Clinical Cases Supplement

by Mary B. Grosvenor

NUTRITION From Science to Life

GROSVENOR / SMOLIN

CLINICAL CASES SUPPLEMENT

TO ACCOMPANY

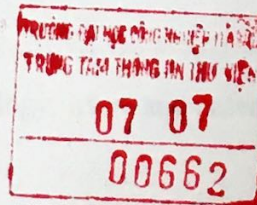# NUTRITION
From Science to Life

GROSVENOR /SMOLIN

by Mary B. Grosvenor, M.S., R.D.

BROOKS/COLE

THOMSON LEARNING™

Australia • Canada • Mexico • Singapore • Spain
United Kingdom • United States

Printed in the United States of America

1 2 3 4 5 6 7   05 04 03 02 01

For more information about our products,
contact us at:
Thomson Learning Academic Resource Center
1-800-423-0563

For permission to use material from this text,
contact us by:
Phone: 1-800-730-2214
Fax: 1-800-731-2215
Web: www.thomsonrights.com

Asia
Thomson Learning
60 Albert Complex, #15-01
Albert Complex
Singapore 189969

Australia
Nelson Thomson Learning
102 Dodds Street
South Street
South Melbourne, Victoria 3205
Australia

Canada
Nelson Thomson Learning
1120 Birchmount Road
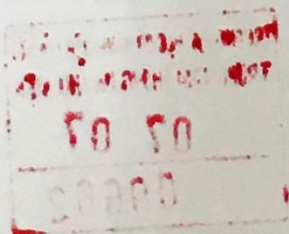Toronto, Ontario M1K 5G4
Canada

Europe/Middle East/South Africa
Thomson Learning
Berkshire House
168-173 High Holborn
London WC1 V7AA
United Kingdom

Latin America
Thomson Learning
Seneca, 53
Colonia Polanco
11560 Mexico D.F.
Mexico

Spain
Paraninfo Thomson Learning
Calle/Magallanes, 25
28015 Madrid, Spain

TABLE OF CONTENTS

Chapter 1: Defining Nutrition

1.1 JUDGING NUTRITION CLAIMS

> **Scenario**
> You are providing nutrition counseling to students at the university health center. Sara S. meets with you to discuss her recent weight gain. She has gained 20 pounds since starting her freshman year 6 months ago. Her roommate and several friends have also gained weight and are now taking a supplement called Weightless to help them eat less and lose weight. They claim that it really helps and must be safe because its package says it is "natural." However, Sara is concerned because she remembers reading that dietary supplements are not always safe even if they are made from natural ingredients. She asks for your advice about this supplement and about her diet in general.

Clinical History:
- Sara's weight has recently increased from 130 to 150 pounds.
- Sara ran track in high school, but, since starting college, she has been too busy studying to get much exercise.
- Sara's breakfast typically includes cereal and a doughnut. She usually skips lunch and has whatever the cafeteria is serving for dinner. She keeps snacks in her room in case she gets hungry while studying.

Product Information: Weightless
- **Ingredients**: Berry extract, brewer's yeast, coffee bean extract
- **Package insert information**: "Weightless promotes rapid weight loss without restrictive dieting or exercise. Feel energized while you lose weight. Some words from a few of our many satisfied customers:
  - ➤ Harold: I lost 50 pounds in 10 weeks without changing my diet or increasing my exercise. I feel great!
  - ➤ Richard: I lost 25 pounds and have more energy than ever.
  - ➤ Suzanne: I fit into my wedding dress on my tenth anniversary. My husband is so proud of me."

Thinking Clinically
1. Evaluate Weightless: (Hint: See Table 1.7, page 23 in text)
   a. Does the information presented make sense?
   b. Where did the information come from?
   c. Are the customer comments based on scientific experimentation?
   d. Who stands to benefit if Sara buys this product?
2. Suggest an experiment that could be used to test the effectiveness of Weightless.
3. Can you tell from the information given if Sara overweight?
4. How could she improve her current diet?

5. Would you recommend that she take Weightless? Why or why not?

1.2 NUTRITION AND MALNUTRITION

Read the following scenarios and answer the questions:

CASE A: Anna is 50 years old. She is 5 feet tall and weighs 200 pounds. Over the last 3 months she has lost almost 50 pounds by following a diet that consists primarily of broiled chicken breasts and carrots. She drinks ten 8-ounce glasses of water each day.

1. What class or classes of nutrients are likely to be deficient in Anna's diet?
2. Is Anna at risk for malnutrition?
3. Do you think Anna's meal plan is one that she could follow for the rest of her life to manage her weight?

CASE B: Nancy is a 20-year-old college student who is a member of the track team. She eats six meals a day – consisting mostly of whole grains, fruits, legumes, vegetables, and yogurt.

1. What class or classes of nutrients are likely to be deficient in Nancy's diet?
2. Is Nancy at risk for malnutrition?
3. How would you suggest Nancy change her diet if she stops running track?

CASE 3: Samuel is ten. He has never been a good eater. He has always been small and thin for his age, but regular physical exams have indicated that he is growing normally. Because his mother is so worried about his weight, she includes chips and candy bars in his lunch each day. Recently she noticed that he has gained a few pounds but his lunch bag comes home with the milk and fruit uneaten.

1. What class or classes of nutrients are likely to be deficient in Samuel's diet?
2. Is Samuel at risk for malnutrition?
3. What would you recommend to Samuel's mother?

Chapter 2: Applying the Science of Nutrition

2.1 EVALUATING A DIET

> **Scenario**
> Helen is working at a day-care center. When the director finds out she is a nutrition student, she asks Helen to evaluate her diet. Helen asks her to record her intake for a couple of days. Helen then reviews the diet but does not have access to a diet analysis computer program. The director's food intake for two days follows.

Food Record

Tuesday	Wednesday
Breakfast:	**Breakfast:**
Toast, 2 slices	Cheerios, 1 cup
with margarine, 2 tsp	Reduced-fat milk, 1/2 cup
Banana, 1 medium	Peach, 1 medium
Coffee, 1 cup	
with cream, 1 Tbsp	
Lunch:	**Lunch:**
Sandwich on whole-wheat bread, 2 slices	Sandwich on whole-wheat bread, 2 slices
Ham, 2 slices	Peanut butter, 2 Tbsp
American cheese, 1 oz	Jelly, 1 Tbsp
Lettuce, 1 leaf	Apple, 1 medium
Tomato, 2 slices	Orange soda, 1 can
Orange, 1 medium	
Cola, 1 can	
Snack:	**Snack:**
Apple, 1 medium	Potato chips, 1 oz
Pretzels, 1 oz	Cola, 1 can
Dinner:	**Dinner:**
Roast beef, 3 oz	Fish sticks, 5 each
Mashed potatoes, 3/4 cup	French fries, 40 pieces
Green beans, 1/2 cup	Carrot sticks, 5 each
Tea ,1 cup	Tea, 1 cup
with sugar, 1 tsp	with sugar, 1 tsp
Snack:	**Snack:**
Cookies, 2 large	Cookies, 2 large
	Ice Cream, 1/2 cup

Thinking Clinically
1. Suggest some tools that Helen could use to evaluate this diet.
2. Using the Food Guide Pyramid, list the food groups in which this diet is deficient.
3. Suggest some specific changes that would improve Helen's diet.

2.2 PLANNING A DIET USING EXCHANGE LISTS

Scenario

Isabelle has been told that she needs to lose some weight and reduce her fat intake. Her doctor has suggested that she try limiting her energy intake to 1500 kcalories. She is familiar with the

Exchange Lists because her father had diabetes and she helped him with his diet. She asks you to plan a diet for her that will be low in fat and provide only 1500 kcalories.

Diet History
- Isabelle typically eats three meals and two snacks per day.
- She is not fond of red meat but does eat chicken and fish.
- She loves fruits and dairy products.
- She likes vegetables but doesn't often take the time to prepare them.
- She doesn't care for salty snacks.
- She loves sweets: her favorites include ice cream and cookies.

Thinking Clinically
1. Use the following table to plan a 1500-kcalorie diet for Isabelle using the Exchange Lists.
2. Follow her typical eating pattern and food preferences as closely as possible.
3. Translate the Exchange List plan you have made into a menu for one day. Compare this day's intake to the Food Guide Pyramid - make sure it meets these recommendations as well.

Exchange	No. of Servings	Kcal/Exchange	Kcalories
Carbohydrate Group			
Starch		80	
Fruit		60	
Milk			
Non-fat		90	
Low-fat		110	
Reduced-fat		120	
Whole		150	
Vegetable		25	
Meat/Meat Substitute Group			
Very Lean		35	
Lean		55	
Medium-fat		75	
High-fat		100	
Fat Group		45	
TOTAL	---	---	

Chapter 3: Nutrient Digestion, Absorption, Transport, and Excretion

3.1 PRODUCT ANALYSIS: DIGEST-AIDE

Scenario