes hostile environment, and come to terms with obstacles by focusing on our positive attributes whenever possible, changing what negative aspects we

can, and learning to recognize and manage the aspects we cannot change.

Individuals who are well take an honest look at their capabilities and limitations and make an effort to change that which is not at its optimum and is within their control. They attempt to achieve a sense of rhythm in each dimension of health and wellness in efforts to attain or maintain a positive position on the imaginary wellness continuum. Many people believe wellness can best be achieved by adopting a holistic approach in which emphasis is placed on integrating mind, body, and spirit in a rhythmic interplay such that they experience optimal health and wellness in each phase of their lives. The disability component of the wellness continuum in Figure 1.1 does not imply that a person with a physical and/or intellectual disability is unwell and cannot achieve wellness. Individuals with disabilities can be healthy in all aspects of wellness—within their potential, recognizing physical and/or intellectual limitations. In contrast, a person who spends hours in front of a mirror lifting weights to perfect the size and shape of each muscle may be less healthy in the other aspects of wellness—even though he or she has no limitations regarding his or her physical and intellectual capacity.

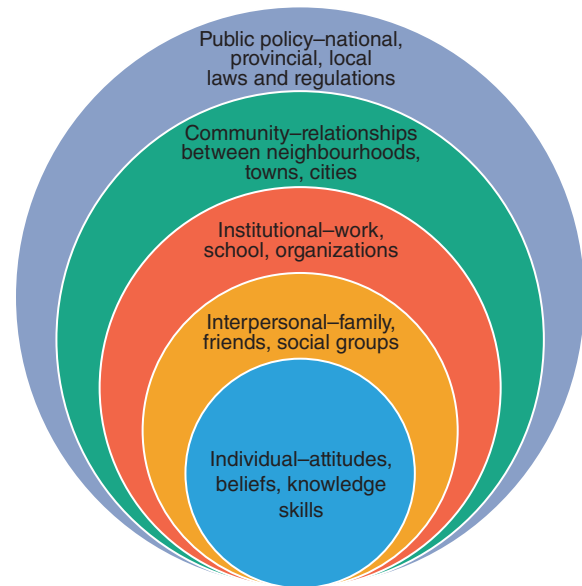
Typically, the closer you get to your potential in the seven components of wellness, the healthier you are. Keep in mind that optimal health and wellness is not a static state that one achieves, but rather a dynamic state with various challenges and supports arising during various stages of your life. These supports and challenges to your health and wellness can in fact happen on a daily, weekly, monthly, and yearly basis. As such, try to perceive your health and wellness in a continual flux where you continuously work on making the best choices to find a rhythm and flow for living your best in the moment while recognizing the influence of your choices on your future health and wellness.

Complete the ‘How Healthy Are You?’ questionnaire at the end of this chapter to get a better perspective of your capacity and potential in each of the wellness dimensions discussed in this section.

## Health Promotion: Helping You Stay Healthy

In discussions of health and wellness, the term **health promotion** is often used. Health promotion generally refers to all efforts made to encourage healthy behaviours with a goal of improving the health of an individual or population (World Health Organization, 2013). Health promotion requires educational, organizational, environmental, political, and financial supports to help individuals and groups build positive health attitudes and behaviours and to change negative ones. In other words, health promotion does not just involve telling people

**FIGURE 1.2**  
Socio Ecological Model



Source: McLeroy, K. R., Bibeau, D., Steckler, A., & Glanz, K. (1988). An Ecological Perspective on Health Promotion Programs. *Health Education & Behavior*, 15(4), 351–377. <http://doi.org/10.1177/109019818801500401>.

to lose weight and to eat better. Efforts are also made to promote learning (*educational supports*), provide programs and services that encourage participation (*organizational supports*), establish rules governing attitudes and behaviours and supporting decisions to change (*environmental policies and supports*), and provide monetary incentives or disincentives to motivate them toward healthful decision making (*financial supports or barriers*). These supports are not independent, but rather crosscutting and must deal with many of the same issues, including gender inequity, poverty, and the social determinants of health in the efforts made at health promotion (Gould, Fleming, & Parker, 2012). Thus our health is influenced by multilevel factors in the environments where we work, live, and play. Figure 1.2 depicts the multiple levels of factors that can interact to influence our health

In short, health promotion enhances the likelihood that, once a person decides to change a behaviour, conditions are optimal for successful implementation of that change. In health promotion, healthy people at risk for disease are identified and efforts are made to motivate them to improve their health. Further, various health promotion efforts encourage those whose health and wellness are already sound to maintain and improve their relevant health-enhancing activities for immediate and long-term health.

**Health promotion** Various efforts aimed at encouraging individuals and communities to make healthier choices.

An example of health promotion is the *Integrated Pan-Canadian Healthy Living Strategy 2005* (ACPHHS, 2006). This strategy is the result of an extensive, deeply involved and involving pan-Canadian consultation process. Rather than focusing on individual behaviour change, the Healthy Living Strategy takes a population health approach, recognizing that sustainable changes in individual behaviours are difficult to achieve without addressing living and working conditions. Thus, one of the key elements of the Strategy is to recognize and address linkages between lifestyle choices and the surrounding social, economic, and environmental influences (ACPHHS, 2006). Actions proposed through this Strategy should improve the health status and health outcomes of the Canadian population (ACPHHS, 2006). Further, the proposed actions, if implemented, should reduce the current burden and contribute to the efficiency and sustainability of Canada's universal health-care delivery system.

Through “healthy living targets” the Strategy emphasizes healthy eating and physical activity, and their relationship to healthy weight. As mentioned, a population health approach guides the Healthy Living Strategy. Using this approach, healthy living refers to the attitudes and behaviours that improve or maintain the health of the entire population and its subgroups (ACPHHS, 2006). When this approach is applied to individuals, healthy living refers to enhancing healthy behaviours, making healthy choices, and living in healthy ways. At all levels, the social, economic, political, cultural, and environmental conditions must be supportive of healthy living.

The Strategy has since been supported and enhanced through the creation and implementation of two more federal, provincial, and territorial government initiatives (Public Health Agency of Canada, 2010). The first is the “Declaration on Prevention and Promotion” in which the Ministers of Health and Healthy Living/Promotion agreed to work together to prioritize health promotion and the prevention of disease and injury. The second is “Curbing Childhood Obesity: A Federal, Provincial, and Territorial Framework for Action to Promote Healthy Weights” (Public Health Agency of Canada, 2011a). The focus of this initiative, as noted in the title, is to reduce childhood obesity by creating environments that support physical activity and healthy eating, identifying and addressing

risk for obesity early, and increasing the availability and accessibility of healthy foods (Public Health Agency of Canada, 2011a).

Whether we use the term *health* or *wellness*, we are talking about a person's overall responses to the everyday

challenges of living. An occasional dip into the ice cream bucket, a missed walk, an outburst of anger, or other deviations from optimal behaviours should not be viewed as major failures in attaining or maintaining your health and wellness. In fact, the ability to recognize that each of us is an imperfect being trying to adapt in an imperfect world signals individual well-being. Further, living life means that you savour some less healthy foods in smaller quantities, infrequently, and that there are times when your usual level of physical activity is not possible or you get a short night's sleep. This means that it is your *overall* approach or rhythmical interplay of healthy eating, physical activity, and other lifestyle habits that is of greater importance than any one element in that approach, and this should be your focus in your efforts to attain and maintain optimal health and wellness.

We must also remember to be tolerant of others trying to improve their health. We need to be supportive, understanding, and nonjudgmental in our interactions with those attempting to make positive changes to their lifestyle. Further, health bashing—intolerance or negative feelings, words, or actions aimed at people who fail to meet our expectations of healthy attitudes and behaviours—indicates deficiencies in our personal intellectual, mental, social, and spiritual dimensions of health.

## Prevention: The Key to Future Health

Prevention means taking action now to avoid becoming sick or less well later. Getting immunized against diseases such as polio, measles, mumps, and hepatitis; not smoking or chewing tobacco; practising safer sex; eating well; engaging in regular physical activity; and taking other preventive measures constitute **primary prevention**—actions designed to prevent health problems. This would include programming which provides opportunities for children to engage in health promoting behaviours. For example, school breakfast programs or The Good Food Box, a community based initiative that provides fresh fruits and vegetable at an affordable price. **Secondary prevention** refers to the early recognition of a health issue and intervention to eliminate or reduce it before an even more serious illness develops. Modifying your dietary intake and physical activity levels in response to elevated blood-cholesterol or blood-glucose is an example of secondary prevention.

At least two-thirds of deaths in Canada are a result of cardiovascular diseases, cancer, type 2 diabetes, and respiratory diseases (Public Health Agency of Canada, 2011b; World Health Organization, 2013). These chronic diseases share common preventable risk factors: physical inactivity, poor dietary intake, and tobacco use. Further, these risk factors are influenced

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**Primary prevention** Actions designed to reduce the chances of a health issue arising, or perhaps to delay the age at which it occurs.

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**Secondary prevention** Intervention early in the development of a health problem to reduce symptoms or to halt or at the least delay its progression.

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by income, employment, education, geographic isolation, and social exclusion. Common sense suggests that health promotion dollars should focus on the primary and secondary prevention of these and other lifestyle-related diseases. However, government money is primarily allocated for research and **tertiary prevention**—that is, treatment or rehabilitation efforts made after a person has become sick. (This is clearly a misnomer, since tertiary prevention is not really prevention at all, but rather a response *after* illness has developed.) In addition, although the intent of tertiary prevention is to prevent the further development or progression of the disease (for example, chemotherapy and radiation therapy for individuals with cancer, or coronary bypass surgery for people with cardiovascular disease), it is more costly and less effective in promoting health than primary and secondary prevention.

## SEX DIFFERENCES

Although much of male and female anatomy is the same, it is clear that many major medical differences exist. Many diseases—osteoporosis, arthritis, headaches, thyroid disease, lupus, and Alzheimer’s disease, for example—are far more common in women than in men. Heart disease, high blood pressure, and stroke are more common in men—at least until women reach menopause. About 8 percent of the population is affected by autoimmune diseases, but 78 percent of those affected are women (Medicinenet.com, n.d.). Further, diseases may manifest differently in women than in men—for example, symptoms of a heart attack in women are more vague than in men. Finally, although women live longer than men, they do not necessarily have a better quality of life (Miller, 1994).

Sex bias has been identified as a serious weakness in medical research. In one study that reviewed medical journals in Canada and the United States, four factors reflecting bias were identified: androcentricity, overgeneralization, gender insensitivity, and double standards (Eichler, Reisman, & Borins, 1992; Ruiz & Verbrugge, 1997). *Androcentricity* refers to viewing the world from a male perspective. *Overgeneralization* occurs when a study explores issues for one sex and generalizes the findings to both sexes. (The same thing can be said for age bias—that is, conducting research on 20-year-olds and applying the results to all adults.) In the past, studies that examined the precise effects of a drug or treatment did not include women because researchers did not want to deal with potential issues related to hormonal fluctuations. *Sex insensitivity* means overlooking sex as an important variable. An example of sex insensitivity is research on symptoms of heart disease in men and women where the data

from both sexes is analyzed in combination, disregarding potential similarities and differences. When differences do not exist between men and women, the data can be collapsed and analyzed together; otherwise, sex should be a controlled variable with the data analyzed separately. The term *double standards* refers to the “evaluation, treatment or measurement of the identical behaviours, traits or situations by different means” (Eichler, Reisman, & Borins, 1992). In 1996, a policy on clinical trials stated that if the product is likely to be used by women, then the testing must also be done on women. There has been increasing pressure placed on government to provide a more balanced approach to funding women’s health programs. One example of increased activism is in the area of breast cancer. In Canada, one in nine women will be diagnosed with breast cancer and one in 29 will die from it (Canadian Cancer Society, 2013), yet it was not until the mid-1990s that any significant amount of research was conducted on the causes, treatments, and social and psychological concerns of women diagnosed with it.

## IMPROVING YOUR HEALTH

### Benefits of Achieving Optimal Health

Figure 1.3 provides an overview of the leading causes of death in Canada. Cancer is now the leading cause of mortality (death) for men and women (Statistics Canada, 2012), though in the past, heart disease was the leading cause of death in men and women. This change is likely due to the improvements in medical technology regarding diagnosis and treatment of various heart diseases. (See Chapter 12 for more details.)

While you cannot change your genetic history, and you may have little control over the medical services available in your area, you can influence your present and future health status by the attitudes and behaviours you choose today. Changing your lifestyle to improve your health status will not only lead to improved quality of life today but also reduced risk for cancer, cardiovascular disease, and other major chronic diseases. Although the reduction of risk for disease is a laudable reason for making lifestyle changes, this reason seldom resonates with young people—after all, a disease you may get when you are 50, 60, or 70 years old does not seem to matter as much when you are 18 to 22 years of age! The following reasons may resonate with you as to why you should focus on your health today:

- greater energy levels and increased capacity for and interest in having fun

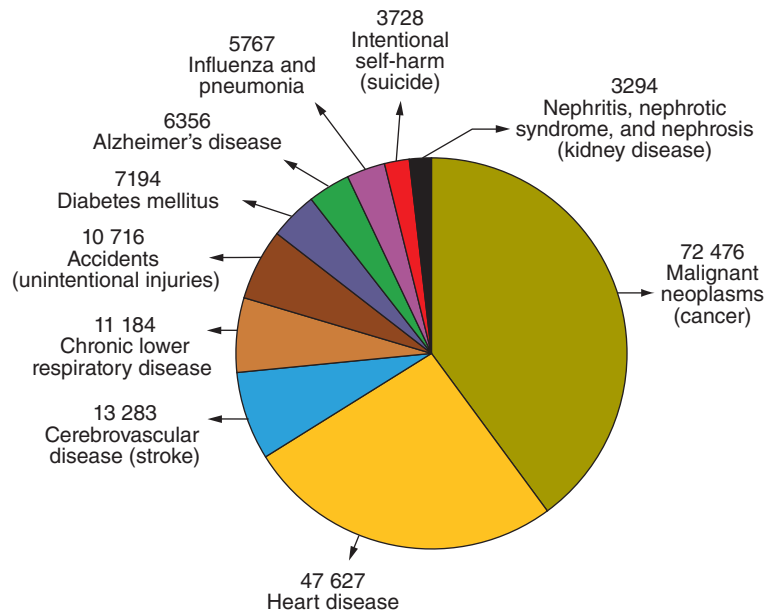
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**Tertiary prevention** Treatment or rehabilitation efforts aimed at limiting the effects of a disease.

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## FIGURE 1.3

Leading Causes of Death Among Adults in Canada, 2012



Source: Data from Table 102-0561. "Leading Causes of Death by Sex (Both Sexes)" Statistics Canada. Retrieved from [www5.statcan.gc.ca/cansim/a26?lang=eng&id=1020561](http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=1020561).

- a stronger immune system, which enhances your ability to fight infections, including the flu and common cold
- improved self-confidence, self-concept and self-esteem, and self-efficacy
- enhanced relationships with others due to better communication and "quality" time
- better sleep; longer and more restful sleep
- increased ability to handle the physical and mental reactions to stress
- a reduced reliance on the health-care system
- improved cardiovascular functioning, thus an enhanced capacity to be physically active
- increased muscle tone, strength, flexibility, and endurance, which results in ease of movement, improved physical appearance, and self-esteem
- a more positive outlook on life, fewer negative thoughts, and an ability to view life as challenging and see negative events as opportunities for growth
- improved environmental sensitivity, responsibility, and behaviours
- enhanced levels of spiritual health, awareness, and feelings of oneness with yourself, others, and the environment

## Preparing for Behaviour Change

While it is easy to list things that one *should* do and even things that one may really *want* to do, behaviour change is not easy. It does not matter where you are on the health and wellness continuum, you can start wherever you are at and make changes to improve your health today. The key is to decide what needs to change, determine the actions necessary to make the change, set up a plan of action, put the plan into action, and then reinforce and maintain the plan. First, it is important to take a closer look at the factors that may contribute to your current health attitudes and behaviours.

In regard to behaviour change, Mark Twain said "habit is habit, and not to be flung out the window by anyone, but coaxed downstairs a step at a time." In other words, changing your attitudes and behaviours into healthier ones is a time-consuming and difficult process. The chance of successfully changing attitudes and behaviours improves when you make gradual changes that give you time to unlearn negative patterns and substitute positive ones. We have not yet developed a foolproof method for effectively changing attitudes and behaviours, and it may be, in fact, that different approaches work effectively for different individuals. To understand how the process of behaviour change

# Student Health TODAY



## Making Health-Wise Choices

Although you likely know the importance of your health, you may find it difficult to make the decisions needed to be and remain healthy. The following behaviours or lifestyle choices will help you not only live longer, but also live “better”:

- getting a good night’s sleep (6–9 hours)
- eating well regularly, which includes:
  - eating breakfast every day
  - spreading caloric intake throughout the day (at least 3–5 meals and snacks)
  - reducing your intake of fat, salt, sugar, and processed foods
- eating plenty of vegetables and fruit, choosing whole grain breads and cereals
- maintaining your weight (within 2–5 kg of ideal)
- participating in regular moderate intensity physical activities (3–7 times per week)
- regular brushing and flossing of teeth
- practising safer sex
- avoiding tobacco products
- limiting your intake of alcohol in terms of frequency and quantity of drinking
- regular self-exams and medical checkups (including the dentist)
- wearing your seatbelt, adhering to the speed laws, and using only hand-free options for cellphones while driving

Although health professionals can statistically assess the health benefits of the previous behaviours—particularly in regards to living longer—there are several other actions that,

while perhaps not increasing quantifiable “years added to life,” may significantly result in “life added to years.” These include:

- controlling the real and imaginary stressors in your life
- maintaining meaningful relationships
- making time for yourself and being as kind to yourself as you are to others
- participating in at least one fun activity each day
- respecting the environment and the people in it
- considering the alternatives and/or consequences when making decisions and assessing how your actions affect others
- valuing each day and making the best of each opportunity
- viewing your mistakes and those of others as opportunities to learn and grow
- understanding the health-care system and using it wisely

works, we must first identify specific behaviour patterns and try to understand the reasons for them.

## Factors Influencing Behaviour Change

Figure 1.4 identifies three categories of factors involved in your attitudes, behaviours, and behaviour-change decisions.

### Predisposing Factors

Our life experiences, knowledge, cultural and ethnic inheritance, and current beliefs and values are *predisposing factors*. These are factors that are likely to lead to a particular behaviour. These factors that predispose you to certain attitudes and behaviours include your age, sex, ethnicity, income, family, education, environment, and access to health care. For example, if your parents smoked, you are 90 percent more likely to start

smoking than someone whose parents did not. However, it may only be the mothers’ smoking behaviour that has an impact on their adolescent children’s smoking behaviour (Harakeh, Scholte, & Vermulst, 2010). It should also be noted that the family influence on smoking behaviour also relates to family poverty as well as family processes such as monitoring and bonding (Hill et al., 2005). It is further estimated that if your peers smoke, you are 80 percent more likely to smoke than someone whose friends do not. A discerning factor here is whether this effect is due to peer influence or peer selection (Scherrer et al., 2012).

### Enabling Factors

Skills or abilities; physical, mental, and intellectual capabilities; and resources and accessible facilities that make health decisions more convenient or difficult are *enabling factors*. Positive enablers encourage you to carry through on your intentions. Negative enablers work against your intentions to change. For example, if you would like to join a local fitness centre and