

UNIT ONE

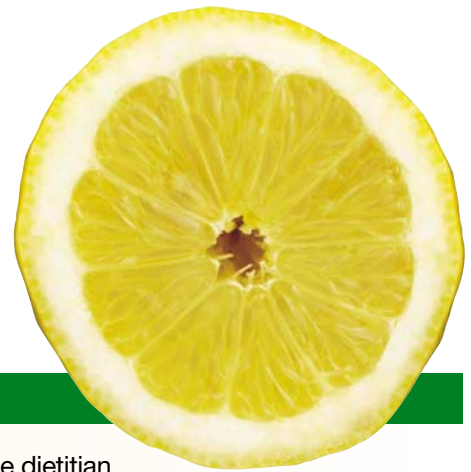
Principles of Nutrition



1



Nutrition in Nursing



TRUE	FALSE	
<input type="checkbox"/>	<input type="checkbox"/>	1 The nurse's role in nutrition is to call the dietitian.
<input type="checkbox"/>	<input type="checkbox"/>	2 Nutritional status is the balance between nutrient intake and requirements.
<input type="checkbox"/>	<input type="checkbox"/>	3 Asking a client if he/she is on a diet may not be of much value in determining usual intake.
<input type="checkbox"/>	<input type="checkbox"/>	4 Changes in weight reflect acute changes in nutritional status.
<input type="checkbox"/>	<input type="checkbox"/>	5 A person can be malnourished without being underweight.
<input type="checkbox"/>	<input type="checkbox"/>	6 The only cause of a low serum albumin concentration is protein malnutrition.
<input type="checkbox"/>	<input type="checkbox"/>	7 "Significant" weight loss is 5% of body weight in 1 month.
<input type="checkbox"/>	<input type="checkbox"/>	8 People who take five or more prescription or over-the-counter medications or dietary supplements are at risk for nutritional problems.
<input type="checkbox"/>	<input type="checkbox"/>	9 Written handouts that list "foods to avoid" and "foods to choose" are valuable teaching tools because they provide explicit dos and don'ts.
<input type="checkbox"/>	<input type="checkbox"/>	10 Physical signs and symptoms of malnutrition develop only after other signs of malnutrition are apparent (e.g., abnormal lab values, weight change).

UPON COMPLETION OF THIS CHAPTER, YOU WILL BE ABLE TO

- Describe how nutritional care can be approached using the nursing care process.
- Describe the "rule of thumb" formula for calculating ideal body weight for men and women based on height.
- Discuss disadvantages of using albumin as an indicator of nutritional status.
- Discuss alternatives to the term "diet."
- Explain why an alternative term to "diet" is useful.



Based on Maslow's Hierarchy of Needs, food and nutrition rank on the same level as air in the basic necessities of life. Obviously, death eventually occurs without food. But unlike air, food does so much more than simply sustain life. Food is loaded with personal, social, and cultural meanings that define our food values, beliefs, and customs. That food nourishes the mind as well as the body broadens nutrition to an art as well as a science. For most people, nutrition is not simply a matter of food or no food but rather a question of what kind, how much, and how often. Merging want with need and pleasure with health are key to achieving optimal nutritional status.

Nutritional Status: the state of balance between nutrient supply (intake) and demand (requirement). An imbalance between intake and requirement can result in overnutrition or undernutrition.

To achieve optimal nutritional status, intake may need to be adjusted upward or downward. For instance, when the goal is recovery from illness or surgery, nutrition therapy focuses on meeting increased needs for calories, protein, and other nutrients. Clients who fail to meet their nutritional needs may experience prolonged or complicated recovery from illness, and their responses to medical treatments and drug therapies may be diminished. In wellness settings, when optimal nutritional status means disease prevention, the nutritional focus is frequently to ensure that intake does not exceed requirement. The emphasis is on avoiding excesses of calories, fat, saturated fat, cholesterol, and sodium to reduce the risk of chronic diseases such as heart disease, hypertension, diabetes, and obesity. However, these settings do not have mutually exclusive nutritional priorities. Some hospital patients require restrictive diets (e.g., low-sodium diet), and some wellness clients have nutrient intakes below their requirements (e.g., not enough calcium or fiber). Therefore, a priority for all clients is to consume or obtain an adequate and appropriate intake of calories and nutrients based on their own individual needs.

Just what is an adequate and appropriate intake of calories and nutrients and how to achieve that intake is determined by analyzing data to identify actual or potential nutritional problems. The decision-making process continues with goal setting, implementing a plan, and evaluation. While the dietitian or diet technician may shoulder most of the responsibility for the nutritional care of hospitalized patients deemed to be at moderate to high nutritional risk, low-risk hospitalized patients and clients in other settings (e.g., home health, corporate wellness, parish nursing) may be relegated to the nurse. In addition, it may be the nurse who screens clients to determine the existing level of risk and who reinforces diet counseling. As such, nurses are intimately involved in all aspects of nutritional care.

This chapter focuses on the importance of nutrition in nursing practice. The *nursing process* is used to illustrate how nutrition is integrated into nursing in the real world. Real-life situations are described to show practical application.

► NUTRITIONAL CARE PROCESS

What does the client need? What can you or others do to effectively and efficiently help the client meet his or her needs? What criteria will you use to judge success? These and similar questions are the foundation of the decision-making process, whether the focus is on general nursing or specifically on nutrition.



Career Connection

What is the nurse's role in facilitating nutritional care?

- Communicate with the registered dietitian (RD).
- Serve as a liaison between the physician and the RD.
- Identify clients who may benefit from programs such as Meals on Wheels.
- Request a referral to a speech therapist.
- Confer with the discharge planner, social services worker, and physical or occupational therapist.

Assessment

Nutritional Assessment: an in-depth analysis of a person's nutritional status. In the clinical setting, nutritional assessments focus on moderate- to high-risk patients with suspected or confirmed protein-energy malnutrition.

In all settings, it is appropriate to evaluate the client's nutritional status so that appropriate goals and interventions can be devised to correct actual or potential imbalances. Nutritional status can be assessed by looking at a few or many criteria. Exactly which criteria are evaluated and how the results are interpreted depend on the particular population and setting as well as the availability of time and resources. Although everyone agrees that it is important to identify actual and potential nutritional problems, there is no universally accepted, definitive tool to do so. Often professional judgment is as important as objective criteria.

The process of assessment involves gathering and analyzing data. Nurses are in an ideal position to screen clients for nutritional problems through an initial nursing history and physical examination. Clients deemed at low or no risk for nutritional problems may need only to be monitored for any deterioration in nutritional status. Clients found to be at moderate or high risk are usually referred to a dietitian for a comprehensive nutritional assessment (see **Connection** website for in-depth assessment criteria). It is important to remember that nutritional risks may exist that simply were not evaluated and that a person's relative risk can change. Here are some key questions to consider.

Is the Client at Nutritional Risk Because of Health Problems?

A positive response to any of these questions may indicate the need for nutrition intervention:

- Does the client have a medical condition that may benefit from nutrition therapy such as diabetes or hypertension?
- Do physical complaints interfere with the client's intake such as difficulty chewing and swallowing, anorexia, heartburn, nausea, vomiting, or pain?
- Does the client have increased needs? For instance, nutritional needs increase in response to pregnancy, fever, sepsis, thermal injuries, skin breakdown, cancer, acquired immunodeficiency syndrome (AIDS), major surgery, and trauma.
- Is the client losing nutrients as in the case of malabsorption, diarrhea, and certain renal diseases?



Is the Client at Nutritional Risk Because of Intake?

Obtaining reliable and accurate information on what the client usually eats is far more difficult than it sounds. Eating is highly personal and people often get defensive when questioned about their eating habits. Although the nurse may only be required to fill in a blank space next to the word “diet,” simply asking the client “Are you on a diet?” will probably not give accurate or sufficient information to determine what the client eats. First of all, a client may interpret that leading question as “You should be on a diet. If you’re a good patient you’ll tell me you follow a diet.” A better question would be, “Do you avoid any particular foods?” or “Do you watch you eat in any way?” Even the term “meal” may elicit a stereotypical mental picture. Questions to consider include

- How many meals and snacks do you eat in a 24-hour period?* This question helps to establish the pattern of eating and identifies unusual food habits such as pica, food faddism, eating disorders, and meal skipping.
- Do you have any food allergies or intolerances, and, if so, what are they?* The greater the number of foods restricted or eliminated in the diet, the greater the likelihood of nutritional deficiencies. This question may also shed light on the client’s need for nutrition counseling. For instance, clients with hiatal hernia who are intolerant of citrus fruits and juices may benefit from counseling on how to ensure an adequate intake of vitamin C.
- What types of vitamin, mineral, herbal, or other supplements do you use and why?* A multivitamin, multimineral supplement that provides 100% or less of the Daily Value offers some protection against less than optimal food choices. Folic acid in supplements or fortified food is recommended for women of childbearing age; people over age 50 are encouraged to obtain vitamin B₁₂ from fortified foods or supplements. However, potential problems may arise from other types or amounts of supplements. For instance, large doses of vitamin A, B₆, and D have the potential to cause toxicity symptoms. Iron supplements may decrease zinc absorption and negatively impact zinc status over time.
- What concerns do you have about what or how you eat?* This question places the responsibility of healthy eating with the client, where it should be. A client who may benefit from nutrition intervention and counseling *in theory* may not be a candidate for such *in practice* depending on her or his level of interest and motivation. This question may also shed light on whether or not the client understands what he or she should be eating and if the client is willing to make changes in eating habits.
- For clients who are acutely ill, how has illness affected your choice or tolerance of food?*
- Who prepares the meals?* This person may need nutritional counseling.
- Do you have enough food to eat?* Be aware that pride and an unwillingness to admit inability to afford an adequate diet may prevent some clients and families from answering this question. For hospitalized clients, it may be more useful to ask the client to compare the size of the meals they are served in the hospital to the size of meals they normally eat.
- How much alcohol do you drink daily?* Risk begins at more than one drink daily for women and more than two drinks daily for men.



Does the Client’s Weight Indicate a Health Risk?

Body Mass Index: an index of weight in relation to height that is calculated mathematically by dividing weight in kilograms by the square of height in meters.

Height and weight are used to indirectly assess undernutrition and overnutrition in adults. Measuring height and weight is relatively quick and easy and requires little skill; therefore, *measures* not *estimates* should be used whenever possible to ensure accuracy and reliability. After height and weight are obtained, they can be used to calculate body mass index (BMI) from which relative risk of health problems related to weight can be estimated. “Healthy” or “normal” BMI is defined as 18.5 to 24.9. Values above and below this range are associated with increased health risks. Keep in mind that a person can have a high BMI and still be undernourished in one or more nutrients if intake is unbalanced or if nutritional needs are high and intake is low. See chapter 14 for more on BMI.

A different, quick, and easy rule-of-thumb method of assessing weight is to calculate “ideal” body weight using the Hamwi method, then analyze the client’s weight as a percent of ideal (Table 1.1). Keep in mind that neither method measures body fatness or evaluates distribution of body fat, both of which impact health risk. Also, edema or dehydration skews accurate weight measurements.

TABLE 1.1 **CALCULATIONS AND ANALYSIS OF WEIGHT FOR HEIGHT**

“Ideal” Body Weight: the formula given here is a universally used standard in clinical practice to quickly estimate a person’s reasonable weight based on height, even though it and all other methods are not absolute.

	Body Mass Index		Hamwi Method	
Calculate	$\text{BMI} = \frac{\text{weight (kg)}}{\text{Height squared}}$		1. “Ideal” weight based on height: Men: 106 pounds for the first 5 feet of height and 6 pounds for each additional inch Women: 100 pounds for the first 5 feet of height and 5 pounds for each additional inch Add or subtract 10% depending on body frame size 2. Use current weight and “ideal” weight to determine percent ideal body weight: $\% \text{IBW} = \frac{\text{current weight}}{\text{ideal weight}} \times 100$	
Analyze	<20.0	may ↑ health risk	>200%	morbid obesity
	20.0–24.9	healthy weight	120–199%	obese
	25.0–26.9	may ↑ health risk in some	110–119%	overweight
	>27.0	↑ health risk	90–110%	within normal range
			89–90%	mild malnutrition
			70–79%	moderate malnutrition
			<69%	severe malnutrition



Has the Client Experienced Significant Weight Change?

Significant weight change is determined by how much weight is lost per specified unit of time, usually in terms of months (Box 1.1). Regardless of whether the change was intentional (e.g., dieting) or unintentional (e.g., related to illness), significant weight loss increases the risk of poor nutritional status. However, because changes in weight may be slow to occur, they are more reflective of chronic, not acute, changes in nutritional status.

Do Medications or Nutritional Supplements Warrant a Closer Look for Their Impact on Nutrition or Food Interactions?

Both prescription and over-the-counter drugs have the potential to affect and be affected by nutritional status. Sometimes drug-nutrient interactions are the intended action of the drug. At other times, alterations in nutrient intake, metabolism, or excretion may be an unwanted side effect of drug therapy. Although well-nourished individuals on short-term drug therapy may easily withstand the negative effects of drug-nutrient interactions, malnourished clients and those on long-term drug regimens may experience significant nutrient deficiencies and decreased tolerance to drug therapy. Clients at greatest risk for development of drug-induced nutrient deficiencies include those who

- Habitually consume fewer calories and nutrients than they need
- Have increased nutrient requirements including infants, adolescents, and pregnant and lactating women
- Are elderly
- Have chronic illnesses
- Take large numbers of drugs (five or more), whether prescription drugs, over-the-counter medications, or dietary supplements
- Are receiving long-term drug therapy
- Self-medicate
- Are substance abusers

Does the Client Look Malnourished?

Subclinical:
asymptomatic.

The problem with relying on physical appearance to reveal nutritional problems is that most signs cannot be considered diagnostic; rather, they must be viewed as suggestive of malnutrition because evaluation of “normal” versus “abnormal” findings is subjective.

BOX 1.1 EVALUATING WEIGHT CHANGE

Calculate percent weight change:

$$(\text{usual weight} - \text{present weight}) \div \text{usual weight} \times 100$$

The following guidelines indicate significant weight loss:

- 1% to 2% in 1 week
- 5% in 1 month
- 7.5% in 3 months
- 10% in 6 months



tive and the signs of malnutrition may be nonspecific. For instance, dull, dry hair may be related to severe protein deficiency or to overexposure to the sun. In addition, physical signs and symptoms of malnutrition can vary in intensity among population groups because of genetic and environmental differences. Lastly, physical findings occur only with overt malnutrition, not subclinical malnutrition. Physical signs and symptoms suggestive of malnutrition appear in Box 1.2.

Are There Social Factors That Impact Nutrition?

Social factors that may influence intake, nutritional requirements, or nutrition counseling needs include a history or evidence of

- Illiteracy
- Language barriers
- Limited knowledge of nutrition and food safety
- Altered or impaired intake related to culture
- Altered or impaired intake related to religion
- Lack of caregiver or social support system
- Social isolation
- Lack of or inadequate cooking arrangements
- Limited or low income
- Limited access to transportation to obtain food
- Advanced age (>80 years)
- Lack of or extreme physical activity
- Use of tobacco or recreational drugs
- Limited use or knowledge of community resources

Do Lab Values Suggest Nutritional Problems?

A wide variety of serum and urine laboratory values can be examined to assess a person's health status or response to treatment. For a quick look at protein status, albumin is the measurement most commonly used. Normal albumin levels range from 3.5 to 5.4 g/dL;

BOX 1.2

PHYSICAL SIGNS AND SYMPTOMS SUGGESTIVE OF MALNUTRITION

- Hair that is dull, brittle, dry, or falls out easily
- Swollen glands of the neck and cheeks
- Dry, rough, or spotty skin that may have a sandpaper feel
- Poor or delayed wound healing or sores
- Thin appearance with lack of subcutaneous fat
- Muscle wasting (decreased size and strength)
- Edema of the lower extremities
- Weakened hand grasp
- Depressed mood
- Abnormal heart rate, heart rhythm, or blood pressure
- Enlarged liver or spleen
- Loss of balance and coordination



TABLE 1.2

GENERAL GUIDELINES FOR INTERPRETING ALBUMIN AND PREALBUMIN LEVELS

	Albumin (g/dL)	Prealbumin (mg/dL)
Normal	3.5–5.5	23–43
Mild depletion	2.8–3.4	10–15
Moderate depletion	2.1–2.7	5–9
Severe depletion	<2.1	<5

values less than normal may indicate protein malnutrition. Unfortunately, albumin is not specific for nutritional status; other non-nutritional factors such as injury, infection, dehydration, liver disease, renal disease, and congestive heart failure, impact serum levels. Nor is albumin sensitive to acute changes in nutrition because it is degraded slowly (half-life: 14 to 21 days) so changes are slow to develop. The body's large extravascular pool of albumin can be mobilized to maintain serum levels until malnutrition is in a chronic stage.

Prealbumin, also known as thyroxin-binding protein, is a more sensitive indicator of protein status than albumin but it is also more expensive and less frequently ordered. Prealbumin is often used to assess protein status in critically ill patients at high risk for malnutrition. See Table 1.2 for general guidelines for interpreting albumin and prealbumin levels.

Nursing Diagnosis

Based on the data collected and interpreted, actual or potential nutritional problems are stated in nursing diagnoses. Nursing diagnoses in hospitals and long-term care facilities provide written documentation of the client's status and serve as a framework for the plan of care that follows. The diagnoses relate directly to nutrition when altered nutrition is the problem or indirectly when a change in intake will help to manage a nonnutritional problem. See Box 1.3 for some nursing diagnoses with nutritional relevance.

In wellness settings, documentation may be informal or nonexistent as in the case of a one-time-only opportunity such as a community health fair. In those instances, nursing diagnoses may be mentally noted but physically unwritten.

Planning and Implementation

The steps in planning and implementation include setting priorities, formulating goals, and determining what nursing actions are needed to help the client achieve those goals. Although planning for high-risk clients is the dietitian's responsibility, the nurse may plan for healthy clients and for those at low or mild risk for nutritional problems.



BOX 1.3

SOME NURSING DIAGNOSES WITH NUTRITIONAL RELEVANCE

- Altered nutrition: more than body requirements
- Altered nutrition: less than body requirements
- Altered nutrition: risk for more than body requirements
- Constipation
- Diarrhea
- Fluid volume excess
- Fluid volume deficit
- Risk for aspiration
- Altered oral mucous membrane
- Altered dentition
- Impaired skin integrity
- Noncompliance (with prescribed diet)
- Impaired swallowing
- Knowledge deficit (about nutrition therapy)
- Pain
- Nausea

Setting Priorities

What is the individual's most pressing health problem and how can nutrition help in its treatment? Does the client need more calories and protein to meet increased needs or a restricted intake to treat chronic disease? For instance, the priority for a nursing home resident with heart disease who is experiencing significant weight loss is not to maintain a low-fat diet but to increase calories (even with more fat) so as to halt or reverse the weight loss. Equally important is that those calories and nutrients must be in a usable form: clients get little benefit from food they cannot digest and absorb. Finally, whenever possible it is a priority to provide calories and nutrients through foods that are familiar to and liked by the client.

It is also essential to prioritize what the client needs to learn about nutrition. The client who is a newly diagnosed type 2 diabetic with irregular eating habits, a high cholesterol level, obesity, and osteoporosis has many nutritional concerns. Rather than suggest that he or she avoid sugar, time meals consistently, cut fat, limit red meat intake, switch to soft margarine, eat more vegetables, use canola oil, eat oatmeal, and drink more milk, it is better to prioritize: establishing a regular eating pattern and simply reducing portions are the most important first steps.

Formulating Goals

Goals should be measurable, attainable, specific, and client-centered. How do you measure success against a vague goal of "gain weight by eating better"? Is "eating better" achieved by adding butter to foods to increase calories or by substituting 1% milk for whole milk because it is heart-healthy? Is a 1-pound weight gain in 1 month



acceptable or is 1 pound/week preferable? Is 1 pound/week attainable if the client has accelerated metabolism and catabolism caused by third-degree burns?

Client-centered goals place the focus on the client not the health care provider; they specify where the client is heading. Whenever possible, give the client the opportunity to actively participate in goal setting, even if the client's perception of need differs from yours. In matters that do not involve life or death, it is best to first address the client's concerns. Your primary consideration may be the patient's significant weight loss during the last 6 months of chemotherapy; the patient's major concern may be fatigue. The two issues are undoubtedly related but your effectiveness as a change agent is greater if you approach the problem from the client's perspective. Commitment to achieving the goal is greatly increased when the client "owns" the goal.

Keep in mind that the goal for all clients is to maintain or restore optimal nutritional status using foods they like and tolerate as appropriate. If possible, additional short-term goals may be to alleviate symptoms or side effects of disease or treatments and to prevent complications or recurrences if appropriate. After short-term goals are met, attention can center on promoting healthy eating to reduce the risk of chronic diet-related diseases such as obesity, diabetes, hypertension, and atherosclerosis.

Examples of client-centered goals in a community-based weight management program are

- Eat breakfast every day.
- On 3 days/week, replace the usual mid-morning snack of soda and a doughnut with sugar-free soda and a piece of fruit.
- Switch from regular margarine to diet margarine.
- Switch from whole milk to 2% milk.

Nursing Interventions

What can you or others do to effectively and efficiently help the client achieve his or her goals? Interventions may take the form of promoting an adequate and appropriate intake, teaching the client about nutrition, and monitoring the client's response.

Promoting an Adequate and Appropriate Intake

Throughout this book, the heading Nutrition Therapy is used in place of Diet because among clients, *diet* is a four-letter word with negative connotations such as counting calories, deprivation, sacrifice, and misery. A diet is viewed as a short-term punishment to endure until a normal pattern of eating can resume. Clients respond better to newer terminology that is less emotionally charged. Use terms such as *eating pattern*, *food intake*, *eating style*, or *the food you eat* to keep the lines of communication open.

Nutrition therapy recommendations are usually general suggestions to increase/decrease, limit/avoid, reduce/encourage, or modify/maintain aspects of the diet because exact nutrient requirements are determined on an individual basis. Where more precise amounts of nutrients are specified, consider them as a starting point and monitor the client's response.

Keep in mind that nutrition theory may not apply to practice. Factors such as the client's prognosis, outside support systems, level of intelligence and motivation, willingness to comply, emotional health, financial status, religious or ethnic background,



Career Connection

How can I promote an adequate intake?

- Reassure clients who are apprehensive about eating.
- Encourage a big breakfast if appetite deteriorates throughout the day.
- Advocate discontinuation of intravenous therapy as soon as feasible.
- Replace meals withheld for diagnostic tests.
- Promote congregate dining if appropriate.
- Question diet orders that appear inappropriate.
- Display a positive attitude when serving food or discussing nutrition.
- Order snacks and nutritional supplements.
- Request assistance with feeding or meal setup.
- Get the patient out of bed to eat if possible.
- Encourage good oral hygiene.
- Solicit information on food preferences.

and other medical conditions may cause the optimal diet to be impractical in either the clinical or the home setting. Generalizations do not apply to all individuals at all times. Also, comfort foods (e.g., chicken soup, mashed potatoes, ice cream) are valuable for their emotional benefits if not nutritional ones. Honor clients' requests for individual comfort foods whenever possible.

Client Teaching

Compared with “well” clients, patients in a clinical setting may be more receptive to nutritional advice especially if they feel better by doing so or are fearful of a relapse or complications. But hospitalized patients are also prone to confusion about nutrition messages. Time spent with a dietitian or diet technician learning about a “diet” may be brief or interrupted. Even if the “diet” represents a whole new eating style that is best achieved by making sequential changes, nutrition counseling in the hospital is often limited to one or two sessions with the dietitian. The patient may not even know what questions to ask until long after the dietitian is gone. The patient's ability to assimilate new information may be compromised by pain, medication, anxiety, or a distracting setting. Hospital menus or diets that differ from discharge orders add to the confusion.

Nutrition counseling by nurses *and* dietitians is more effective and efficient than that done by nurses *or* dietitians. First, the nurse is often available as a nutrition resource when dietitians are not, such as when trays are passed, during the evening, on weekends, and when the client is sitting on the edge of the bed fully dressed and waiting for transport home. In home care and wellness settings, dietitians may be available only on a consultative basis. Secondly, nurses reinforce nutrition counseling performed by dietitians: the more the message is repeated and the more people tell it, the more likely the message will stick. Finally, nurses initiate basic nutrition counseling for hospitalized clients with low to mild risk who may not have contact with a dietitian. The nurse has greatest con-



Career Connection

What can I do to facilitate client and family teaching?

- Listen to the client's concerns and ideas.
- Encourage family involvement if appropriate.
- Reinforce the importance of obtaining adequate nutrition.
- Help the client to select appropriate foods.
- Counsel the client about drug–nutrient interactions.
- Avoid using the term “diet.”
- Emphasize things “to do” instead of things “not to do.”
- Keep the message simple.
- Review written handouts with the client.
- Advise the client to avoid any foods that are not tolerated.

Nutritional Screen: a quick look at a few variables to judge a client's relative risk for nutritional problems. Can be custom designed for a particular population (e.g., pregnant women) or for a specific disorder (e.g., cardiac disease).

tact with the client, family, and other members of the health care team; the dietitian has nutrition and food expertise. Together, the nurse and dietitian form a strong alliance.

As an example, consider a male client of normal weight who is admitted to the hospital because of difficulty breathing. According to nutritional screening data, he is not at nutritional risk. You find that although his weight is within the normal range, he experienced progressive weight loss before admission because of shortness of breath and fatigue that interfered with eating. You seize the opportunity to suggest protein- and calorie-dense foods that are easy to prepare and consume such as instant breakfast made with whole milk, yogurt with cereal, whole-milk fruit smoothies, and cottage cheese with canned fruit. You also suggest that the client eat or drink every 2 hours. He admits that he considered this idea before but rejected it because he thought it would interfere with his appetite. You reassure him that planned nutritious snacks will add to rather than detract from his eating plan. You ask the dietitian to see the client in case there are other concerns or misconceptions. Without your intervention, his weight loss probably would have continued, increasing the risk of future health problems.

Monitoring

Think of monitoring as a precursor to evaluation in which you watch and document the impact of interventions on the client on an ongoing basis so that immediate concerns can be quickly addressed.

For example, after counseling a female employee at a worksite on how to manage mild hypertension through food choices and exercise, you suggest she stop by the health office every day during her lunch break so that you can take her blood pressure. During those visits you ask her specific questions: How many meatballs did you eat with your spaghetti last night? Was the sauce labeled “reduced sodium”? Did you double your normal portion of vegetables? What kind of milk are you drinking? How much exercise did you do yesterday? Her answers help you determine how well she understands the counseling information and how successfully she is implementing the strate-



Career Connection

How do I stay on top of the client's nutrition?

- Observe intake whenever possible to judge the adequacy.
- Document appetite and take action when the client does not eat.
- Order supplements if intake is low or needs are high.
- Request a nutritional consult.
- Assess tolerance (i.e., absence of side effects).
- Monitor progress (e.g., weight gain).
- Monitor progression of restrictive diets. Clients who are receiving nothing by mouth (NPO), who are restricted to a clear liquid diet, or who are receiving enteral or parenteral nutrition are at risk for nutritional problems.
- Monitor the client's grasp of the information and motivation to change.

gies to achieve her goals. Talking about specific foods is likely to stimulate discussion that provides the client with more information, more options, or revised goals.

Ideally, behavior change occurs gradually and sequentially to become part of the client's new normal way of eating. In a less than perfect, time-challenged world, it is necessary to prioritize the client's needs and address the most important ones.

Evaluation

The optimal outcome of interventions is that the client's goals are completely met on a timely basis. But goals may be only partially met or not achieved at all; in those instances it is important to determine why the outcome was less than ideal. Were the goals realistic for this particular client? Were the interventions appropriate and consistently implemented? Evaluation includes deciding whether to continue, change, or abolish the plan.

Consider a male client admitted to the hospital for chronic diarrhea. During the 3 weeks before admission, the client experienced significant weight loss due to malabsorption secondary to diarrhea. Your goal is for the client to maintain his admission weight. Your interventions are to provide small meals of low-residue foods as ordered, to eliminate lactose because of the likelihood of intolerance, to increase protein and calories with appropriate nutrient-dense supplements, and to explain the nutrition therapy recommendations to the client to ease his concerns about eating. You find that the client's intake is poor because of lack of appetite and a fear that consumption of foods and fluids will promote diarrhea. You notify the dietitian, who counsels the client about low-residue foods, obtains likes and dislikes, and urges the client to think of the supplements as part of the medical treatment not as a food eaten for taste or pleasure. You document intake and diligently encourage the client to eat and drink everything served. However, the client's weight continues to drop. You attribute this to his reluctance to eat and to the slow resolution of diarrhea due to inflammation. You determine that the goal is still realistic and appropriate but that the client is not willing or



able to consume foods orally. You consult with the physician and dietitian about the client's refusal to eat and the plan changes from an oral diet to tube feeding.

● How Do You Respond?

Should I save my menus from the hospital to help me plan meals at home? This is not a bad idea if the in-house and discharge food plans are the same, but the menus should serve as a guide, not a gospel. Just because shrimp was never on the menu doesn't mean it is taboo. Likewise, if the client hated the orange juice served every morning, he or she shouldn't feel compelled to continue drinking it. By necessity, hospital menus are more rigid than at-home eating plans.

Can you just tell me what to eat and I'll do it? A black-and-white approach should be used only when absolutely necessary such as for food allergies or for clients who insist on a rigid plan rather than the flexibility of being able to decide for themselves. In most cases, advice should be as flexible as possible, even if the client insists it is not necessary to individualize the eating plan for his or her particular eating pattern. Individualization requires more work, but it is worth the effort for the flexibility it provides. Impress on the client that foods are not inherently good or bad except in special conditions. What matters more is how much, what kind, and how often a food is eaten.

▲ Focus on Critical Thinking

Respond to the following statements:

1. Nurses should not have to deal with nutrition.
2. "Ideal" weight is a misnomer.
3. It is possible to be overweight yet undernourished.
4. In the acute care setting, nutritional status is less important than medical treatments.

● Key Concepts

- Through a routine history and physical, nurses can identify who may be at nutritional risk.
- Chronic or acute changes in health can impact nutritional status by altering intake, digestion, metabolism, or excretion of nutrients.
- A client may be at nutritional risk because of what he or she does or does not eat. Ask open-ended, non-leading questions to ascertain usual intake.
- Neither BMI nor "ideal" body weight may reliably assess health risk related to weight if muscle mass is large or edema is present. Nor does either method take into account where body fat is deposited.



- Significant weight loss increases the risk of poor nutrition even if the weight loss was intentional.
- Medications and nutritional supplements should be evaluated for their potential impact on nutrient intake, absorption, utilization, or excretion.
- Physical signs and symptoms of malnutrition are nonspecific, subjective, and develop slowly. They can be considered suggestive of malnutrition but not diagnostic.
- Nursing diagnoses relate directly to nutrition when the client's intake of nutrients is too much or too little for body requirements. Many other nursing diagnoses, including constipation, impaired skin integrity, health-seeking behaviors, non-compliance, and risk for infection, relate indirectly to nutrition because nutrition contributes to the problem or solution.
- A nutrition priority for all clients is to obtain adequate calories and nutrients based on individual needs. Sometimes it is necessary to prioritize nutrient needs. Other priorities are to provide calories and nutrients in a form the client can use and, if possible, through foods familiar to and liked by the client. The client's nutrition priorities may be completely different from yours.
- Short-term nutrition goals are to attain or maintain adequate weight and nutritional status and (as appropriate) to avoid nutrition-related symptoms and complications of illness. Long-term goals are to promote healthy eating so as to avoid chronic diet-related diseases such as heart disease, hypertension, obesity, and type 2 diabetes. Help the client to formulate nutrition goals that are measurable, attainable, and specific.
- The term *diet* inspires negative feelings in most people. Replace it with *eating pattern*, *eating style*, or *foods you normally eat* to avoid negative connotations.
- Keep in mind that intake recommendations are not always appropriate for all persons, that clients' needs change, that what is recommended in theory may not work for an individual, and that clients may revert to comfort foods during periods of illness or stress.
- The term *counseling* means teaching plus brainstorming to help the client understand *and implement* intake recommendations. Nurses can reinforce nutrition counseling done by the dietitian and initiate counseling for clients with low or mild risk.
- Use preprinted lists of "do's and don'ts" only if absolutely necessary such as in the case of celiac disease. For most people, actual food choices should be considered in view of how much and how often they are eaten rather than as foods that "must" or "must not" be consumed.

ANSWER KEY

1. **FALSE** The nurse is in an ideal position to provide nutrition information to patients and their families since he or she is the one with the greatest client contact.
2. **TRUE** Nutritional status is loosely defined as the state of balance between nutrient supply and demand.
3. **TRUE** Clients may respond to the buzzword diet with an answer they think you expect. Asking if they avoid any particular foods or "watch" what they eat may be more revealing.



4. **FALSE** Changes in weight may be slow to occur. Weight changes are more reflective of chronic, not acute, changes in nutritional status.
5. **TRUE** A person can be malnourished without being underweight. Weight does not provide qualitative information about body composition.
6. **FALSE** Low serum albumin levels may be caused by problems other than protein malnutrition such as injury, infection, overhydration, and liver disease.
7. **TRUE** Weight loss is judged significant if there is a 5% loss over the course of 1 month.
8. **TRUE** People who take five or more prescription drugs, over-the-counter drugs, or dietary supplements are at increased risk for developing drug-induced nutrient deficiencies.
9. **FALSE** Specific lists of foods to choose and foods to avoid should be used only if absolutely necessary. It is important to focus on the quantity and frequency of foods consumed rather than absolute “do’s” and “don’ts.”
10. **TRUE** Physical signs and symptoms of malnutrition develop only after other signs of malnutrition, such as laboratory and weight changes, are observed.

WEBSITES

For Dietary Analysis and Intake Calculators, a variety of Dietary Assessment Tools, and Resource Information, go to “Dietary Assessment” Under Topics A-Z at the Food and Nutrition Information Center at www.nal.usda.gov/fnic.html

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