Unit 8 Assignment – Understanding Calorie Intake: The Power of "Calories In, Calories Out" for Weight Loss

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Understanding Calorie Intake: The Power of "Calories In, Calories Out" for Weight Loss

This is a 3-week lesson sequence that provides a deep foundation for health and wellness. Critical principles on healthy weight loss, nutrition, and dietary supplements in complementary and integrative medicine (CIM), as well as calories in and calories out (CICO), were presented in a culturally sensitive manner. They are well suited for both personal and professional settings. Lesson 1. Protein: Critical for Weight Loss Lesson 2. Nutrition and Dietary Supplements When Discussing Complementary and Integrative Medicine (CIM) Lesson 3. Calories In, Calories Out The CICO principle is a practical tool to help monitor energy balance and manage a healthy weight.

This is a detailed lesson to help students understand how calorie counting and the ‘calories in, calories out’ (CICO) principle can be used to lose weight. The lesson taps into the scientific idea behind calorie balance, how CICO can be used in practice, and why some people misunderstand it. Since CICO is a fundamental scientific principle for health and wellness, and because people are misinformed due to the marketing efforts of diet scammers, having a nutrition, exercise science, and health psychology-based health literacy program that includes teaching CICO is vital if health and wellness programs are to make sense.

Introduction (10 minutes)

Slide 1: Title Slide

Introduction: Welcome to today’s lecture on calorie intake and weight loss. We will explore the concept of "calories in, calories out" (CICO) and how it can be a practical strategy for managing body weight. This principle is foundational for understanding how daily habits affect weight and health (Hall et al., 2012).

Objective: By the end of this session, you will be equipped with the knowledge to apply the CICO principle in daily life, enabling you to achieve and maintain a healthy weight through informed choices about diet and activity levels (Weinsier et al., 2000).

Slide 2: Importance of Calorie Management\*\*

Discussion Points:

- Calories as Energy: Calories are a unit of energy essential for bodily functions, from basic survival (e.g., breathing) to physical activities (Weinsier et al., 2000).

- Why Calorie Balance Matters: Weight management depends on balancing calorie consumption and expenditure. Weight gain occurs if caloric intake exceeds caloric output; when it is reversed, weight loss happens (Hall et al., 2012).

- Introduction to CICO: The CICO principle is a simple way to conceptualize weight management, focusing on energy balance as the key to weight loss (Mayo Clinic, 2021).

Core Concepts (50 minutes)

Slide 3: What Are Calories?

-Discussion Points:

- Definition of Calories: Calories are the energy found in food and drinks, which our bodies use to function (Hofmeyr et al., 2021).

- Macronutrient Breakdown: Different macronutrients—carbohydrates, proteins, and fats—provide different calories per gram: 4 calories per gram for carbs and protein and nine calories per gram for fat (Westerterp & Speakman, 2008).

- Nutritional Quality vs. Caloric Content: While calories measure energy, the nutritional quality of the food is important. Nutrient-dense foods (e.g., vegetables) provide more vitamins and minerals than calorie-dense foods (e.g., processed snacks) (Hall et al., 2012).o,

Slide 4: Understanding "Calories In"

-Discussion Points:

- Definition of "Calories In": "Calories in" refers to the total number of calories consumed through food and drink (Weinsier et al., 2000).

- Tracking Caloric Intake: Several methods can help track calorie intake:

- Food Labels: Learn to interpret food labels to assess calorie content (Hofmeyr et al., 2021).

- Calorie Tracking Apps: Apps like MyFitnessPal help users log their meals and track caloric intake (Mayo Clinic, 2021).

- Manual Logging: A food diary can be a helpful tool for manual calorie tracking.

- Basal Metabolic Rate (BMR): BMR is the number of calories your body requires at rest to maintain basic physiological functions. It is essential in calculating total daily calorie needs (Müller et al., 2004).

Slide 5: Understanding "Calories Out"

-Discussion Points:

- Definition of "Calories Out":\*\* "Calories out" encompasses the total number of calories burned by the body through BMR, physical activity, and thermogenesis (Müller et al., 2004).

- Estimating Calorie Expenditure:

- BMR Calculators: Online calculators help estimate the calories burned at rest (Hofmeyr et al., 2021).

- Physical Activity: Exercise increases calorie expenditure. Walking and running can significantly boost caloric burn (Westerterp & Speakman, 2008).

Thermogenesis: Food's thermic effect represents the energy required for digestion and metabolism, accounting for about 10% of daily energy expenditure (Müller et al., 2004).

- \*\*Role of Exercise: Exercise enhances overall health and increases calorie burn. Discuss the impact of aerobic (e.g., cardio) and anaerobic (e.g., strength training) activities on calorie expenditure (Mayo Clinic, 2021).

Slide 6: The "Calories In, Calories Out" Principle

- Discussion Points:

- Energy Balance Equation: Weight gain occurs when calories in exceed calories out, while weight loss happens when calories out exceed calories in (Hall et al., 2012).

- Creating a Calorie Deficit: Weight loss requires a calorie deficit, which can be achieved by reducing intake or increasing activity. A 500-calorie deficit per day typically results in about 1 pound of weight loss per week (Mayo Clinic, 2021).

- Sustainability: Maintaining a moderate calorie deficit is essential to avoid malnutrition and muscle loss. Drastic reductions can lead to unsustainable eating habits (Westerterp & Speakman, 2008).

Flexibility and Adaptability: The CICO approach is flexible, adaptable to individual preferences, and encourages gradual changes for long-term success (Hall et al., 2012).

Slide 7: Practical Applications of CICO

- Discussion Points:

- Meal Planning: Planning meals helps maintain balanced portions and meets calorie goals. Discuss the importance of a balanced diet (Müller et al., 2004).

- Portion Control: Provide tips on using hand sizes or everyday household objects to estimate portion sizes (Mayo Clinic, 2021).

- Healthy Food Choices: Encourage selecting nutrient-dense foods, such as lean proteins, whole grains, fruits, and vegetables, to ensure nutritional balance while managing calories (Weinsier et al., 2000).

- Consistency in Tracking: Consistent calorie tracking is essential, especially in the early stages. Over time, individuals may better understand their caloric needs and become more intuitive (Hall et al., 2012).

- Mindful Eating: Encourage participants to practice mindful eating by recognizing hunger and fullness cues, eating slowly, and avoiding distractions during meals (Westerterp & Speakman, 2008).

Slide 8: Common Misconceptions

- Discussion Points:

- "All Calories Are Equal": Address the misconception that all calories are the same, regardless of their source. Nutritional value is crucial; 100 candy calories is not equivalent to 100 nutrient-dense vegetables (Hofmeyr et al., 2021).

- Challenges with CICO: Discuss common challenges, such as underestimating calorie intake and overestimating calories burned during exercise. Honesty in tracking and professional support can help overcome these hurdles (Mayo Clinic, 2021).

- CICO and Nutritional Quality: While CICO focuses on calorie balance, the quality of those calories matters for overall health. Encourage focusing on whole, nutrient-rich foods (Weinsier et al., 2000).

Slide 9: Case Study

- Discussion Points:

- Introduction to the Case: Present a real-life or hypothetical case of an individual who used CICO successfully for weight loss (Hall et al., 2012).

- Detailed Breakdown: Provide a detailed overview of their daily caloric intake, the foods consumed, and their exercise routine, which helped maintain a calorie deficit (Müller et al., 2004).

- Results and Lessons: Share their results, focusing on weight loss, body composition changes, and overall health improvements. Stress the importance of persistence and adaptability in long-term success (Hall et al., 2012).

Interactive Activities (15 minutes)

Slide 10: Activity - Calorie Tracking Exercise

- Instructions:

- App Usage: Participants use a calorie tracking app (e.g., MyFitnessPal) to log meals for one whole day and accurately track portion sizes (Mayo Clinic, 2021).

- Caloric Comparison: Have participants calculate their total caloric intake and compare it to their estimated caloric needs (Müller et al., 2004).

- Discussion: Facilitate a discussion on challenges participants faced during tracking and how they can identify hidden calories in foods (Westerterp & Speakman, 2008).

Slide 11: Group Discussion

Instructions:

- Challenges and Strategies: Discuss the common challenges faced in maintaining a calorie deficit, such as social eating, cravings, and meal preparation (Weinsier et al., 2000).

- Sharing Tips: Encourage participants to share strategies to manage their calorie intake, such as meal prepping and healthier food alternatives (Hall et al., 2012).

Conclusion (10 minutes)

Slide 12: Summary of Key Points

- Discussion Points:

- Recap: Summarize critical points, including the role of calorie intake, expenditure, and the practical application of the CICO principle (Hall et al., 2012).

- Calorie Management: Reiterate the importance of managing calorie intake and expenditure to achieve sustainable weight loss (Westerterp & Speakman, 2008).

Slide 13: Actionable Steps

- Discussion Points:

- Setting Goals: Encourage participants to set realistic, achievable calorie goals that align with their weight loss objectives (Mayo Clinic, 2021).

- Consistency and Flexibility: Highlight the importance of consistent calorie tracking

Conclusion for the 3-Week Health and Wellness Course

At the end of this three-week course, here are the concepts and practices we have been exploring, which together form a framework for health and wellness that you can use.

Week 1: In the first week, we focused on protein and weight loss: ‘Protein is important for weight loss because it helps preserve lean body mass, helps you feel full, so it can help reduce the number of calories you consume, and aids in thermogenesis. But it’s also important for dietary recommendations to be culturally sensitive, particularly for diverse populations who may not be able to sustain a meat-based high-protein diet.’

Week 2: We discussed the role of nutrition and dietary supplements in Complementary and Integrative Medicine (CIM), how traditional practices have incorporated them, and how modern research supports their utilization for health. We also discussed how it is important to realize the benefits of using supplements when necessary for health reasons and know when to obtain our nutrients from proper whole-food sources.

Week 3: Brought in the ‘calories in, calories out’ (CICO) principle and went through the rules: Participants can build their knowledge of energy balance and understand how it affects weight. By using this principle to understand calorie intake, expenditure, and the significance of sustainability, they can apply the knowledge to their well-being and create and maintain a healthy weight.

These sessions have provided us with a practical model for health and healing grounded in the natural order of life. As you continue to deepen your practice, you should review these insights from time to time, as they are meant to serve as a template for the physical and mental skills that support our well-being.

References

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