

ACTIVITY HANDOUT: CAUSES OF MALNUTRITION CASE STUDIES (ANSWERS)

[MODULE 3: Nutrition Considerations for Children with Disabilities]

Why are these children at risk for malnutrition? Identify potential causes within the following categories: *what* the child eats, *how much* they eat, or how their body *uses* nutrients.

Case Scenario 1: Musa – 18-month-old boy with cerebral palsy

Musa has significant motor impairments and his muscles are always tense. He cannot sit or feed himself on his own. His mother finds it difficult to feed him and reports that it can take over an hour. Musa is fed mashed foods and drinks thin liquids from a spoon. During meals, he often coughs or gags, which makes feeding stressful for him and his mother.

WHAT: Feeding difficulties may limit food variety; limited textures; relies on caregiver for food offered

HOW MUCH: Long feeding times suggests fatigue and low intake; tense muscles increase his energy needs; coughing/gagging may reduce appetite; relies on caregiver for feeding, which could result in underfeeding

USE: Tense muscles use up a lot of energy; stressful mealtime interferes with digestion and nutrient absorption; frequent coughing could suggest risk of respiratory illness, which increases nutrient needs

Case Scenario 2: Miriam – 4-year-old girl with autism

Miriam has become extremely selective about food over the past six months. She will only eat five specific foods: white bread, plain rice, chicken nuggets, apples, and plain yogurt. Her father is concerned she refuses most fruits and all vegetables. Her growth is currently normal, but she is often constipated.

WHAT: Very limited food variety; diet lacks nutrient-rich foods; preference for plain, low-fiber foods contributes to constipation; sensory sensitivities associated with autism

HOW MUCH: Selective eating limits sufficient intake of key nutrients; constipation may lead to poor appetite

USE: Constipation; possible stress related to mealtime interferes with digestion and nutrient absorption

Case Scenario 3: Joseph – 7-month-old boy with Down syndrome

Joseph was born with a heart defect, which was repaired one month ago. He is recovering well but still tires easily. He recently started complementary feeding and currently drinks formula milk from a bottle, along with small amounts of pureed cereal and fruit. His

mother reports that he often falls asleep during feeding. He is not yet sitting up independently.

WHAT: Limited variety in complementary foods; not yet receiving iron-rich foods (common concern at this age); receives formula milk but no information on its composition

HOW MUCH: Fatigue and falling asleep during feeding which means he likely is not meeting post-surgery energy and nutrient needs

USE: Low muscle tone associated with Down syndrome may cause constipation; post-surgery recovery increases energy and nutrient needs

Case Scenario 4: Amina – 3-year-old girl with developmental delays

Amina lives with her grandmother and three young brothers. The family has limited income and often struggles to afford enough food. Amina is small for her age and has had frequent diarrhea this past year. Her grandmother says Amina eats less than her brothers and tends to spit out food or refuse to eat unless she's given biscuits, juice, or cereal with a lot of sugar.

WHAT: Food insecurity may result in poor food diversity and low intake of nutrient-dense foods; picky eating, possibly due to sensory sensitivities; frequent intake of high-sugar foods

HOW MUCH: Eats less than others in the household; food insecurity may result in inconsistent access to enough food; diarrhea can often cause poor appetite; consumption of juice may displace nutrient-dense foods

USE: Frequent diarrhea may reduce nutrient absorption and increase nutrient loss; chronic stress related to food insecurity, living conditions, and mealtime challenges may affect nutrient absorption

Case Scenario 5: Omar – 5-year-old boy with spina bifida

Omar uses a wheelchair to move around but spends most of his time lying down. His mother says that he struggles with constipation and often goes several days without a bowel movement. His constipation got worse after he started iron supplements for his anemia. His mother says he has a good appetite but only for high-fat, high-sugar snacks.

WHAT: Low fiber intake, which may cause constipation; iron supplements, which worsens constipation; frequent consumption of high-fat, high-sugar snacks may displace nutrient-dense foods, worsen constipation, and put him at risk for unintended weight gain; low intake of iron-rich foods and vitamin C-rich foods worsens anemia

HOW MUCH: Consuming more calories than needed for his activity level; low intake of vitamin C-rich foods causes lower absorption of iron from food and supplements

USE: Limited mobility increased risk of constipation; spends long periods lying down, which may affect digestion and increase risk for reflux; GI conditions associated with spina bifida may affect nutrient absorption