Lifetime Physical Fitness and Wellness A Personalized Program 14th edition Hoeger Solutions Manual

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CHAPTER 2
BEHAVIOR MODIFICATION

"To reach a goal you have never before attained, you must do something you have never before done." –Richard Scott

OBJECTIVES

- Learn the effects of environment on human behavior.
- Understand obstacles that hinder the ability to change behavior.
- Explain the concepts of motivation and locus of control.
- Identify the stages of change.
- Describe the processes of change.
- Explain techniques that will facilitate the process of change.
- Describe the role of SMART goal setting in the process of change.
- Be able to write specific objectives for behavioral change.

MINDTAP

Ask your students to visit MindTap to:

- Prepare for a healthy change in their lifestyle.
- Check their understanding of the chapter material by taking the chapter 2 pre-test and post-test.
- Watch the chapter 2 video and take the quiz.
  Answers to the video quiz:
  1. b
  2. e
  3. system for getting everything done

FREQUENTLY ASKED QUESTIONS

Why is it so hard to change? Our behaviors follow core values that do not promote the change, and we tend to be pessimistic about successful change.

What triggers the desire to change? The motivation to change usually comes from an internal emotion that puts (a change in) core values into motion. Often, discomfort is a great motivator. Relationships affect motivation to change.

REAL LIFE STORY

Sharon's initiation into, and lifetime with, jogging.

EXPANDED CHAPTER OUTLINE

I. Introduction
   A. Convincing research results of the value of physical activity and healthy lifestyle are not enough to bring healthy lifestyle practices into action.
      1. Nearly all Americans accept that exercise is beneficial and should be part of their lives.
      2. New and returning exercisers are at risk for early dropout (Figure 2.1).
   B. The individual must first take a critical look at personal behaviors and lifestyle with an open mind to change.

II. LIVING IN A TOXIC HEALTH AND FITNESS ENVIRONMENT
   A. The environment influences our behaviors, personal lifestyle, and health each day.
      1. Influences come from family, friends, peers, schools, workplaces, television, radio, and movies.

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B. Environmental Influences on Physical Activity
    1. To be considered active, health experts recommend the equivalent of five to six miles of walking (10,000–12,000 steps) each day.
    2. Modern-day conveniences are reducing daily caloric output.
C. Environmental Influence on Diet and Nutrition
    1. Caloric intake is on the rise.
        a. The United States Department of Agriculture states that the American food supply contains a surplus of 500 calories per day, per person
        b. The 20-year trend of additional daily calories: Men consume an additional 170 calories, and women consume an additional 335 calories.
    2. Weight gain is accepted because everyone is doing it.
        a. Habits are difficult to change.
        b. Acquiring positive behaviors that will lead to better health and well-being is a long-term process and requires continual effort.

III. VALUES AND BEHAVIOR
A. Values influence what we do.
B. They are the core beliefs and ideals that people have.
C. Values are established through experience and learning (Figure 2.2).
D. Also learned through examples and role models.

IV. YOUR BRAIN AND YOUR HABITS
A. Habits are usually based on rewards.
    1. The corpus striatum of the brain is activated by events that are rewarding, exciting, unexpected, and intense as well as by the associated cues from the environment.
    2. Dopamine is abundant in the corpus striatum and is involved in forming habitual responses to these stimuli.
B. Steps to change unwanted behaviors that have become habitual:
    1. Recognize that there are biological processes that lead to behavioral habits.
    2. Change values, whether through education or environmental cues.
    3. Consciously prepare to eliminate the unwanted habit.
    4. Repeat the new behavior under similar circumstances.
    5. Prepare a response when stress triggers old bad habits.

V. WILLPOWER
A. Self-restraint against impulses can be built, like a muscle, if built slowly and gradually.
B. Willpower is a limited daily resource—highest in the morning and depleted as we use it throughout the day.
C. **Willpower reserve** can be increased through exercise, balanced nutrition, a good night's sleep, and quality time spent with important people in your life.

VI. BARRIERS TO CHANGE
A. The most common reasons people make unhealthy choices are:
    1. Lack of core values.
    2. Procrastination.
    3. Preconditioned cultural beliefs.
    4. Gratification.
    5. Risk complacency.
    6. Complexity.
    7. Indifference and helplessness.
    8. Rationalization.
    9. Illusions of invincibility.
    10. Overplanning.
B. The sooner a healthy lifestyle program is implemented, the greater the health benefits and quality of life ahead.

Critical Thinking: What barriers to exercise do you encounter most frequently? How about barriers that keep you from managing your daily caloric intake?

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VII. SELF-EFFICACY
- A. **Self-efficacy** is the belief in one's own ability to perform a given task. It is at the heart of behavioral change.
- B. Sources of self-efficacy include mastery experiences, vicarious experiences, verbal persuasion, and physiological cues.

VIII. MOTIVATION AND LOCUS OF CONTROL
- A. **Motivation** is the drive that dictates human behavior.
- B. **Locus of control** is the extent to which individuals believe they can influence the external environment.
    1. **Internal** locus of control results when individuals believe they have control over events in life.
    2. **External** locus of control results when individuals do not believe their behavior will alter events in life; rather, events happen by chance or by some other external reason.
- C. Three major impediments to improving internal locus of control
    1. Problems of competence.
    2. Problems of confidence.
    3. Problems of motivation.

IX. CHANGING BEHAVIOR

(Behavior Modification Box: Steps for Successful Behavior Modification)
- A. The first step in behavior change is to recognize there is a problem. Behavior change categories include:
    1. Stopping a negative behavior.
    2. Preventing relapse of a negative behavior.
    3. Developing a positive behavior.
    4. Strengthening a positive behavior.
    5. Maintaining a positive behavior.
- B. The two-stage model is the simplest behavior change model.
    1. The change is made, or the change is not made.
    2. Individuals might lack the knowledge of how to make the change.
- C. Behavior Change Theories
    1. **Learning Theories**
        a. Most behaviors are learned and reinforced with multiple "small" cues.
        b. Change can occur if a few of the cues are modified a little at a time.
    2. **Problem-Solving Model**
        a. Behaviors result from decisions made.
        b. Change can occur if the individual understands why a different decision is desired and then has analyzed how to make the change.
    3. **Social Cognitive Theory**
        a. Behaviors result from an interaction between the environment, the individual's self-efficacy (a person's belief in the ability to perform the task at hand), and the characteristics of the behavior.
        b. Change can occur if the individual creates a reinforcing environment that encourages a new behavior. This can be done by raising self-efficacy, understanding how to change the specific behavior, and participating in a world that approves of this behavior.
    4. **Relapse Prevention Model**
        a. Change in behavior can be predicted and prevented.
        b. High-risk situations can be identified and plans developed to prevent **lapses** and **relapses**.
    5. Humanistic Theory of Change
        a. The aim is to be self-actualized: being independent, creative, able to set goals, and accepting of self.
        b. Motivation for change comes from the hierarchy of needs to find approval, recognition, achievement, and fulfillment of potential.

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6. **Transtheoretical Model**
    a. Change in behavior is successfully willed through a predictable series of stages and processes.
    b. Progress can be identified by what stage and processes the individual is experiencing.
    c. The **Transtheoretical Model** illustrates six stages of change that usually occur in a successfully willed process of behavior change (Figure 2.3 and Activity 2.2).
        i. Stage 1: **Precontemplation** -The status of not considering or unwilling to change.
        ii. Stage 2: **Contemplation -** Acknowledgment that a behavior change is needed in the next six months.
        iii. Stage 3: **Preparation -** Seriously considering and planning behavior change in the next month.
        iv. Stage 4: **Action -** Following the prescription for change.
        v. Stage 5: **Maintenance -** The behavior change is continued for up to five years.
        vi. Stage 6: **Termination/Adoption -** Maintaining the change for more than five years.
        vii. Relapse **-** To slip into unhealthy behavior or to regress in the stages of the Transtheoretical Model (Figure 2.5).

X. THE PROCESS OF CHANGE
A. The Transtheoretical Model also includes processes of change that typically occur within each stage of change (Table 2.1).
B. Consciousness-Raising
    1. **Behavior modification** is the process to permanently change negative behaviors in favor of positive behaviors that will lead to better health and well-being.
    2. Defined: Obtaining information as a first step in behavior modification.
    3. The individual may remain unaware or underaware that change is needed.
C. Social Liberation
    1. Defined: Societal examples of behavioral problems and solutions.
    2. Examples: Pedestrian walks for safety, no-smoking areas, civic organizations, and self-help groups.
D. Self-Analysis
    1. Defined: A decisive desire to change an identified behavior.
    2. Results from a pro–con list showing how benefits outweigh costs.
E. Emotional Arousal
    1. Defined: Experiencing and expressing feelings about the problem.
    2. Results from outcome dramatizations or real-life observations of other people in similar circumstances.
F. Positive Outlook
    1. Defined: Taking an optimistic approach to change by believing in self.
    2. Results from personal experience and focusing on benefits of change.
G. Commitment
    1. Defined: Accepting the responsibility to change.
    2. Goals and plans of action are identified.
    3. Accountability is established to reinforce resolve to change.
H. Mindfulness
    1. Defined: Being aware of thoughts and choices is a powerful tool.
    2. A common technique of mindfulness is referred to as “urge surfing,” which directs the person to notice the urge, pay attention to the way the urge feels as it builds, and then simply continue noticing it as the urge subsides.
I. Behavior Analysis
    1. Defined: Studying actual behaviors that should change and how they interact with circumstances or other behaviors.

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2. Examples: Finding out what foods consumed are high fat or logging the day to determine when uncontrolled eating occurs.

J. Goals
   1. Defined: Verbalizing specific outcomes and action plans.
   2. Deadlines, measurement of behavior, and evaluation procedures are outlined.

K. Self-Reevaluation
   1. Defined: Rechecking resolve to change.
   2. Pros and cons are rewritten and feelings are analyzed.

L. Countering
   1. Defined: Substituting healthy behaviors for a problem behavior.
   2. Example: Exercise instead of sedentary living, smoking, stress, or overeating.

M. Monitoring
   1. Defined: Record-keeping or other observation discipline to increase awareness of progress.
   2. Examples: Counting servings from each food group increases practice to behave according to plans.

N. Environmental Control
   1. Defined: Restructuring the physical surroundings to avoid problem behavior and decrease temptations.
   2. Examples: Buying healthier foods, not going to tempting locations, laying-out exercise clothes, setting a timer on the television.

O. Helping Relationships
   1. Defined: Surrounding oneself with people who encourage the change.
   2. Example: Joining a support group of those who care about each other and are making (or have made) the same change.

P. Rewards
   1. Defined: Use of positive reinforcement when goals are achieved.
   2. Reward objects can be gifts or experiences.

Critical Thinking: Your friend John is a 20-year-old student who is not physically active. Exercise has never been a part of his life, and it has not been a priority in his family. He has decided to start a jogging and strength-training course in two weeks. Can you identify his current stage of change and list processes and techniques of change that will help him maintain a regular exercise behavior?

XI. TECHNIQUES OF CHANGE

A. Defined: The specific ways processes are accomplished.
B. Examples: Tables 2.2 and 2.3 give techniques and classifications for the processes.
C. Goal Setting and Evaluation (Activity 2.3: Setting SMART Goals)
   1. Essential for initiation of change.
   2. Goals motivate behavior change and provide a plan of action.
D. **SMART Goals** (Figure 2.7): Goals are most effective if they are:
   1. **S**pecific
      a. Write down the goal exactly and in a positive manner.
      b. Example: "I will reduce my body fat to 20 percent (137 pounds) in 12 weeks."
      c. Now write the objectives (supportive behaviors) that help meet the goal.
   2. **M**easurable
      a. The behavior to change should have an index of evaluation.
      b. The behavior to change should be assessed on a time schedule.
   3. **A**cceptable
      a. Do I have the time, commitment, and necessary skills?
      b. Can the roadblocks to change be reasonably overcome?
   4. **R**ealistic
      a. Goals should be within reach.
      b. Focus on short-term goals that move change closer to the ultimate long-term goal.

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c. Misconceptions must be corrected with education.
d. Identify solutions to anticipated behavior change roadblocks.
e. Monitor progress to reinforce behavior change.

5. **T**ime-specific
   a. The goal should have a deadline.
   b. Other time-oriented aspects could also be included.

E. Goal Evaluation
1. Is the goal still feasible?
2. Do any methods/programs need to be changed?
3. Does periodic measurement motivate me to keep working on the change?

CHAPTER 2
BEHAVIOR MODIFICATION
CLASSROOM ACTIVITIES

CARTOONS

Use popular cartoons to illustrate behavior modification.

PROGRESS REPORTS

Give simple prospective and retrospective quizzes to keep the students reading and thinking.
1. Put multiple-choice, true–false, or short answer questions on a half-sheet of paper.
2. This requires students to make a commitment to some controversial choices.
3. Use the questions as an outline for topics of the day.

THE TRANSTHEORETICAL MODEL EXAMPLE (Figures 2.3, 2.4, 2.5; Table 2.1)

1. Show the Stages (Figures 2.3–2.5) and the Processes (Table 2.1) simultaneously on the overhead projector (Acetates or PowerPoint).
2. Give an operating example. This can be described or a "guest" can pantomime it.
3. Then ask students to determine how particular processes play out within the stages.

COLLEGE LIFESTYLE CHANGE

1. Ask students how college life is different from high school life.
2. What lifestyle choices are they now making differently?
3. Were the changes due to contemplated decisions or otherwise?

WHERE AM I NOW? (Figure 2.6)

1. Ask students to think about a lifestyle-related issue or introduce one to which they all will respond.
2. For this issue, what stage and what processes of the Transtheoretical Model are they now engaging in?
3. What would cause them to change stages or processes?

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WHAT IS THE BARRIER?

1. Ask students to write down something they have desired to change.
2. What has been the reason for not making the change? Do the barriers relate to finances, attitudes, discipline, time, priorities, addictions, etc.?
3. After identifying the barrier, what would make it feasible to attempt a change?
4. Allow individuals to share their work.

PSYCHING THE PRECONTEMPLATORS

1. Define the condition of precontemplation, according to the Transtheoretical Model.
2. Ask what reasons precontemplators give for being in that state.
3. Two categories will arise: passive (being unaware of the need to change) and active (not caring to change).
4. Discuss how to "help" each type of precontemplator.

WHAT MAKES YOU CHANGE? (Frequently Asked Questions)

1. Ask students to brainstorm what makes people change.
2. Reasons will circle around the general area of discomforting feelings.
3. Explore that these discomforts can come from all areas of wellness (physical, emotional, intellectual, social, spiritual, environmental, or occupational).
4. Then ask if purposely changing one of the environments of wellness will help make change possible.
5. Give this example and then ask for more possibilities: To help stop smoking, avoid smoking friends or make friends with those who don't smoke.
6. Reinforce that intentional efforts are required to change, not wishing or hoping things were different.

COUNTERING THE HABIT

1. Identify a theoretical problem habit that needs to be removed.
2. Have students brainstorm ideas of what could substitute.
3. Rather than brainstorming, skits or posters can be assigned to illustrate these responses to change.

MAKE THE GOAL (Activity 2.2)

1. Ask students to plan to change one aspect of life.
2. Encourage them to write down the specific goal with all the characteristics of effective goals.
3. Have them read the goal aloud. The other students are to ask questions regarding an aspect of the goal that is not clear, deadline and measurement oriented, or realistic.

MAKE THE REWARD

1. Ask why rewards are helpful and many times needed. Write the reasons on the board.
2. Ask students to write down activities and purchases that would qualify as rewards.
3. Have them match these rewards to goals they have already set.
4. Ask them whether they are now more motivated to reach for the goals.

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PRIORITIZE TIME TO SAY "GOODBYE" TO OLD BEHAVIOR

1. The most important aspect of behavior change is to replace the old behavior with the desired change, instead of merely trying to accomplish more in the 24-hour day.
2. Prioritize the next 24 or 48 hours:
    a. What are the most important uses of your time down to the least important?
    b. Be honest and make sure eating or sleeping is not in the bottom position.
3. The best chance to begin and maintain a change is to acknowledge that:
    a. The time for the new behavior is more important than the time for the old behavior in the first 24 or 48 hours.
    b. You will need to say "goodbye" to the old behavior time.
4. Is television at the bottom of your prioritized time and the new behavior exercise?
    a. Then stop watching earlier in the evening, go to bed earlier, and exercise in the morning.
    b. Or, arrange to do something from another part of the day during TV time, so exercise can happen in that part of the day.
5. If the 24th or 48th hour activity is less important than beginning and maintaining exercise, say "goodbye" to the old behavior.

INTERPRETING THE REAL LIFE STORY: Sharon's Experience

Sharon took a series of steps to become a jogger. She and her fiancé wrote out an exercise prescription. They began jogging together. She consistently jogged 2 miles, or about 20 minutes, for several years and reaped rewards. Then, about five years into her program, she found one day that she wanted to continue jogging. She ended up jogging for a full hour, which made her feel like she had reached the "top of the mountain." She could truly appreciate all the benefits that she had gained by being physically fit, and she continued on, year after year, for over 32 years.

Critical Thinking Questions

1. Describe Sharon's progression through the stages of change.
2. Where are you in the stages of change when it comes to your own physical activity habits?
3. Like Sharon, have you ever done something just because you "should" or because "it's good for you" but eventually ended up actually enjoying it?

WEB RESOURCES

1. The University of California, San Francisco Medical Center behavior modification ideas for weight management: http://www.ucsfhealth.org/education/behavior_modification_ideas_for_weight_management/

2. The Montreal Heart Institute's recommendations for how to adopt a healthy lifestyle: https://www.icm-mhi.org/en/prevention/adopt-healthy-lifestyle

3. The Habits Lab at University of Maryland, Baltimore County has a self-report questionnaire on processes of change: http://www.umbc.edu/psyc/habits/content/ttm_measures/processes/index.html

4. The American Council on Exercise's guide to SMART goals: http://www.acefitness.org/acefit/fitness-fact-article/2637/reaching-your-goals-the-smart-way/

5. The American Cancer Society's Powerful Choices Podcast: http://www.cancer.org/healthy/eathealthygetactive/powerfulchoicespodcasts/index.htm

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Creating a Profile

When you log into Diet & Wellness Plus for the first time, you must create a profile, as illustrated in Figure 24, below. Note that this is the "Long Activity Questionnaire," which asks you for fairly extensive information so that Diet & Wellness Plus can build an accurate profile for you. If you create any Secondary Profiles (more about this on the next page) then you have a choice whether to re-take the Long Activity Questionnaire, or take a shorter questionnaire, in which case the data from your long questionnaire for your Primary Profile will be used for your Secondary Profile as well.

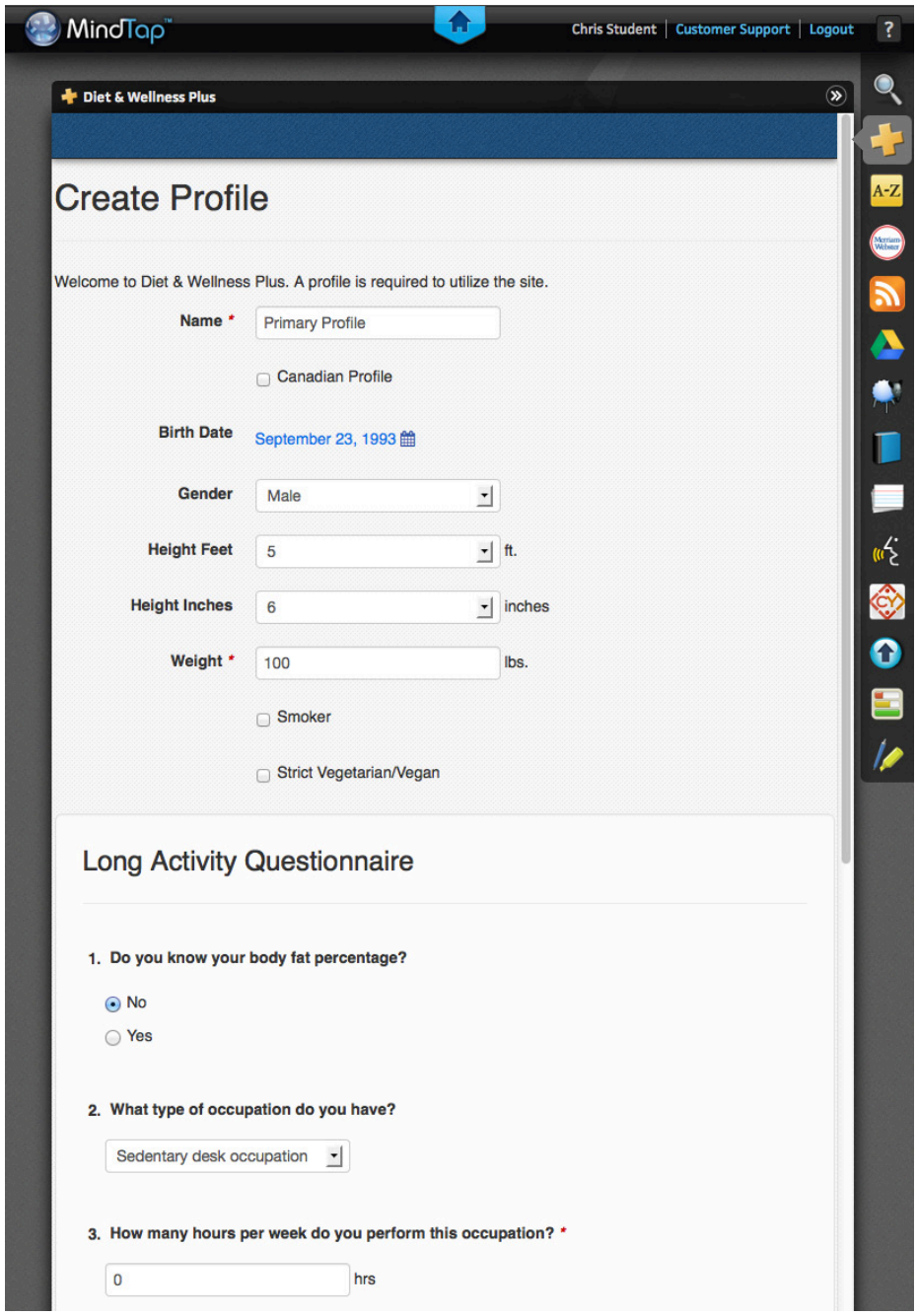


Figure 24 – Any user logging into Diet & Wellness Plus for the first time must create a new profile.

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After filling in all fields and answering all requisite questions, click on the Submit button, as shown in Figure 25, below. After you've completed your profile (hereafter known as your Primary Profile), you can create Secondary Profiles by clicking on the "Primary Profile" menu that will appear on your Dashboard (which is covered in the next section of this manual). It is important to note that the Track Change functions of Diet & Wellness Plus can only be used with your Primary Profile and not any Secondary Profiles. We'll cover this in greater detail in the Track Change section of this manual.

There are numerous reasons you might want to create one or more Secondary Profiles, such as experimenting to see how changes to your diet and activities could affect your health.

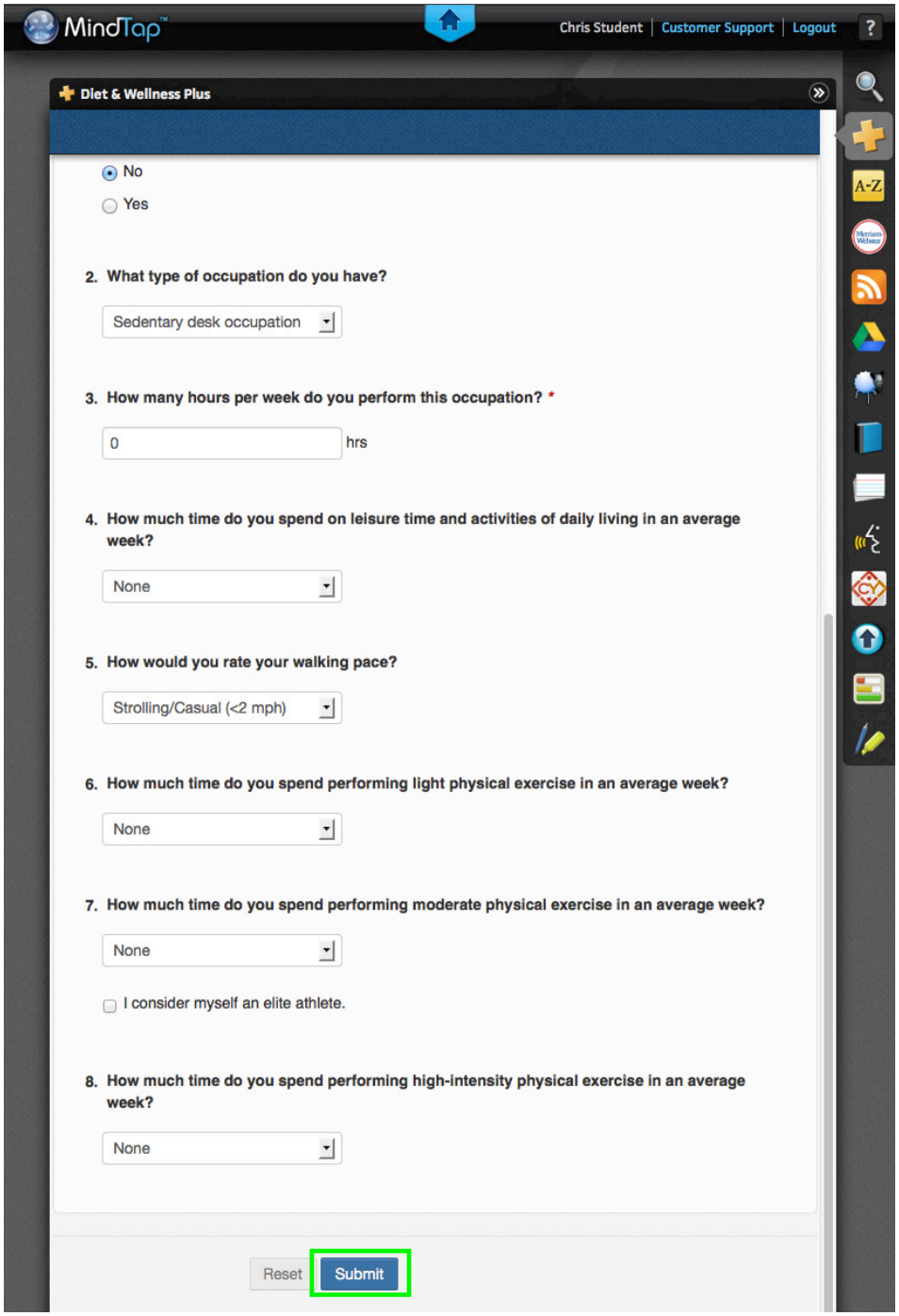


Figure 25 – After filling in all fields and answering all questions, click the Submit button.

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Managing Students, Sections, and Teaching Assistants

To manage enrolled Students, as well as create sections for a Course, click the **Manage Students & Sections** button to open the **Manage Students & Sections** page. If you plan on having several sections of a Course, you may generate a Student Access Code (SAC) for each section to enroll users into those sections directly. You can then provide these numbers to Students so they can enroll in the correct section. Click the **Manage Teaching Assistants** button to perform similar actions with Course TAs.

From the **Manage Students & Sections and Manage Teaching Assistants** pages you can also email, move, or un-enroll selected Students or TAs, edit section information, or regenerate section Student Access Codes (although this will invalidate the previous section code).

Viewing Submitted Assignments

Instructors can view and add comments to **Assignments** submitted by Students enrolled in a Course. Assignments are Reports or Labs that the Instructor has assigned (we'll cover creating Assignments in a later section of this Guide). Click the **View Student Submissions** button and select the correct section from the **"Section"** pull-down menu. You can then select the Student and submission (from either the Labs or Reports tables) for review. Each page of a submission has an area for **Instructor Comments** at the bottom. You may submit more than one comment for an Assignment.

AMDR and DRI Calculations

Introduction

For you as an Instructor, it is important to understand what conditions are being compared and the limitations of the information provided in Diet & Wellness Plus Standalone. This section describes in detail how profile data is used in the calculations for the **AMDR (Acceptable Macronutrient Distribution Range)** and **DRI (Dietary Reference Intake).**

The values for these recommended daily ranges of carbohydrates and fat are based on **KiloCalorie** (kCal) values. These recommended values are determined from two different sources of information: from either the Student's responses in the **Activity Level Questionnaire** or from the **Activity Level** the Student selected.

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Questionnaire Data Calculations

Note: The following formula uses height in centimeters and weight in kilograms.

The Student's base KiloCalorie needs are based on their **Lean Body Mass.** This can be determined when Students are able to supply their body fat percentage. If this information is not known, then an alternate formula is used to calculate the base KiloCalories. And we end up using their full weight for calculations of the additions below.

Known body fat %:

For All Students: Base kCal = (21.6 * (weight - (bodyFat%*weight/100))) + 367

If the Student is unable to supply their body fat percentage, then an alternate formula is used to calculate the base KiloCalories.

Unknown body fat %:

For Males: Base kCal = (10 * weight) + (6.25 * height) - (5 * age) + 5

For Females: Base kCal = (10 * weight) + (6.25 * height) - (5 * age) -161

Once the Base kCal value is determined, then the KiloCalories are added based on the responses to the Activity Questionnaire. If we know the Student's lean body mass we use that, if not then we use their full weight. Because the activity questionnaire uses time ranges for durations the following assumptions are used for calculations:

Activity Duration

- A response of *none* or *unknown* is treated as **0 hours** spent on the activity.
- A response of *1-30 minutes* is treated as **0.25 hours** spent on the activity.
- A response of *31-59 minutes* is treated as **0.75 hours** spent on the activity.
- A response of *1-2 hours* is treated as **1.5 hours** spent on the activity.
- A response of *2-3 hours* is treated as **2.5 hours** spent on the activity.
- A response of *3+ hours* is treated as **3.5 hours** spent on the activity.

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Activity Category

- Occupation adds:
    - Sedentary: Time at occupation/7 * 1.5 * weight *(1.5 is the MET for this occupation level)*
    - Standing/Moving: Time at occupation/7 * 2.8 * weight *(2.8 is the MET for this occupation level)*
    - Active: Time at occupation/7 * 4 * weight *(4 is the MET for this occupation level)*
- Leisure Time adds: (The MET depends on the walk pace response)
    - Unknown: Duration in hours/7 * 2 * weight *(2 is MET for this walk place)*
    - Casual: Duration in hours/7 * 2 * weight *(2 is MET for this walk place)*
    - Steady: Duration in hours/7 * 3 * weight *(3 is MET for this walk place)*
    - Brisk: Duration in hours/7 * 3.8 * weight *(3.8 is MET for this walk place)*
- Light Exercise adds:
    - Duration in hours/7 * 3.5 *(the MET)* * weight
- Moderate Exercise adds:
    - Duration in hours/7 * 5 *(the MET)* * weight
- High-intensity Exercise adds:
    - Duration in hours/7 * 7 *(the MET)* * weight
    - If a user indicates they are an elite athlete then we use the the specific weekly hour time provided rather than one of the estimation ranges listed above. We still divide by 7.

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