

**CAMEROON BAPTIST CONVENTION HEALTH SERVICES**

*NUTRITION IMPROVEMENT PROGRAM*

**2013**

**STANDARD OPERATING PROCEDURE MANUAL**



**A Guide for Nutrition and Infant Feeding Counsellors**

**Nutrition Improvement Program**

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## **Counseling on Dietary Prevention and Control of Overweight and Obesity**

**Introduction:** Obesity is most commonly caused by a combination of excessive food energy intake, lack of physical activity, and genetic susceptibility. Abnormal or excessive fat accumulation may impair health. This can be as a result of poor nutrition, alcoholism, genetic predisposition, increase in physical inactivity from the increasingly sedentary nature of many forms of work, or changes in dietary and physical activity patterns. WHO classifies body mass index (BMI) equal to or greater than 25 ( $\geq 25$ ) as overweight and BMI  $\geq 30$  as obesity.

**OBJECTIVES:** *At the end of the session, the client will be able to:*

1. Explain the risk factors for overweight and obesity.
2. Discuss the consequences of overweight and obesity.
3. Explain the use of diet to control overweight and obesity.

**Requirements:**

- Notebook and pen
- Table and two chairs
- Counseling room

**Step 1 Create rapport**

- Greet and welcome the client and introduce yourself.
- Ensure client is comfortable and relaxed
- Sit in a comfortable, convenient position
- Find out what the client knows about his/her condition and acknowledge.
- Find out if the client is ready and motivated to lose weight.
- Find out why the client came and assure the client that the counselling is confidential.

**Step 2 Find baseline measurements**

- Measure height and weight.

- Measure waist circumference.
- Determine BMI and classify as either overweight or obesity.
- Record the information.
- Take a brief history of dietary intake.

### *Step 3: Provide information*

- Explain that overweight is a major risk factor for non-communicable diseases such as cardiovascular diseases (e.g., hypertension), diabetes, musculoskeletal disorders (osteoarthritis of joints), and some cancers (endometrial, breast, colon).
- Explain that childhood obesity is associated with premature death and disability in adulthood, respiratory difficulties, and increased risk of fractures, hypertension, early markers of cardiovascular disease, insulin resistance, psychological effects, stress, and eating disorders.
- Explain that weight loss can help relieve physical, metabolic, endocrinological and psychological complications.
- Explain the importance of regular meal patterns (three meals a day with two snacks).
- Counsel on adding fiber in to the diet (more whole grains, more fruits and vegetables).
- Counsel on eating healthy snacks and not drinking sugary beverages.
- Help the client “find” the right body for him or her. Encourage self-recognition of hunger cues (e.g., stop eating when feeling full).
- Advise client to drink plenty of water every day.
- Advise client to increase physical activity.
- Explain that parents are responsible for what is offered to children to eat, and children are responsible for what and how much is eaten. Both should focus on healthy growth.
- Counsel on portion sizes of food. Discuss age-appropriate portions and snacks. Explain that many parents innocently overfeed their children. Show child-size plates and utensils with sample portion sizes.

- Explain that good role modelling by parents is essential. Encourage regular family meals whenever possible and limiting unplanned or habitual snacking. Between meals, ice water can be offered as a treat instead of sweetened beverages. Maintain children's self-image through positive reinforcement.
- Find out if the client foresees any challenges and address as necessary.
- Make a follow-up appointment.
- Record the session.

***Step 3: Follow-up:***

- Monitor and record weight and BMI.
- Express appreciation for the client's cooperation.

## **Counseling on Dietary Prevention and Control of Iron Deficiency Anemia**

**Introduction:** Anemia happens when haemoglobin (molecule transporting oxygen in the blood) falls below a certain level. It can also occur as result of the number of red blood cells dropping below normal levels, causing a drop in oxygen supply to tissues. Factors that can contribute to this include lack of iron or poor absorption of iron in the body. This type is anaemia is called iron deficiency anemia. Other types are pregnancy-related anemia, pernicious anemia, sickle cell anemia, and haemolytic anemia. Iron deficiency is relatively common in toddlers, adolescent girls, and women of childbearing age.

**OBJECTIVES:** *At the end of the session, the client or caregiver will be able to:*

1. Explain the importance of diet in preventing and controlling iron deficiency anemia.
2. State some common foods that can be recommended for the prevention and control of iron deficiency anemia.
3. Explain the causes of iron deficiency anemia.
4. Explain how to recognize the signs and symptoms of iron deficiency anemia.

**Requirements:**

- Notebook and pen
- Table and two chairs
- Counseling room

**Step 1: Creating a rapport**

- Greet the client and introduce yourself.
- Ensure client is comfortable and relaxed.
- Sit in a comfortable, convenient position.
- Ask the client the reasons for coming.
- Assure the client of confidentiality.
- Explain how much time you will spend with the client.

**Step 2: Provide information**

- Find out what the client or caregiver knows about anemia and what has been done so far.

- Explain the meaning of anemia and factors can contribute to anemia.
- Explain that a good diet is important to prevent and control anemia, especially iron deficiency anemia, and that therefore much of this discussion will be on diet.
- Explain that iron, protein, vitamin B<sub>12</sub>, and folate are the most important nutrients in the prevention and control of iron deficiency anemia.
- Use local food examples to explain how to prevent or control anemia.
- Explain that soy, legumes, fruits, dark green leafy vegetables, and red beets are helpful for people with anemia patients and for vulnerable groups like pregnant women, growing children, and adolescents.
- Encourage the client to eat fresh fruits. Once cut, fruit should be eaten or put in clean air-tight containers to avoid loss of nutrients through oxidation.
- Stress good hygienic practices like rinsing dark green leafy vegetables in running water and not washing beans once they are cooked.
- Discourage consumption of fried and fatty foods.
- Discourage alcohol and coffee consumption, which inhibits the absorption of nutrients into the cells, especially for people with iron deficiencies symptoms.
- Encourage cooking methods that conserve nutrients--boiling (eat with stock), steaming—and avoiding cooking methods that lead to loss of nutrients in foods, i.e. heating, soaking, frying grilling.
- Find out if the client grows or has access to soya beans. Explain that soy is one of the most iron-rich foods and contains substances with powerful healing properties and anti-carcinogenic effects. It also contains anti-nutritive substances (dangerous substances that interfere with the absorption of other nutrients), but these can be made harmless by soaking soy in water for 8 hours or by fermenting or sprouting the beans.
- Find out if there are any food taboos against eating eggs. Explain that egg yolk is another very good source of iron, but the iron found in egg yolk is poorly absorbed.
- Explain that citrus fruits like oranges and lemon and grapes can help absorb iron, even if they are poor sources of folate and iron themselves.
- Answer any questions the client has.

- Make a follow-up appointment.
- Record the session.

## **Counseling on Dietary Prevention and Control of Hypertension**

**Introduction:** High blood pressure or hypertension is a condition in which the heart pumps blood into the arteries and creates pressure within them because blood volume increases or the blood vessel narrow. People who are genetically sensitive to salt can't efficiently get rid of extra sodium through their urine. Therefore, the extra sodium draws in extra water, increasing blood volume. People with hypertension have diastolic pressure of 90 to 104 mmHg. This can be treated with non-drug approaches including diet. Moderate hypertension, in which diastolic pressure is 105 to 119 mmHg, can be treated with a combination of drugs and with diet to reduce the quantity of drugs needed. People with severe hypertension, in which diastolic pressure is 120 to 130mmHg and above, must be placed on drug therapy immediately after evaluation, with potassium replacement and nutritional guidance. Signs and symptoms of hypertension include frequent headaches, impaired vision, shortness of breath, nosebleeds, chest pain, dizziness, falling memory, snoring, sleep apnea, and gastrointestinal distress.

**OBJECTIVES:** *At the end of the session, the client or caregiver will be able to:*

1. Explain causes of and risk factors for hypertension.
2. Describe non-drug therapies in the management of hypertension.
3. Tell the client about common foods that can help people with hypertension.

**Requirements:**

- Notebook and pen
- Table and two chairs
- Counselling room
- Blood pressure cuff

**Step 1: Creating a rapport**

- Greet the client and introduce yourself.
- Ensure the client is comfortable and relaxed.
- Sit in a comfortable, convenient position.
- Ask the client the reasons for coming.

- Assure the client of confidentiality.
- Explain how much time you will spend with the client.

### *Step two: Exploration*

- Find out what the client knows about his/her condition.
- Correct as necessary and explain that the condition can be managed at any level.
- Find out if the client is aware of any risk factors that can make his/her condition worse.
- Listen actively skills and correct information as necessary.
- Measure weight and blood pressure to determine whether the client has mild, moderate, or severe hypertension.
- Ask about the client's diet.

### *Step 3: Risk factors*

- Explain that high blood pressure can be dangerous. If not controlled, it can lead to heart problems, kidney disease, and stroke.
- Explain that some risk factors cannot be controlled, like age (older people are more likely to develop high blood pressure) and heredity (high blood pressure can run in families), but some can be controlled, such as diet.
- Find out what the client knows about salt intake and his/her condition. Explain that decreasing sodium intake (salt, Maggi) can control mild hypertension and enhance treatment of moderate hypertension. Clarify that you are not asking him/her to stop eating salt but to reduce intake. If the client is middle aged or elderly, advise to consume less than 1,500 milligram of sodium per day and show the equivalent amount of salt.
- Explain that decreasing dietary fat intake can also be beneficial, especially saturated fat, which is found in fatty cuts of meat, whole milk, and palm oil, and trans fat, for example, shortening used to fry foods.
- Explain that avoiding alcohol consumption can enhance drug therapy for hypertension. Ask about the client's alcohol consumption. Advise to limit alcohol intake to a maximum of two drinks a day.

- Find out if the client smokes and explain that smoking can raise blood pressure.
- Explain that oral contraceptives like birth control pills may increase high blood pressure.
- Find out how much physical activity the client gets and explain that moderate exercise will benefit hypertensive people.
- Use the table below to guide the client in what foods to eat to help lower blood pressure.

**DASH (dietary approaches to stop hypertension)**

<b>Food group</b>	<b>Servings</b>	<b>Nutrients that lower blood pressure</b>
Whole grains and grain products	7-8/day	Carbohydrates and fiber
Vegetables	4-5/day	Potassium, magnesium and fiber
Fruit	4-5/day	Potassium, magnesium and fiber
Low-fat or fat-free milk or milk products	2-3/day	Calcium, protein, potassium, and magnesium
Lean meats, poultry and fish	2 or less/day	Protein and magnesium
Nuts, seeds and beans	4-5/week	Magnesium, potassium protein, and fiber

- Recommend the following foods that are low in sodium and dietary fat:
  - **Meat:** Skinless chicken, fish, eggs, bacon, lean cuts of beef, ham, and any salt-cured meat
  - **Grain products:** Whole wheat bread, oatmeal, macaroni, rice
  - **Vegetables:** Broccoli, carrots, corn, mushrooms, potatoes, and spinach
  - **Fruits:** Paw-paw, bananas, oranges, pineapples, watermelon, all raw fruit Limit in consumption of salt intake, Fats (especially saturated fats) and alcohol and completely abstain from include smoking
- Advise the client to use less salt in cooking and at the table. Discuss low-sodium food choices, reading labels, on canned and processed foods to see how much salt they contain, recipe alterations, shopping tips, using spices and herbs to flavor food instead of salt, and tips for dining away from home.

- Advise the client to eat plenty of potassium-rich fruits and vegetables every day. Examples are yams, sweet potatoes, potatoes, okra, bananas, meat, tomato, mangoes, poultry, tomato paste, coconut, fish, maize, beans, soybeans, plantain, eggs, green vegetables, peanuts, orange, cassava, eggplant, paw-paw (papaya), cabbage, cucumber, and pears.
- Advise the client to eat fresh or smoked fish several times a week and avoid salted fish and meats.
- If the client has been prescribed medicine for hypertension, advise him/her to take the medications as prescribed.
- Explain the importance of regularly having blood pressure monitored.

#### *Step 4. Follow-up*

- Appreciate the client's efforts.
- Make an appointment for the next session.
- Record the information.

## Counseling on Diet and Celiac Disease

**Introduction:** Celiac disease (CD) is a common, lifelong, genetically based autoimmune disorder that causes inflammation of the small intestine. Celiac disease is characterized by inappropriate T cell-mediated immune response to ingested gluten (protein) from wheat, rye, and barley that lead to inflammation, villous atrophy, and crypt hyperplasia in the small intestine. Intestine villi decrease in number, with less absorptive surface and fewer enzymes. Crypts are elongated, causing mucosal malabsorption. This disease can occur at any age and often occur after stress, pregnancy, or viral infections. Infants may present with impaired growth, diarrhea, pica, abdominal distension, pallor, edema, or vomiting. Children may have frequent, strong-smelling stools that are pale and foamy, diarrhea, irritability, a distended abdomen, fatigue, pallor, weight loss, vomiting and anemia. All children with neurodevelopmental problems should be assessed for CD. Children and adolescents with symptoms or an increased risk of CD should have the blood test for antibody to tissue transglutaminase. If the test is positive, a gluten-free diet is needed.

**OBJECTIVES:** *At the end of the counselling session the client or caregiver should be able to:*

1. Identify the causes, signs, and symptoms of celiac disease.
2. List local foods that are good for people with CD.
3. Identify ways to prevent CD.

**Requirements:**

- Notebook and pen
- Table and two chairs
- Counseling room
- Blood pressure cuff

**Step 1: Create rapport**

- Greet the client and introduce yourself.
- Ensure the client is comfortable and relaxed.
- Sit in a comfortable, convenient position.

- Ask the client the reasons for coming.
- Assure the client of confidentiality.
- Explain how much time you will spend with the client.
- Take the client's blood pressure.

### *Step 2: Provide information*

- Find out the reason for the client's visit.
- Find out what the client knows about his/her situation and correct if necessary.
- Find out the client's medical history, asking about any viral infection, signs and symptoms, and the client's feelings about those.
- Find out what foods the client can afford to eat regularly.
- Explain that gluten can lead to inflammation in the small intestine and comes from bread from wheat, pasta, malt, malt flavoring, beer, commercial soups, and processed meats, sauces, and seasonings.
- Help the client plan meals using gluten-free flours or grain products (made of nuts, potatoes, sorghum, rice), olive oil, fruits, and vegetables.
- Counsel about fluid sources and ways to add fluids to meals (e.g., fruit juice, vegetable stock, plain water).
- Find out if client has any other questions and respond as necessary.
- Thank the client for sharing.
- Make an appointment for the next session.
- Record the session.

## Counseling on Diet and Hepatitis

**Introduction:** Hepatitis or any liver condition can result from an inflammation of the liver cells or cells lining the biliary tract. It is characterized by both inflammation and necrosis of liver tissues and may be chronic or acute. The liver is involved with some nutrient metabolism. Acute viral hepatitis is a widespread inflammation of the liver and is caused by hepatitis viruses A, B, p, D or E. Hepatitis causes nausea, fever, liver tenderness, and enlargement, jaundice, pale stools, and anorexia.

**OBJECTIVES:** *At the end of this session, the client should be able to:*

1. Explain the cause of liver conditions including hepatitis.
2. State some of the common foods people with liver conditions should avoid.
3. List affordable foods that people with liver conditions should eat.

**Requirements:**

- Notebook and pen
- Table and two chairs
- Counseling room

**Step 1: Create rapport**

- Greet the client and introduce yourself.
- Ensure the client is comfortable and relaxed.
- Sit in a comfortable, convenient position.
- Ask the client the reasons for coming.
- Assure the client of confidentiality.
- Explain how much time you will spend with the client.

**Step 2: Provide information**

- Explain that hepatitis or any liver condition can result from an inflammation of the liver cells and may be chronic or acute. Explain that the liver has a lot to do with

nutrient metabolism. Explain that acute viral hepatitis is a widespread inflammation of the liver caused by hepatitis viruses A, B, p, D or E.

- Ask the client if he/she has symptoms of hepatitis (nausea, fever, liver tenderness, and enlargement, jaundice, pale stools, anorexia).
- Find out what has been done concerning his/her condition.
- Explain that the most liver conditions including hepatitis require prolonged rest and a good diet.
- Explain that a high-calorie diet of 3,000–4,000 kcal/day and high protein intake (1.5-2g/day/kg body weight) is needed to regenerate liver cells
- Educate about nutrient dense foods and role that alcohol plays in liver damage.
- Encourage the client, depending on his/her condition, to avoid:
  - Paracetamol and sulphathiazone, if not prescribed by a health care provider
  - Alcohol (avoid social outings where alcohol is present)
  - High doses of certain vitamins and minerals, e.g., vitamin A, vitamin D, iron, and niacin, which can be toxic to the liver
  - Spicy food, which can make nausea worse
  - Raw or undercooked shellfish
  - Food high in fat, salt, or sugar
  - Canned, frozen, or preserved foods and fast foods that may contain chemical additives and high levels of sodium
  - Gravy and soups made from meat extracts
  - Fried foods
  - Strong tea, coffee
  - Raw vegetables such as salads
  - Raw unripe fruits, dried fruits, skins, and peels of fruits, even in cooked foods
  - Pickles, spices, and condiments
  - Oily or highly seasoned meats including sausages, bacon, and pork
- Encourage the client to:
  - Track food intake through a food diary or history.

- Eat small, frequent healthy meals and snacks rather than three large meals each day.
- Eat foods high in complex carbohydrates like leafy vegetables .
- Wash all meats, fruits, and vegetables to remove harmful residues.
- Drink soy milk if unable to tolerate dairy products.
- Reduce salt intake.
- Reduce fluid intake to 6–8 cups per day.
- Eat 4–6 times daily.
- Avoid food supplements.
- Get exercise and get plenty rest.
- Re-heat leftovers before eating.
- Eat boiled, steamed, or baked foods rather than fried.
- Give the client the following sample menu:

<b>Day</b>	<b>Breakfast</b>	<b>Snack</b>	<b>Lunch</b>	<b>Snack</b>	<b>Supper</b>
1	1 cup milk	1 portion bread with pear 2 cups (8 oz) water	2 cups water Rice with beans	Boiled corn on cob 1 cup water	Maize meal with leafy vegetable 2 cups water
2	1 cup water 1 cup coffee	Boiled fish with bones 1 cup water	2 cups water Maize meal with any leafy vegetable	1 liche watermelon	Boiled plantain with cabbage soup 2 cups water
3	1 cup water 1 cup soymilk	Fruit	Soybeans Yam 1 cup water	Boiled corn	2 cups water Cassava with okra soup
4	1 cup soymilk	2 carrots	Boiled rice with soup 1 cup water	1 boiled egg	2 cups water Beans with boiled potatoes
5	1 plate pap 1 cup milk with Ovaltine	1 slice paw-paw	1 cup coffee Boiled rice with beans	Fruit	2 cups water Maize meal with okra

#### *Step 4. Follow-up*

- Appreciate the client's efforts.
- Make an appointment for the next session.
- Record the information.

## Counseling on Diet and Gout

**Introduction:** Gout is sudden and recurring attacks of painful inflamed joints (usually the big toes, ankles, knees, and feet caused by the abnormal build-up of chemical called uric acid in the bloodstream that is deposited in the joints. The disease tends to affect men between the ages of 30 and 50 years and is often hereditary. The joint swells, the skin turns warm, red, purplish, and shiny. Severe pain usually occurs, more at night. Although attacks of gout can subside in a few days, repeated attacks can cause permanent joint damage, and the disease often results in substantial disability and frequent medical care. Most patients with gout eventually require long-term treatment with medications that lower blood uric levels. Patients with asymptomatic hyperuricemia should lower their uric levels through changes in diet or lifestyle.

**OBJECTIVES:** *By the end of this session client should be able to:*

1. Explain the cause and symptoms of gout.
2. Explain how to prevent and treat gout through diet.

**Requirements:**

- Notebook and pen
- Table and two chairs
- Counseling room

**Step 1: Create rapport**

- Greet the client and introduce yourself.
- Ensure the client is comfortable and relaxed.
- Sit in a comfortable, convenient position.
- Ask the client the reasons for coming.
- Assure the client of confidentiality.
- Explain how much time you will spend with the client.

**Step 2: Provide information**

- Ask about the clients medical history, diet history, alcohol and fluid intake.

- Find out if the client had any other illness before and what he/she knows about gout. Acknowledge the client's response.
- If the client does not know the cause of gout, explain that it is caused by an accumulation of uric acid in the blood.
- Explain that animal products such as red meat, liver, brain, kidney, heart, and sweetbreads, sugary foods, fatty foods, and excessive alcohol decrease the excretion of uric acid in the kidneys, thereby causing gout.
- Advise the client to eat only moderate amount of fish and dairy products.
- Encourage the consumption of foods low in purine such as fruits, vegetables, eggs, milk, vegetable soups, nuts, cereals, and potatoes.
- Also encourage plenty of water intakes, fruit juice, for it helps the body to excrete uric acid.

### *Step 3: Follow-up*

- Evaluate the client's dietary intake.
- Record improvement in symptoms of gout.
- Evaluate uric acid level and frequency of gout attacks.
- Express appreciation for the client's participation and efforts.
- Make an appointment for the next session.

## Counseling on Nutrition and Cancer

**Introduction:** Cancer results from unregulated cell growth control and is caused by an interaction of dietary, genetic, and environmental risk factors. There are over 100 variations of cancer. Natural carcinogens (substances that cause unregulated cell growth) include ultraviolet (UV) radiation, dyes, environmental chemicals from smoke or mines, viruses, and aflatoxins. The most consistent carcinogen is tobacco (found in cigarettes). Diet can either promote or hinder the development of cancer. The strongest evidence of foods linked to a decreased risk of certain cancers is related to consumption of fruits, vegetables, and whole grains. Antioxidants in fruits and vegetables protect against free radical damage that causes cancer. The best fruits and vegetables are dark green, yellow, and orange fruits and vegetables; garlic; and beans. Dietary factors and physical inactivity contribute to approximately one-third of all cancers. Five lifestyle habits should be promoted:

- Maintain BMI of 20.0–25.0.
- Get 30 minutes of exercise a day.
- Limit alcohol to 1–2 drinks a day.
- Do not smoke.
- Eat lots of fruits and vegetables.

**OBJECTIVES:** *At the end of this session the client should be able to:*

1. Identify his/her type of cancer.
2. Identify foods to include or omit in the diet to help counteract the effects of surgery or chemotherapy.

**Requirements:**

- Notebook and pen
- Table and two chairs
- BMI chart
- Scale
- Counseling room

### *Step 1: Create rapport*

- Greet the client and introduce yourself.
- Ensure the client is comfortable and relaxed.
- Sit in a comfortable, convenient position.
- Ask the client the reasons for coming.
- Assure the client of confidentiality.
- Explain how much time you will spend with the client.

### *Step 2: Assess the client*

- Determine the client's weight, height, and BMI.
- Review the client's medical history.
- Find out which kind of cancer the client has.
- Find out what side effects the client is experiencing.

### *Step 2. Provide information*

- Explain that nutrition plays a strong role in managing symptoms related to cancer treatment.
- Explain that the client may need to adjust his/her diet according to the type of cancer and treatment side effects.
- Use the table below to help clients manage side effects with diet.

### **Side effects of treatment and common problems of cancer**

<b>Side effect</b>	<b>Comments</b>
Anemia	About half of patients being treated for cancer are anemic. Eat a balanced diet with protein, B vitamins, and vitamin C. Eat small meals every 2–3 hours. Eat beef meat, chicken, groundnuts, and seeds for iron. Avoid long-term use of iron supplements.
Anorexia	Medications, GI distress, and altered sensory experiences often lead to loss of appetite. Eat small, frequent meals. Consider pharmacological

	therapy with appetite-enhancing medication. Rinse mouth with baking soda or water before eating. Ginger or mint mask metallic tastes. Use plastic utensils if needed. Avoid unpleasant odors.
Aversion to foods or flavors	A lower threshold for urea causes aversion to meat, which smells rotten. Substitute milk, eggs, groundnuts, legumes, fish, and chicken. If ability to taste salt and sugar is decreased, add other seasonings, sauces, and more salt or sugar as desired; however, do not allow sweet foods to replace nourishing foods. Clear palate before meals by brushing teeth, gums, and oral cavity. Rinse with baking soda and salt water.
Chemotherapy	With all types (daily, weekly, monthly, every 2 months or even every year), promptly manage side effects through diet. Increase fluid intake for adequate hydration.
Cold food preference	Cold foods may be better accepted than hot foods. Consume cold, clear fluids, sweet drinks, watermelons, peeled cucumbers, yogurt, and salted groundnuts.
Constipation	Add fiber and extra fluids to the diet. Milk is beneficial, if tolerated. Fresh fruits, vegetables, and a hot drink may help. Get adequate exercise, such as walking.
Dental caries	Avoid sweets and use sodium fluoride three times daily. Practice mouth care several times daily
Diarrhea	Evaluate all medications carefully. Assess hydration status and associated symptoms. Alter fiber in diet. Beware of lactose intolerance secondary to disease process, drug therapy, or abdominal or pelvic radiation therapy. Increase fluids that contain sodium and potassium. Oral rehydration may be helpful. Avoid dairy products if lactose intolerant. Eat small amounts of food throughout the day instead of three large meals. Decrease fatty, spicy, or acidic foods; caffeine; gas-

	forming vegetables; or carbonated beverages. Plain rice, potatoes, eggs, mild fish, or skinless chicken may be well tolerated.
Difficulty swallowing	Eat moist foods; add sauces or stews. Semi-solid foods may be better tolerated than liquids, and pureed foods rather than regular items. Sip fluids through meal. To prevent aspiration, try placing liquids under the tongue. Tilting the head back or using a straw may help. Spoons are easier to control than forks in the mouth. Avoid very hot or very cold foods. Chew sugarless gum or candy. Consider feeding tube if needed.
Dry mouth	Surgical removal of salivary glands, atrophy of mucous membranes, or permanent damage from radiation to salivary glands may cause difficulty eating and swallowing. Use lip balm, sugarless gum and candies, gravies, and sauces. Increase fluids and use softened, moist foods (stews and soups). Cut food into small pieces or use pureed foods. Ice chips may help. Avoid salty foods. Tart foods and lemonade may help stimulate saliva production; avoid tart items if oral lesions. Sip water or other liquids frequently throughout the day and with each bite of food. Avoid caffeine, alcohol, and tobacco products.
Early satiety	Rather than plain water, drink calorie-containing beverages between meals. Avoid fatty, greasy foods because they are more slowly digested and absorbed. Eat small meals and frequent snacks between meals. Add protein and calories using extra oil, margarine, and dry milk powder.
Edema	Elevate the legs at rest, stay physically active (walk), and reduce salt intake. The doctor may prescribe a diuretic.
Fatigue	Eat foods that require less chewing and rest frequently, particularly before meals. Exercise daily to build stamina. Maintain adequate sleep/nap patterns.
Graft-versus-host	Wash hands frequently and use safe food handling procedures. Wash

disease (GVHD), neutropenia	all fruits and vegetables carefully and cook thoroughly. Avoid raw eggs. Cook meats well.
Insulin resistance	Control carbohydrate intake.
Malabsorption	Elemental diets can only be used if patient has an intact duodenum and jejunum. Total parental nutrition should be used only in some cases, considering risk of infection. Tart beverages such as lemonade can be mixed with elemental products if they are to be taken orally.
Mouth blindness (dysgeusia)	To alleviate disinterest and aversion to foods, emphasize the aroma and colors of foods. Foods that are served warm or hot have more flavor and aroma. Eat a variety of foods and use garnishes. Acidic foods (such as lemonade) may help stimulate taste. Use highly flavored foods and sauces. Eat fresh vegetables, olives, and pickles.
Mouth or throat soreness or dry mouth	Swish mouth with mild saline or sodium bicarbonate before meals. Avoid acidic juices, salty foods or soups, and dry toast. Grind meats. Drink cold or tepid fluids frequently; use a straw if needed. Eat smaller meals. Cut foods into small pieces; grind or puree if needed. Mix food with sauces or stews to make it easier to swallow. Avoid smoking and alcohol.
Muscle wasting	Muscle weakness is frequently associated with tumour growth. Include adequate amounts of protein and amino acids in the diet.
Nausea	Chew ice chips or sip ginger tea. Try a diet with liquids between meals. Eat small meals; rest upright afterward. Eat toast, yogurt, lemonade, oatmeal, clear liquids, or broth. Cut down on greasy, spicy, fried, fatty foods; foods with strong odors and excessive sweetness. Sit upright for meals and snack; avoid tight clothing. If breakfast is the best meal, it can be the largest of the day. Keep crackers or light snacks at hand; do not skip meals. Drink plenty of water/liquids the day before and after chemotherapy.

Pain	Take pain medications with the first few bites of a meal or eat when pain is lowest. Try foods again after a time lapse.
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***Step 3: Follow-up***

- Schedule a follow-up appointment to find out how the client is managing his/her symptoms through diet.
- Evaluate weight status to ensure no weight loss.