



# Case Study Questions for Modules 1 – 5

## Module 1: Growth Assessment Part One

- Growth Plotting Exercise

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# Module 1: Growth Assessment Part One

## Growth Plotting Exercise

Sarah is 4 years old and attending a preschool screening event. She currently weighs 36½ lbs and is 39¼ inches tall. Her mother also has Sarah's growth measurements at ages 2 and 3.

Age	Weight	Height	BMI
2	23 ¼ lbs (10.6 kg)	33" (82.5 cm)	15.6
3	28 ¼ lbs (13 kg)	36¼" (90.6 cm)	15.9
4	36 ½ lbs (16.5 kg)	39¼" (98.5 cm)	17

Determine the appropriate chart to use, plot the measurements and answer the following questions:

1. What growth chart should you use and what measurements need to be plotted?
2. Should you be concerned about her current growth pattern?
3. What is your plan of care concerning growth?

## Module 2: Growth Assessment Part Two

### Case Study: T.J.

#### Subjective/Objective

- T.J. is a 4½-year-old boy, and has tracked along the 75th percentile for weight and the 50th percentile for height since birth.
- Within a six month period, T.J.'s weight increased from 17kg to 22kg, and his height is 105.5cm.
- Mom is concerned with T.J.'s rapid weight gain over six months.
- T.J. lives at home with Mom and older brother, and will be starting school next year.
- Older brother is in high school, he's not often home as he is usually hanging out with friends after school.
- Mom works full-time and does not have time to cook so relies mostly on convenience foods. Dad is not in the picture, and family does not talk about him.
- T.J.'s aunt (Mom's sister) babysits T.J. during the day when Mom is at work, along with aunt's 2 kids (3-year-old girl and 1-year-old baby boy).
- T.J.'s aunt is a stay-at-home mom, quite busy with three kids during the day, and her two during the evening, so she also relies on convenience foods.

#### Assessment Questions

1. How does T.J. plot on the CDC growth curve and BMI curve?
2. If he continued to track along his past growth curve pattern, what would his current weight be?
3. What is T.J.'s % Ideal Body Weight?
4. Should T.J.'s mom be concerned? Why or why not?

#### Further Assessment

##### 24-Hour Recall reported by Mom and TJ

###### Breakfast:

- 1 pop-tart
- ½ cup of juice

###### AM Snack:

- 2 chocolate chip cookies
- Water

## Module 2: Growth Assessment Part Two (continued)

### Lunch:

- Slice of pizza
- Bottle of juice

### PM Snack:

- 2 chocolate chip cookies

### Dinner:

- 1 sausage
- Broccoli
- Mashed potatoes
- Juice

### Bedtime Snack:

- Buttered pop-corn (1/2 bag- shares with Mom or older brother)
- ½ cup of chocolate milk

## Assessment and Planning

1. What other additional information would you obtain to help with your assessment (if any)? And why?
2. What are some of T.J.'s nutritional concerns?
3. What nutritional recommendations would you provide for Mom based on her concerns?
4. What are your plans for T.J.'s follow up visit?

## Case Study: B.W. (FTT)

### Subjective/Objective

- B.W. is a four-year-old girl who is on the 10th percentile for BMI for Age.
- Food intake records show small portion sizes and the consumption of low calorie products, such as diet jello and diet pudding.
- Meals are frequently consumed by herself as Mom openly reports that she diets and does not regularly eat at the table with the rest of the family.
- Mom states she does not want her daughter to have a weight problem.

### Questions

1. Can you assess B.W.'s growth status and determine if she has FTT?
2. What can you do with the information you have? Determine the nutrition concerns and risk level.
3. What parental advice would you give?
4. What should be your follow-up?

**Module 2: Growth Assessment Part Two (continued)****Case Study: C.G.****Subjective/Objective**

- C.G. is a 3½-year-old male with a weight on the 3rd percentile, height on the 10th percentile and a BMI for Age on the 5th percentile.
- Mom reports C.G. was an infant with IUGR and has been followed by the family doctor for his growth since birth.
- She reports his weight growth pattern has maintained on the 3rd percentile for the last two years and she is not concerned his growth and food intake.
- Food intake records indicate a varied diet and sufficient calories and portion sizes for his age. Mom reports C.G. is physically active daily.

**Questions**

1. Can you assess C.G.'s growth status and determine if he has FTT?
2. What can you do with the information you have? Determine the nutrition concerns and risk level.
3. What parental advice would you give?
4. What should be your follow-up?

## Module 3: Nutritional Assessment

### Case Study: J.P.

- J.P. is a 3½-year-old (42 months) female. She is a twin, born at 25-weeks gestation, with numerous complications during in her first two years of life (respiratory infections, colic, chronic diarrhea, and growth failure).
- By her second birthday, she was consuming a high calorie diet similar to a young toddler in texture and variety and no longer had food intolerances or diarrhea.
- She has been showing a satisfactory rate of growth since 18 months of age but not at a catch-up level. She currently weighs 10 kg and is 87 cm tall.
- She appears to be achieving age-appropriate developmental milestones.
- Her intake records indicate a varied diet that is age appropriate with the occasional high calorie food choices.

### Questions

1. What is J.P.'s chronological age and corrected age? Is this important?
2. Plot J.P.'s growth measurements. What percentile is she for weight, height, BMI, %IBW?
3. Determine her energy requirements and explain which method you used and why.
4. What is your nutritional assessment?
5. What follow-up would you suggest?

# Module 4: Nutritional Deficiencies: Iron and Vitamin D

## Iron

### Anemia Case Study: A.B.

#### Subjective/Objective

- A.B. is a 3-year-old girl who has been referred to you by her family doctor for nutritional counseling for anemia.
- Born at full term, no significant illnesses
- Hb: 90 g/L (normal range: 110-140)
- Ferritin: N/A
- MCV: 61 fL (normal range: 70-86 fL)
- Her anthropometrics are as follows:

Age (months)	Weight (kg)	Height (cm)
Birth	3.1	46
4	5.6	58
6	6.7	62
12	8.9	70
18	10.2	76
36	12.6	88

- Breastfed to 5½ months of age, weaned to whole milk without issues.
- Parents report that despite some picky eating, child still eats well.
- Parents surprised about her iron status because they rarely experienced feeding issues, and have been informed by family doctor that she was growing appropriately.

**Module 4: Nutritional Deficiencies: Iron and Vitamin D (continued)****24-Hour Recall from Parents****Breakfast**

- 1 cup of whole milk
- 1 slice of toast with margarine and jam
- ½ apple
- 1 mini-go yogurt

**AM Snack**

- Sliced banana
- 1 cup of Sunny D

**Lunch**

- 1 cup macaroni and cheese with ketchup
- 1 cup of whole milk

**PM Snack**

- 1 cup of whole milk before nap

**Dinner**

- ½ cup of mashed sweet potatoes or a handful of French fries
- 1 slice of bread with margarine
- 1-2 chicken fingers, or 1-2 ounces of cut-up hamburger (she can be picky about her meats)
- 1 chocolate pudding
- 1 cup of juice or 1 cup of whole milk

**Night-time Snack**

- 1 cup of whole milk
- 2 Gingerbread cookies

**Case Study/Self-Study Questions**

1. Why is iron deficiency a concern? What are the long-term consequences if it is not corrected?
2. What are the appropriate growth curves to assess A.B.'s growth?
3. How does A.B. plot on the curve? What does this information tell you?
4. What are some of the factors which may place an infant at risk for iron deficiency? What concerns do you have about A.B.'s diet?
5. What other nutrient(s) deficiencies may cause anemia? How can we tell from the information we have that A.B.'s anemia is in fact an iron deficiency?
6. Discuss nutrition factors which may prevent iron deficiency, and some changes that parents can make to A.B.'s diet.

Module 4: Nutritional Deficiencies: Iron and Vitamin D (continued)

## Vitamin D

### Self-Study Questions

1. Osteomalacia is known as the softening of bones due to insufficient vitamin D, or problems with the break down of this vitamin.
  - a) True
  - b) False
2. The most common cause of osteomalacia is \_\_\_\_\_.
  - a) Vitamin D deficiency
  - b) Lack of collagen
  - c) Excess Vitamin D
  - d) None
3. The softness of the bones is more likely to cause bow and fractures.
  - a) True
  - b) False
4. Osteomalacia can develop in people who spend little time in the sunlight.
  - a) True
  - b) False

## Module 5: Food Allergies and Intolerances

### Test your knowledge! 14 Practice Questions

1. Which of the following statements best defines food allergy?
  - a. A toxic reaction to a food borne pathogen.
  - b. An adverse response to a pharmacologically active food component.
  - c. An abnormal immunologic response to a dietary protein.
  - d. A host-specific metabolic disorder.
2. The most prevalent food allergy in young children is to what food?
  - a. Peanuts
  - b. Cow's milk
  - c. Wheat
  - d. Eggs
3. The primary food allergens for older children and adults are:
  - a. Eggs, milk, soy, and peanuts
  - b. Tree nuts, milk, wheat, and eggs
  - c. Peanuts, tree nuts, fish, and crustacean shellfish
  - d. Soy, crustacean shellfish, tree nuts, and milk
4. The measurable presence of IgE antibodies, also called \_\_\_\_\_, can be present in an individual without \_\_\_\_\_, or allergic symptoms.
  - a. Sensitization; clinical reactivity
  - b. Immunopositive; anaphylaxis
  - c. Sensitization; hives
  - d. None of the above
5. Symptoms of food allergies may occur in which of the following?
  - a. Respiratory system
  - b. Skin
  - c. Gastrointestinal tract
  - d. All of the above
  - e. None of the above

**Module 5: Food Allergies and Intolerances (continued)**

6. The most common food allergy symptoms affect:
  - a. The respiratory system
  - b. The intestinal system
  - c. The skin
  - d. All of the above
  - e. None of the above
  
7. Which of the following steps may be utilized when diagnosing a food allergy?
  - a. Blood and/or skin prick test
  - b. Elimination diet
  - c. Food challenge test
  - d. All of the above
  - e. None of the above
  
8. What is the most important step that someone with a severe food allergy must take?
  - a. Alert family, friends, coworkers, teachers and others of the condition
  - b. Wear a medical-alert bracelet or necklace with the proper information
  - c. Always carry self-injectable epinephrine
  - d. Avoid the allergenic food
  
9. Managing a food allergy requires that the patient and/or caretakers are able to:
  - a. Carefully read food labels
  - b. Cook and prepare all foods at home
  - c. Avoid eating at restaurants or friends' homes
  - d. All of the above
  - e. None of the above
  
10. Which of the following ingredients may contain allergenic proteins for someone with a milk allergy?
  - a. Albumin and tempeh
  - b. Caseinates and whey
  - c. Both a & b
  - d. Neither a or b

**Module 5: Food Allergies and Intolerances (continued)**

11. Which of the following are considered high risk eating situations for someone with a food allergy?
- Restaurants
  - Movie theaters
  - Cafeterias
  - All of the above
  - None of the above
12. In IgE mediated food allergy, respiratory symptoms such as congestion, runny and/or itchy nose, sneezing, raspy cough, and/or wheezing can occur in up to 25-80% of patients. Based on this information, if an eight-year-old boy with chronic respiratory symptoms referred to a dietitian for assistance in eliminating potential allergens from the child's diet, how should the dietitian respond?
- Develop an elimination diet to identify the culprit.
  - Rule out viral infection.
  - Refer the child to his pediatrician or a board-certified allergist for further evaluation.
  - Do nothing. Most children outgrow food allergies by age 10.
13. Celiac disease, or gluten-sensitive enteropathy, is an example of what type of allergic response?
- IgE-mediated response
  - IgG-mediated response
  - Intracellular response
  - Cell-mediated response
14. Which of the following statements is NOT true of celiac disease?
- Symptoms are often confused with irritable bowel syndrome and Crohn's disease.
  - GI symptoms often include gas, abdominal bloating and diarrhea.
  - Celiac disease can be asymptomatic which can lead to malnutrition-related complications.
  - If elimination of wheat and gluten alleviates symptoms, food containing gluten can be reintroduced after 12 weeks.
  - All of the above
  - None of the above