NUTRITION RESOURCE GUIDE

Manitoba Home Care Program

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Dietitians of Canada
Les diététistes du Canada

Produced in co-operation with Dietitians of Canada

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Introduction

The majority of older people have one or more chronic ailments. Many of these conditions, such as heart disease, lung disease and diabetes, benefit from nutritional intervention. Nutrition plays a key role in maintaining health and well-being, and in delaying the inevitable changes that come with normal aging. Identifying chronic and acute nutritional problems as early as possible will be a catalyst for providing appropriate low-cost interventions. For example, in a poorly nourished person, boosting her or his nutrient intake can help speed the recovery from an acute infection by improving immunity and promoting healing. This is far less costly and less traumatic than hospitalization.

The Nutrition Resource Guide will allow the case co-ordinator to identify significant nutritional risks. The Guide also provides tools and resources that will assist direct service workers to provide nutritional information to clients and their families. The direct service worker is a key member of the team and her/his understanding and cooperation is essential if this Guide is to be effective in improving the nutritional health of Home Care clients.

The next two pages summarize the steps to be taken, from Part A to Part D, when using the Nutrition Resource Guide.

Use of the Nutrition Resource Guide will increase awareness of nutritional problems by case co-ordinators, resource co-ordinators and direct service workers. Parts of the Guide are also designed for use by clients and their families. The Guide will promote appropriate nutrition intervention in a timely and effective manner. The Guide encourages an interdisciplinary community-based model that uses existing programs and fosters greater collaboration among all professionals and staff who care for clients in the Home Care setting. Case co-ordinators should consult a Registered Dietitian as necessary. Dietitians have special expertise and training in conducting nutritional assessments and in practical meal planning. Consultation with the physician, with an occupational therapist, physiotherapist, speech language pathologist, mental health worker, dentist or denturist, pharmacist, or other specialists, may be required.

Please refer to the inservice package, which includes case studies, for further information on using the Nutrition Resource Guide.

Part A: Nutrition Questionnaire

The Nutrition Questionnaire (page 25-28) is an easy-to-use tool that will help case co-ordinators screen for nutritional problems in Home Care clients. It is designed to be used by case co-ordinators as a supplement to the Home Care *Care Assessment Form*. Prior to doing the Nutrition Questionnaire it is essential to be familiar with the information contained in this Nutrition Resource Guide, including the section called "Background to Nutrition Questionnaire". The case co-ordinator also needs to be familiar with basic nutrition tools found in this Guide such as the Canada's Food Guide to Healthy Eating. The questions contained in the Nutrition Questionnaire are simple, but the case co-ordinator may need to probe further if there are indicators of a potential nutritional problem.

Once the Nutrition Questionnaire has been completed, the case co-ordinator should complete the Nutritional Risk Checklist. This Checklist is to be placed in the client's chart, and will provide a quick visual reminder of identified risks. There is a place on this sheet to record follow-up plans. The Nutrition Guidelines can be used once the risks have been identified.

The Glossarial Index provides definitions of medical words and terms, and an index for Part A.

Part B: Nutrition Guidelines

The Nutrition Guidelines will provide guidance to case co-ordinators on how to reduce the identified nutritional risks and problems. Useful Nutrition Handouts are suggested. It is important to keep in mind, that these guidelines are just that. For example, dysphagic clients may have found the most effective method to improve their own swallowing. Many clients will have strategies that work well and these should not be neglected or discounted. These guidelines should supplement or improve those strategies already being used.

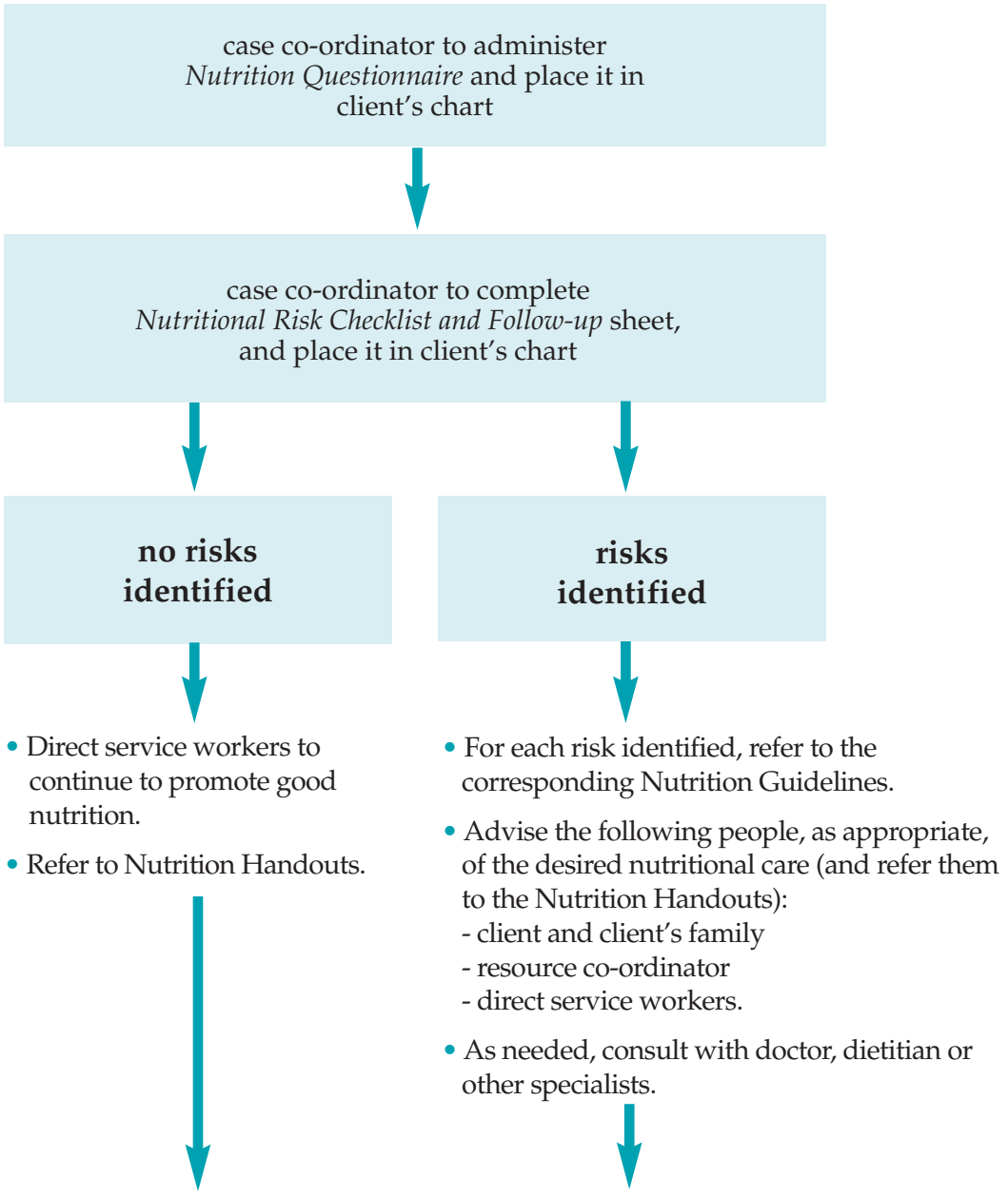
Part C: Nutrition Observation Form

The Nutrition Observation Form is a tool to be used by direct service workers to record nutritional concerns that can be brought to the attention of case co-ordinators.

Part D: Nutrition Handouts

This package will be of particular use to the direct service workers and clients and their families to facilitate positive nutritional changes. The package contains easy-to-read sheets on key nutrition topics.

Nutrition Resource Guide Flowchart



Follow-up of Nutritional Risks

- It may be appropriate to repeat the Nutrition Questionnaire if the client experiences a trauma such as death of a spouse, hospitalization, significant weight loss, or an obvious change in mental or physical status.
- Direct service workers should use the Nutrition Observation Form to record nutritional concerns and bring these to the attention of their supervisor.

A. Nutrition Questionnaire
(for case co-ordinators)

Background to Nutrition Questionnaire

This section provides background information on the importance of each question included in the Nutrition Questionnaire (found on page 25-28). Issues to consider prior to asking each question, are discussed.

Tips for using the Questionnaire:

- Questions #1-3, 9, 11, 12, 13 and 15-20 will indicate a nutritional risk if answered yes. Questions 4-8, 10 and 14 will indicate a risk if answered no.
- With each yes/no answer there is a small amount of space where you can record any relevant comments, or report something that has been said by the client. For example, the answer may not be "yes" or "no" but might be "maybe" or "usually", and you can record this. However for the Nutrition Risk Checklist you will need to decide if the answer is swayed towards the nutritional risk versus no risk.
- There is a line at the bottom of the Questionnaire where you can record anything else that you feel may be relevant to the client's nutritional health. For example, if the client had just lost a spouse this might explain a recent weight loss and poor appetite. Any relevant subjective assessment could also be recorded here. For example, record any signs of dementia or abnormal memory loss which could be indicators of malnutrition.
- If the client is unable or unwilling to answer these questions, a family member or other person may agree to assist. If applicable, record beside "Information provided by" the name of the person who assisted and their relationship to the client.

Questions 1-3 — Weight

- Body weight, and especially body weight change, is the most useful single observation for assessment of nutritional status.
- A weight gain or loss of 10 lb or more within a six month period of time indicates a high risk client.

Weight assessment problems:

- Home Care staff and/or clients may not have access to a reliable scale.
- The client may be wheelchair-bound and/or may have had limbs amputated.
- The client may have excess fat but be depleted of muscle mass.
- Height and weight tables and body mass index (BMI) charts are not appropriate for the elderly.

Because of these problems, the Nutrition Questionnaire does not focus solely on total weight, but rather, questions whether there has been a significant weight change.

Options for determining weight:

1. Obtain present and past weights from the client's medical records.
2. Encourage client to be weighed at the doctor's office each time they see the doctor; ask the client or family to keep a record of these weights.
3. Use a calibrated, good quality portable scale (placed on a hard floor).
4. A last option would be to use the client's floor scale.

Health risks of being underweight:

For the underweight person, a lack of calories, protein and other nutrients contributes to many problems including:

- fatigue and loss of muscle strength
- poor wound healing
- development of decubitus ulcers (bed sores)
- depressed immune system
- increased risk for osteoporosis, falls and bone fractures, and reduced recovery from hip fracture
- reduced recovery from surgery and anesthetics
- cognitive dysfunction (distortions in thinking)
- worsening of Chronic Obstructive Pulmonary Disease (COPD)
- anemia, and
- depression.

Reasons why a fast weight loss is a concern:

An unintentional weight loss of 10 lb or more in a six month period is a concern because:

- It could be a sign of a medical illness such as cancer, uncontrolled diabetes, depression or hyperthyroidism. Alternately, it could be related to the effects of recent illness or surgery.
- A rapid weight loss will result in a loss of important body muscle, and nutrients, as well as a loss of fat.
- The person who has had a rapid weight loss, even if the weight loss has not put her/him below ideal body weight, is still at risk of being malnourished and experiencing health problems.

Health risks of being overweight:

Excess weight and excess calorie intake slows therapy and complicates the management of many common illnesses in the elderly, including:

- diabetes
- hypertension and heart disease
- lung disease
- arthritis, and
- gastric ailments.

For the overweight person, surgery and recovery from surgery are more risky.

Reasons why a fast weight gain is a concern:

An unintentional weight gain of 10 lb or more in a six month period is a concern because:

- It could be a sign of an undiagnosed medical condition such as edema, hypothyroidism, an unwanted drug interaction, or the result of over-eating due to stress or depression.

Suggestions and considerations before asking questions 1-3:

What is a Healthy Weight?

- You might want to discuss with your client her/his[1] weight history, including what she weighed as a young adult. Many are at their healthiest adult weight between the ages of 25-30, after which weight gain may occur. Conversely, she may have been overweight (or under weight) as a young adult, and may be unable to define a healthy weight.
- When you ask your client what weight she thinks is healthy, discuss at what weight she had the most energy, and overall felt the best. Most people know what is a good weight for themselves and a look in the mirror will tell them if they have excess abdominal fat, or emaciated arms and legs.

Note: In a very occasional case, your own assessment will vary from that of your client. For example, perhaps she is visibly overweight (say by 50 lb) but she does not perceive herself as overweight when asked question 1. She may have been heavy for many years and may not identify weight as a health concern. Or alternately, she may appear underweight and yet not perceive herself as too thin. You should note such discrepancies.

What is a Goal Weight?

- Her goal weight should be a realistic weight change based on her age, activity level and calorie needs. This weight change must be targeted over an adequate period of time.
- Her weight goal may be quite different from her perceived healthy weight. For example, if she has been underweight for several years, then a realistic goal for her may be to gain just five pounds over the next six months, or in some cases, to simply prevent further weight loss. On the other hand, if she has been very overweight all her life, then a realistic goal for her may be to lose a few pounds over the next month, or to lose 5-10 pounds over the next year, or in some cases, to simply prevent further weight gain. Generally, her weight goal should be short-term and reachable.

Footnote 1: For simplicity “her“ & “she” will be used to refer to either a female or male client throughout the remainder of the Nutrition Resource Guide. The majority of Home Care clients are women.

Ethical Considerations
Weight discussions also present ethical considerations for care givers regarding intervention and client choice.

- A client who is dying or terminally ill may choose to limit her consumption of food and beverages. It is not the responsibility of Home Care staff to force food or fluid on the client. The Nutrition Guidelines and Nutrition Handouts are guidelines to provide clients with options, education, encouragement, support and caring. In the end, it is the client herself, in her own home, who should be free to make choices.
- While the obese client's physical health would likely benefit from weight loss, her "quality of life" may suffer if her favourite foods are restricted. Again, the client herself has the final choice.

Question 4 — Lack of Food

It is important to determine if the problem is related to:

- a lack of financial resources
- an inability to access foods (i.e., shopping difficulties), or
- budgeting.

A client may have the financial resources yet be unwilling to spend money on food. In other cases, the client's financial resources may be drained by family members who themselves rely heavily (or abusively) on her for financial assistance.

Question 5 — Unable to Cook or Shop, or Feed Herself

- These problems could be related to disabling conditions such as osteoarthritis, post-stroke, multiple sclerosis, tremor, cognitive problems or simply aging.
- Cooking difficulties may occasionally be related to not having a stove or other appliances.
- Shopping difficulties may be related to lack of transportation. Poor vision or low literacy will make it hard for the client to read and understand food labels.

Question 6 — Poor Appetite

Poor appetite may be related to the following:

- A reduced ability to taste, smell and see food. As one gets older, sweet and salty tastes decline first, and food then tends to taste sour or bitter. Salt may enhance the taste of food because it masks bitter flavours and enhances sweet ones. Therefore many elderly add too much salt and sugar to their food.
- Isolation and eating alone.
- Depression, which could be brought on by bereavement, acute disease or surgery. Special attention should be given to detecting depression.
- Nausea as a side effect of medications or acute illness.
- Nutritional deficiencies such as low thiamin can depress appetite, creating a vicious cycle of poor appetite, weight loss, nutrient deficiencies, worsened appetite and greater weight loss.
- Poor hygienic care of teeth or dentures and the mouth can interfere with food flavours and destroy appetite.
- Over-consumption of alcohol (see Question 15).

Question 7 — Skips Meals

- Skipping meals can lead to under-nutrition, or over-nutrition. Having regular meals is important for the person who has a small appetite. It is also important for the person with a large appetite who tends to fast a little, then feast a lot.
- Breakfast is often one of the meals that is missed. Breakfast can contribute important nutrients and is an important meal for those who are underweight or overweight. Eating a breakfast increases metabolism and helps give the energy needed to start the day off right.
- A full meal is loosely defined as having three or four food groups. Thus bread, butter and jam would not count as a meal, however, bread, butter, jam and a slice of cheese would count as a meal, albeit not an "ideal meal". Both Question 7 and 8, are designed to identify clients at *significant* nutritional risk, not marginal risk.

Question 8 — Lack of Nutritional Variety

- Canada's Food Guide to Healthy Eating is an excellent tool to use to assess a client's nutrient intake. Ideally she should be choosing the number of servings from each of the four food groups as outlined in the Food Guide. If she is not even consuming one choice from each group each day she is at a definite nutritional risk. Studies have shown that the food groups most often omitted from the diet of the elderly are the fruits and vegetables group, and the milk group.
- Canada's Food Guide to Healthy Eating does not give advice to all cultural groups. It does not fully address vegetarian food choices or choices for those who are lactose intolerant. The Canada's Food Guide to Healthy Eating Nutrition Handout provides some supplementary information.

Why each of the four groups are important:

1. **Grain Products** are rich in starch and are sources of fibre, B vitamins and minerals such as magnesium, zinc and iron (especially from enriched cereals).
2. **Vegetables & Fruit** provide natural sugars, fibre, vitamin C, vitamin A, potassium and other nutrients. Green leafy vegetables are an excellent source of the B vitamin, folic acid. Calcium is found in some of these vegetable foods too, for example in broccoli and cabbage, and in smaller amounts in some fruits such as figs and oranges. Iron is also found in some vegetables and fruits.
3. **Milk Products** provide calcium, vitamin D and phosphorous, as well as natural sugar, protein and fat.
4. **Meat & Alternatives** provide protein, fat, iron and B vitamins. They also provide important minerals that have been found to be low or marginal in elderly populations including iron, chromium, copper and zinc. Calcium is found in some protein foods such as canned salmon and sardines (in the bones), almonds and brown beans.

Question 9 — Special Diet Needed

Conditions that require dietary intervention:

Virtually every medical condition could benefit from nutritional intervention. Conditions that might present a nutritional risk and might benefit from dietary intervention are listed below.[2] Note: this is not an all inclusive list. Depending on severity, the risk that a condition presents can change. For example, a low risk condition could become high risk if left untreated. Low risk conditions can usually be addressed appropriately in the nursing care plan, medium risk conditions are more complex and may require a dietitian consultation. Such a consultation is recommended for most high risk conditions.

Low risk conditions:

- Constipation, gallstones, low or high blood potassium, anemia, mild hypertension and the elderly with no specific disease.

Medium risk conditions:

- Food allergies[3] and intolerances, stroke (depends on severity), cardiac conditions, cirrhosis of the liver, diabetes (non-compliance), neuromuscular disease (cerebral palsy, multiple sclerosis, Parkinson's and muscular dystrophy), diarrhea (more than 72 hours), chronic obstructive pulmonory disease (COPD), hyperlipidemia, chemotherapy or radiation, children with disorders such as phenylketonuria, and chronic fatigue syndrome.

High risk conditions:

- Diarrhea (in previously stable enteral patients), newly diagnosed diabetes (or new to insulin), unintentional weight loss of 10% or greater, AIDS, bulimia, anorexia nervosa, amyotrophic lateral sclerosis (ALS), ulcerative colitis, excessive vomiting, prolonged fever or infection, dysphagia, decubitus ulcers, open wounds, burns, total parenteral nutrition (TPN), gastrointestinal (GI) surgery, cystic fibrosis, Crohn's, inflammatory GI disorder, cancers affecting metabolism, gastroplasty, dialysis, hepatitis, enteral tube feeding, transplants and organ failure, pancreatitis and severe food allergies (such as allergy to peanuts).

Footnote 2: List was adapted from Nutrition Needs Screening Guide, Waterloo Region Nutrition Services, 1991.

Footnote 3: Allergies, including food allergies should be listed on the original Home Care *Care Assessment Form*. Highlight food allergies on the Nutrition Questionnaire and Checklist.

Your client may have several medical conditions, which when combined, increase the nutritional risk and can make meal planning a challenge. For example, if she needs to gain weight and also has hyperlipidemia, then the recommendations in *Nutrition Handout: How to Gain Weight*, may not be appropriate due to the amount of saturated fat. Here is another example: she may have diabetes and also be in chronic renal failure or be on dialysis, and may require modifications to her intake of protein, sodium and potassium, as well as carbohydrate and fat. For these types of dietary modifications a dietitian needs to be consulted.

Inadequate previous diet education:

- If your client has never received any dietary counselling, nor even received a diet sheet, she may not know what foods are recommended or not recommended. Or she may have received education or a diet sheet and not know how to apply the information. For example, an overweight person with diabetes may restrict sugars but not realize that it is just as important to also restrict fats. She may have received diet education when she was in the hospital, at which time she was feeling ill and so was unable to learn. Teaching in the home or community is often far more valuable.

What level of diet restriction is needed:

- It is important to consult with the client's doctor or a dietitian to determine if a diet restriction is really necessary. For example, if a client was put on a salt-free diet when she was in hospital last year, it doesn't necessarily mean she needs to still follow that diet at home. The goal is for her to have the most enjoyable and least restrictive meal plan that still affords good health.
- Laboratory assessments, if requested and available to you, can help determine whether a diet is needed and what level of restriction is appropriate. Lab test results can be recorded on the Nutritional Risk Checklist.

Some lab tests that give important nutritional information:

- A random blood sugar of 11.1 mmol/l or greater along with classical signs and symptoms of diabetes is diagnostic of diabetes. A fasting plasma blood glucose of greater than or equal to 7.0 mmol/l on two separate occasions is also diagnostic of diabetes.
- Cholesterol over 5.2 mmol/l will indicate marginal high cholesterol, and over 6.2 is of greater concern.
- Cholesterol under 4.1 mmol/l is a possible indicator of malnutrition, however other factors such as liver disease and malabsorption can cause such readings.
- Serum albumin under 35 g/l is an indicator of protein-energy malnutrition (under 21 is an indicator of severe malnutrition).

  Note: Serum albumin is considered to be the single most commonly recommended parameter for diagnosing and monitoring protein-energy malnutrition.
- Hemoglobin less than 12 g/l could indicate anemia. Further iron status tests should be performed if hemoglobin is low including hematocrit, serum ferritin (to assess iron stores) and mean corpuscular volume (MCV).
- Serum creatinine above 133 mmol/l could indicate early kidney failure.
- Blood pressure on repeat readings above 140/90 could indicate hypertension.

Note: Some of the above lab value normals are different for males and females, and may be different for the elderly. Also some lab normals vary between Manitoba laboratories depending on the testing methods used.

Question 10 — Lack of Physical Activity

Regular physical activity is essential in restoring, maintaining and enhancing the functional ability to meet daily demands and to participate in activities of choice. Living actively means including enough physical activity into our daily lives to contribute to our health and well-being.

The active living message recognizes barriers to participation and does not assume that everyone is capable or has the desire to adopt a regimented set of exercises and maintain a disciplined routine. The active living approach is centered on the individual, and considers the person's abilities, interests and goals.

Types of physical activity:

- Clients can be physically active outdoors or indoors.
- Specific activities have specific benefits, for example:
  - Walking exercises the muscles and the heart and lungs. It is a weight-bearing exercise which helps to strengthen the bones and prevent osteoporosis.
  - Resistance activities such as carrying a bag of groceries, or lifting a can of soup while sitting in a wheelchair, are also weight-bearing activities.
  - Swimming, or water activities for the non-swimmer, are beneficial for heart and lung health, as well as muscle strength and flexibility. Yet this type of activity is low weight-bearing, making it an option for someone with arthritis in the knees and ankles.
- Physical activity will have a different meaning for each of your clients:
  - For the frail and elderly, realistic goals could include maintaining flexibility, strength, balance and coordination through appropriate activities.
  - Bed or chair-bound clients may benefit from activities that can be done in or around their home such as lifting or moving "equipment" like canned goods.
  - More mobile clients can benefit from walking a comfortable distance or time daily. In any case it is important to encourage activity and to affirm efforts being made.

Question 11 — Osteoporosis Risk

Risk factors which may contribute to osteoporosis:

- Inadequate dietary calcium. Certain factors affect a person's need for calcium. For example, excessive intake of animal protein results in a loss of calcium via the urine. Another example is that certain drugs such as corticosteroids (e.g., prednisone) interfere with calcium absorption.
- Inadequate vitamin D, which is necessary so that the body can use calcium and phosphorous and keep the bones strong. Vitamin D deficiency is due either to inadequate sun exposure (mild sun exposure allows for the development of vitamin D in the skin) and/or inadequate dietary vitamin D.

Factors that affect the production of vitamin D in our skin include:

Age - the capacity of the skin to produce vitamin D in the elderly is approximately half that of younger people.
Skin colour - people with dark skin will require more exposure to sunlight for vitamin D production. Note: sunscreens with an SPF of 8 or higher will prevent vitamin D synthesis.
Area exposed - this will depend on clothing worn.
Sunlight - sunlight (or light from sun lamps) produces ultraviolet rays so will result in vitamin D production in the skin, but may also cause skin damage depending on the intensity of the rays.
Time of year and geographical location - there is less ultraviolet radiation in the winter and in more northerly locations. Fortunately, our bodies have the ability to store vitamin D for the months with less sunshine.

Making a recommendation for the minimum amount of sunlight exposure that is needed to produce adequate vitamin D is complicated by the above factors. Fifteen to thirty minutes a day of mild sun exposure to the hands and face is suggested as a reasonable amount to meet needs. It is important for your client to have a dietary source of vitamin D in her diet if she is at risk for low production of vitamin D in her skin. All fluid milk is fortified with vitamin D and vitamin D occurs naturally in such animal foods as fatty fish, eggs, liver and butter.

- Other nutrients are minor osteoporosis risk factors such as inadequate vitamin C and magnesium.
- Inadequate weight-bearing exercise.
- Being thin and/or being housebound or bed-ridden reduces weight bearing on one's bones.
- Lower estrogen level (post-menopausal women).
- Excess alcohol and/or caffeine, and being a smoker.
- Family history of osteoporosis.
- For females, Caucasian or Asian ancestry.
- Age 50 or older.
- Medications used in large amounts including cortisone and prednisone, thyroid hormone, anticonvulsants, and aluminum-containing antacids.

Fractures and/or bone pain usually indicate that osteoporosis is quite advanced. The goal at this point is to try and prevent further bone loss, to increase the strength of the supporting muscles and tissues, facilitate healing through good nutrition and other measures, and if possible, to regenerate the strength of the bones. Hip fractures in the elderly are associated with high levels of morbidity and mortality and so their prevention is very important.

Question 12 — Chewing Problems

Chewing problems and associated poor oral health may be a contributor to the development of significant involuntary weight loss in elderly people. Poor dentition often results in poor choices of foods, e.g., lack of crisp, raw vegetables and fruits, and other high-fibre foods. Elderly with poor chewing capabilities have been found to have more constipation and other stomach or bowel problems.

Chewing problems may be related to:

- A lack of teeth.
- A lack of dentures. Some elderly feel they can't afford dentures, or they adjust poorly to the use of dentures and refuse to wear them.
- Poorly fitting dentures. The jaw bones changes with age, primarily due to osteoporotic bone loss. Weight loss and jaw bone changes can result in dentures becoming loose.

- Poor oral hygiene.
- Bleeding or swollen gums, or sore mouth, tongue or throat. High blood sugars mean higher levels of sugar in the saliva and this increases the chance of infection in the gums and mouth.
- Reduced saliva production, and this is often worsened in the elderly by medications. This decreased saliva can result in reduced denture retention; increased dental caries, chewing, swallowing and speaking difficulties; and mucous membrane injuries and infections.
- Muscular weakness of the tongue, jaw and soft palate.

Question 13 — Swallowing Problems (dysphagia)

- Swallowing (or chewing) problems may be secondary to a stroke, Parkinson's disease, Alzheimer's disease, multiple sclerosis, cancer, traumatic or acquired brain injury, or other conditions.
- Before dietary modifications are made, it is helpful to assess the type of swallowing dysfunction that exists. Different problems are best treated with various consistencies of food products.
- If the dysphagia is severe, a referral for assessment by a speech-language pathologist may be warranted, and close nutritional follow-up will be needed. Individuals who have more pronounced chewing, swallowing or feeding problems, or certain types of gut impairment, may require complete liquid diets. Total nutritional requirements must be considered in selecting a liquid diet. It is recommended that a dietitian be consulted for liquid diets.

Question 14 — Low Fluid Intake

- Drinking fluids is important to prevent dehydration and constipation.
- The water content of the body decreases with age, so elderly people have lower water reserves.
- Elderly persons often have a decreased sensation of thirst. Due to this blunted sensation, thirst may not be a trigger to prevent dehydration. Many elderly people are unaware of this and so do not take precautionary measures.

- Many other factors can increase the likelihood of dehydration occurring including changes to kidney functioning (even in the absence of kidney disease), high blood sugar, excessive laxative use, high intakes of diuretics, excessive amounts of caffeine (coffee or tea) or alcohol, certain medications, high temperatures (either outside or in a home without air conditioning), fever, vomiting and diarrhea.
- Some elderly clients who suffer urinary incontinence, consciously limit their fluid intake. They fear they may not be able to reach the toilet in time to void, and so may go for up to twelve or more hours without fluid.
- Adequate fluid hydrates the body, helps the bowels work well, and helps moisten a dry mouth.
- Water is often inappropriately replaced with large amounts of high-sugar juices or soft drinks, or coffee. Water should be flavoured (for example with a drop of lemon juice) if this encourages consumption.
- Swallowing problems can cause some people to decrease their fluid intake.

Question 15 — Excess alcohol intake

Excess alcohol intake is a concern because:

- Alcohol is high in empty calories and robs the body of nutrients.
- Too much alcohol, too often, harms the brain, heart, liver, and other vital organs.
- Alcohol makes it hard for a person to think clearly, to remember to eat, and to take their medicine on time and in the right amount. Alcohol use can result in staggering and falling, and consequently injuries.
- Chronic alcohol abuse often leads to multiple vitamin deficiencies, reduced serum protein and albumin levels, and weight loss.
- In some cases, obesity can result when alcohol is consumed with excess food.
- Alcohol mixed with some medications can be harmful or present high risks.

If your client drinks alcohol only on weekends or sporadically but drinks to excess, "Yes" should still be checked on the Questionnaire. Make a note of this. The client may say "no" but may drink secretively. It is important not to be confrontational but to be aware of *possible* signs and symptoms of alcohol abuse. These include: morning "hangover" effects (e.g., headaches, nausea and thirst), bloodshot eyes, trembling hands, fatigue and personality changes. The direct service worker can report any areas of concern on the *Nutrition Observation Form* (page 47-48).

Question 16 — Smoking

The causative and contributory effects of smoking on COPD, heart disease and lung cancer are known. Clients with these conditions will often be emaciated and malnourished, and continued smoking makes health management difficult.

Smoking also has direct effects on nutrition as it:

- Decreases vitamin C levels in the plasma and white blood cells. Vitamin C is one of the nutrients that has often been found to be low in the home-bound elderly.
- Alters the taste and smell of foods with a resulting decrease in appetite, decreased food intake, and in some cases an unwanted weight loss.
- Increases the risk for osteoporosis.

Question 17 — Multiple Medicines

Potential nutritional problems associated with medication use:

- Many elderly living at home take a large number of medications and so are at high risk for drug interactions.
- While medications can have many benefits, the inappropriate use of medications either self-administered or prescribed, has the potential to significantly impact upon nutrition.
- As a person ages, their body responds differently to drugs. Fat-soluble drugs are taken up more readily and stored, and may result in cumulative toxicity. If a client has lost weight, the effect of the drug will become greater and toxicity is more likely. The more medications a person takes, the greater the chance for side effects. Even vitamins or minerals when taken in large doses act and interact like drugs and could be harmful. Some herbal medicines have medicinal effects. While some herbs may be useful, others can cause harm in high doses or in combination with other drugs or health conditions.
- Drug reactions which have primary or secondary effects on nutritional status may be a cause of older individuals being admitted to acute care hospitals.

Adverse interactions are often over-looked:

- Adverse outcomes of drug-nutrient interactions or drug-drug interactions that affect nutrition may be missed by the client, the family, Home Care staff, hospital staff and physicians. These problems are missed because it is assumed that they are an effect of aging or are related to disease.
- Many drugs exert a marked effect on absorption, digestion, excretion or function of nutrients. Some medicines could cause a client to change the way she eats or can increase or decrease her appetite (which could result in an unwanted weight change). Medications may change the way food tastes or smells. They can affect her ability to swallow, or cause nausea, diarrhea, constipation, dizziness, confusion and muscle weakness. Drugs may affect her body's requirements for vitamins and minerals. They can sometimes change the way she thinks and feels. Generally, drug changes are beneficial but unwanted side effects may be very harmful.

- All medications, prescription and over-the-counter, should be reviewed on a regular basis.

A table with examples of nutritional problems related to the use of some medications is included in Appendix 3 in the Nutrition Guidelines section (page 45-46). Further references can be found in the Resource List.

Question 18 — Constipation

The use of laxatives is an issue to which many elderly devote a lot of thought, worry, discussion and money. It often is a major health factor. A health goal should be regularity without laxative use.

What is constipation?

Constipation is defined as small, dry stools that are difficult to pass, rather than frequency of bowel movements as this varies between individuals.

Possible causes of constipation:

Constipation is a preventable problem in most cases. The primary causes of constipation are insufficient dietary fibre, inadequate fluid intake and immobility. Low food intake can also be a cause. Chronic use of enemas and laxatives can result in loss of bowel muscle strength. Examples of secondary causes of constipation are drugs (e.g., codeine or morphine) and diseases such as cancer.

Complications of constipation:

Constipation has many complications including hemorrhoids, fecal impaction and obstruction (which can lead to diverticulosis and diverticulitis), overflow incontinence (due to loss of muscle tone in the anus and rectum), and mental anxiety.

Question 19 — Diarrhea

The causes of a client's diarrhea must be identified and treated.

Possible causes of diarrhea:

- Disease related, e.g., Crohn's, irritable bowel syndrome or cancer.
- Medication related, e.g., excessive laxative use.
- A nutritional cause, e.g., lactose intolerance, or excess intake of fibre.
- Related to an infectious agent, e.g., flu.
- Related to the consumption of spoiled food and/or water.
- Overflow incontinence (as described for constipation complication).

Complications of diarrhea:

- Dehydration with loss of electrolytes, especially potassium.
- Poor absorption of nutrients.

Question 20 — Skin Changes

Poor nutrition can cause or aggravate abnormal skin changes, especially to the hair, eyes, lips, mouth, and the skin of the face, arms and neck.

Examples of skin changes that may be related to poor nutrition:

- Poor healing of a wound, ulcer or pressure sore could be due to a deficiency of protein and/or vitamin C.
- Small yellowish lumps around the eyes (xanthelasma) could be due to high blood cholesterol or triglycerides.
- Facial and gum pallor could be due to iron deficiency anemia.
- A sore, inflamed tongue could be due to anemia or B vitamin deficiency.
- Dull, thin hair could be due to protein and calorie malnutrition.
- Sore tongue or bleeding gums could be due to vitamin C deficiency.
- Edema and/or ascites have multiple medical causes, including immobility, but may be a sign of protein deficiency, or be associated with kidney or liver disease, which both have potential nutritional significance.

Limitation to Question 20:

1) Many skin conditions could have non-nutritional causes and/or could be multifactorial. For example, poor wound healing could also be due to uncontrolled diabetes or poor hygiene. Only nutritional causes were previously identified.
2) Clinical signs that are characteristic of a nutritional deficiency are usually not well marked until the deficiency is extremely severe and metabolism is greatly affected.
3) Highly trained personnel in nutritional diagnosis are needed to accurately diagnose a nutritional deficiency, unless the deficiency is severe.

Any physical findings should be considered a clue rather than a diagnosis and as such, should be pursued further by the physician. Lab tests would assist the physician in making a diagnosis.

Nutrition Questionnaire
Questionnaire sur l'alimentation

Client's name: _____
Nom du client :

Age: _____ PHIN: _____
Âge : *NIP :*

Information provided by: _____
Renseignements fournis par :

1. Weight: _____ Date: _____
Poids : *Date :*

Recorded by: _____
Noté par :

Do you think you are more than 10 lb underweight? ❒ Yes ❒ No
Pensez-vous avoir une insuffisance de poids de plus de 10 lb? ❒ *Oui* ❒ *Non*

Do you think you are more than 10 lb overweight? ❒ Yes ❒ No
Pensez-vous avoir un excès de poids de plus de 10 lb? ❒ *Oui* ❒ *Non*

What do you think would be a healthy weight for you? _____
Quel serait un poids santé pour vous, d'après vous? _____

What is your goal weight (give time frame)? _____
Quel poids visez-vous (précisez l'échéance)? _____

_____

2. Without trying, have you lost more than 10 pounds in the last 6 months?
Yes ❒ No ❒ Don't Know ❒ If yes, about how much? _____
Avez-vous perdu plus de 10 livres au cours des six derniers mois, sans essayer de maigrir?
Oui ❒ *Non* ❒ *Ne sais pas* ❒ *Si oui, à peu près combien?* _____

_____

3. Without trying, have you gained more than 10 pounds in the last 6 months?
Yes ❒ No ❒ Don't Know ❒ If yes, about how much? _____
Avez-vous pris plus de 10 livres au cours des six derniers mois, sans essayer de grossir?
Oui ❒ *Non* ❒ *Ne sais pas* ❒ *Si oui, à peu près combien?* _____

4. Do you always have enough food at home to eat each day? Yes ❒ No ❒
Avez-vous toujours assez de nourriture à la maison pour manger chaque jour? *Oui* ❒ *Non* ❒

---

5. Are you able to shop for your groceries? Yes ❒ No ❒
Êtes-vous capable de faire votre épicerie vous-même? *Oui* ❒ *Non* ❒

Are you able to cook your own meals? Yes ❒ No ❒
Êtes-vous capable de cuisiner vous-même vos repas? *Oui* ❒ *Non* ❒

Are you able to feed yourself? Yes ❒ No ❒
Êtes-vous capable de vous nourrir vous-même? *Oui* ❒ *Non* ❒

---

6. Do you have a good appetite? Yes ❒ No ❒
Avez-vous bon appétit? *Oui* ❒ *Non* ❒

---

7. Do you eat two or more full meals each day? Yes ❒ No ❒
(Note: a "full meal" has 3 or 4 food groups from the Canada's Food Guide to Healthy Eating).
Mangez-vous au moins deux repas complets par jour? *Oui* ❒ *Non* ❒
(Note : Un repas « complet » en est un qui comprend des aliments de 3 ou 4 des groupes d'aliments du Guide alimentaire canadien pour manger sainement.)

---

8. Do you choose something from each food group every day? Yes ❒ No ❒
Mangez-vous chaque jour des aliments de chaque groupe d'aliments? *Oui* ❒ *Non* ❒

---

9. Have you been told to follow a special diet? Yes ❒ No ❒
If yes, by whom and what kind? _____
Vous a-t-on dit de suivre un régime spécial? *Oui* ❒ *Non* ❒
Si oui, de quel genre de régime s'agit-il et qui vous l'a prescrit? _____

---

10. Does your physical activity (e.g., walking, biking or swimming) add up to 15 minutes or more each day? Yes ❒ No ❒
Faites-vous 15 minutes ou plus d'exercice physique (p. ex. marche, bicyclette, natation) chaque jour? *Oui* ❒ *Non* ❒

---

11. Have you fractured or broken a bone in the last 5 years? Yes ❒ No ❒
If yes, describe. _____
Vous êtes-vous fracturé ou brisé un os au cours des cinq dernières années? *Oui* ❒ *Non* ❒
Si oui, veuillez préciser. _____

Have you been told you have osteoporosis? Yes ❒ No ❒
Vous a-t-on dit que vous faisiez de l'ostéoporose? *Oui* ❒ *Non* ❒

---

12. Do you have problems with your teeth, dentures or mouth that makes it hard for you to eat? Yes ❒ No ❒
Avez-vous de la difficulté à manger à cause de problèmes de dents, de dentier ou de bouche? *Oui* ❒ *Non* ❒

---

13. Is it hard for you to swallow? Yes ❒ No ❒
Avez-vous de la difficulté à avaler? *Oui* ❒ *Non* ❒

---

14. Do you drink at least 4 cups of water or other non-alcoholic fluid every day? Yes ❒ No ❒
Buvez-vous au moins 4 tasses d'eau ou d'autres liquides non alcoolisés chaque jour? *Oui* ❒ *Non* ❒

---

15. Do you drink three or more drinks of beer, alcohol, wine or liqueur on an average day? Yes ❒ No ❒
Buvez-vous habituellement trois verres ou plus de bière, d'alcool, de vin ou de liqueur par jour? *Oui* ❒ *Non* ❒

---

16. Do you smoke? Yes ❒ No ❒ If yes, how much? _____
Fumez-vous? *Oui* ❒ *Non* ❒ *Si oui, combien?* _____
If no, did you use to smoke and when did you quit? _____
Si non, avez-vous déjà fumé et quand avez-vous arrêté? _____

---

17. Do you take 3 or more different kinds of prescription drugs or over-the-counter pills each day? Yes ❒ No ❒
Prenez-vous 3 différents types ou plus de médicaments achetés sur ordonnance ou en vente libre chaque jour? *Oui* ❒ *Non* ❒

---

18. Do you have difficulty having a bowel movement? Yes ❒ No ❒
Avez-vous de la difficulté à aller à la selle? *Oui* ❒ *Non* ❒

Are your stools usually small and dry? Yes ❒ No ❒
Vos selles sont-elles habituellement petites et sèches? *Oui* ❒ *Non* ❒

Do you use laxatives once a week or more? Yes ❒ No ❒
Prenez-vous des laxatifs une fois par semaine ou plus? *Oui* ❒ *Non* ❒

---

19. Do you have diarrhea more than once a week? Yes ❒ No ❒
If yes, how often? _____
Avez-vous la diarrhée plus d'une fois par semaine? *Oui* ❒ *Non* ❒
Si oui, combien de fois? _____

---

20. Have you noticed any recent changes to your skin, hair or mouth? Yes ❒ No ❒
(For example, sores that won't heal, ulcers, or bruises, sudden loss of hair.)
Avez-vous remarqué des changements dans votre peau, vos cheveux ou votre bouche récemment? *Oui* ❒ *Non* ❒
(Par exemple, lésions qui ne guérissent pas, ulcères, ecchymoses, perte soudaine de cheveux.)

Other comments: _____
Autres commentaires : _____
_____
_____

Case co-ordinator signature: _____ Date: _____
Signature du coordonnateur de dossier : *Date :*

Nutritional Risk Checklist and Follow-up

Liste de vérification et de suivi des risques d'ordre nutritionnel

After completion of the Nutrition Questionnaire, check off the answers that indicate a nutritional risk and for each refer to the Nutrition Guidelines. At follow-up, note any further intervention needed. Consult the doctor and/or dietitian if: 1) any of the identified risks are severe, and 2) if at follow-up, significant risks remain unresolved.

Après avoir rempli le questionnaire sur l'alimentation, cochez les cases qui indiquent un risque d'ordre nutritionnel et référez-vous aux lignes directrices pour chacun. Lors des visites de suivi, précisez si une autre intervention est nécessaire. Consultez le médecin ou une diététiste si : 1. un ou plusieurs des risques décelés sont graves ou si 2. lors du suivi, certains risques importants sont encore présents.

Client's Name: _____
Nom du client :

Initial Weight
Poids initial

Weight: _____
Poids :

Healthiest weight: _____
Poids santé :

Weight goal: _____
Poids visé :

Client's Response and Risk
Réponse du client et risque

1a) Yes ❒ underweight
Oui ❒ *maigreur*

1b) Yes ❒ overweight
Oui ❒ *obésité*

2) Yes ❒ unintentional weight loss
Oui ❒ *perte de poids involontaire*

3) Yes ❒ unintentional weight gain
Oui ❒ *gain de poids involontaire*

4) No ❒ lack of food
Non ❒ *manque de nourriture*

5) No ❒ unable to cook or shop, or feed self
Non ❒ *incapable de faire la cuisine ou l'épicerie, ou de se nourrir*

Follow-up Weight (include dates)
Poids lors des visites de suivi (précisez la date)

Weight: _____
Poids :

Weight goal: _____
Poids visé :

Follow-up of Risks (include dates)
Suivi des risques (précisez la date)

_____

_____

_____

_____

_____

_____

Client's Response and Risk *Réponse du client et risque*	**Follow-up of Risks (include dates)** *Suivi des risques (précisez la date)*
6) No ❒ poor appetite *Non ❒ peu d'appétit*	_____
7) No ❒ skips meals *Non ❒ saute des repas*	_____
8) No ❒ lack of nutritional variety *Non ❒ alimentation peu variée*	_____
9) Yes ❒ special diet needed *Oui ❒ régime spécial requis*	_____
10) No ❒ lack of physical activity *Non ❒ peu d'exercice physique*	_____
11) Yes ❒ osteoporosis risk *Oui ❒ risque d'ostéoporose*	_____
12) Yes ❒ chewing problems *Oui ❒ problèmes de mastication*	_____
13) Yes ❒ swallowing problems *Oui ❒ problèmes de déglutition*	_____
14) No ❒ low fluid intake *Non ❒ consomme peu de liquides*	_____
15) Yes ❒ alcohol intake *Oui ❒ consomme de l'alcool*	_____
16) Yes ❒ smoking *Oui ❒ fume*	_____
17) Yes ❒ multiple medicines *Oui ❒ prends plusieurs médicaments*	_____
18) Yes ❒ constipation *Oui ❒ constipation*	_____
19) Yes ❒ diarrhea *Oui ❒ diarrhée*	_____
20) Yes ❒ skin changes *Oui ❒ altérations de la peau*	_____

Case co-ordinator signature: _____ Date:_____

Signature du coordonnateur de dossier : *Date :*

Glossarial Index

A glossary has been incorporated into this index. **Glossary terms in boldface are followed by their definitions.**

B. Nutrition Guidelines

(for case co-ordinators)

Risks, Desired Change and Guidelines

1a) Underweight

Desired Change: Stabilize weight or gain weight.

Nutrition Handouts (as applicable):
- Canada's Food Guide to Healthy Eating
- Cooking for One or Two
- How to Gain Weight
- Improving Your Appetite
- Resource List

Other Guidelines:
- Refer to Risk 6 — Poor appetite, and Risk 17 — Multiple medicines, as applicable.

1b) Overweight

Desired Change: Stabilize weight or lose weight slowly.

Nutrition Handouts (as applicable):
- Canada's Food Guide to Healthy Eating
- How to Lose Weight
- Resource List, e.g., meal planning books

Other Guidelines:
- Refer to Risk 17 — Multiple medicines.
- Note: Trying to lose weight is a major challenge for the overweight or obese elderly because calorie needs are often so low. While calorie needs are low, the need for protein, vitamins and minerals remains the same.

2) Unintentional weight loss

Desired Change: Stabilize weight or gain weight.

Nutrition Handouts (as applicable):

If client is now at a good weight, refer to:
- Canada's Food Guide to Healthy Eating

Other Guidelines:
- If client is underweight, refer to Risk 1a.
- If client is overweight, refer to Risk 1b, if further weight loss is appropriate.
- Monthly weights are recommended.
- If unintentional weight loss continues, consult a dietitian for an in-depth nutritional assessment.

3) Unintentional weight gain

Desired Change: Stabilize weight or lose weight slowly.

Nutrition Handouts (as applicable):

If client is now at a good weight, refer to:

- Canada's Food Guide to Healthy Eating

Other Guidelines:

- If client is overweight, refer to Risk 1b.
- If client is underweight, refer to Risk 1a, if further weight gain is appropriate.
- Monthly weights are recommended.
- If unintentional weight gain continues, consult a dietitian for an in-depth nutritional assessment.

4) Lack of food

Desired Change: Improve availability of food.

Nutrition Handouts (as applicable):

- Food Budgeting
- Resource List, e.g., social service agencies, Meals on Wheels, seniors organizations

Other Guidelines:

- Refer to Risk 5 — Unable to shop, etc., if applicable.
- If the problem is related to a lack of financial funding then investigate if your client is eligible for any additional sources of funding, e.g., diet funding with Income Security or a veteran's pension.
- Remind client's family or friends to bring a meal or food when visiting.

5) Unable to shop, cook, or feed themselves

Desired Change: Assist shopping, cooking and/or feeding.

Nutrition Handouts (as applicable):

- Cooking for One or Two
- Grocery Shopping List
- Soft Foods
- Keeping Food Safe
- Resource List

Other Guidelines:

- Refer to Risk 8 — Lack of nutritional variety.
- Refer to Appendix 1: Screening Tool for Swallowing Disorders.
- Ensure client can perform meal preparation tasks such as opening milk cartons, cans, etc. Direct service worker, family and friends could assist.
- Consult an occupational therapist if special devices are needed such as tools to open cans or special adaptive eating devices.
- Encourage client to feed herself.

6) Poor appetite

Desired Change: Improve appetite.

Nutrition Handouts (as applicable):
- Canada's Food Guide to Healthy Eating
- Cooking for One or Two
- Improving your Appetite
- Resource List

Other Guidelines:
- Refer to Risk 1a if underweight.
- Ask a family member or DSW to call client around meal time to remind her/him to eat.
- Respite and caregiver support.
- DSW not to wear strong perfumes as this could increase nausea.
- Call local seniors' volunteer centre to see if a volunteer could come and visit and share some meals with client.

7) Skips meals

Desired Change: Regular meals.

Nutrition Handouts (as applicable):
- Canada's Food Guide to Healthy Eating
- Cooking for One or Two
- Improving your Appetite

Other Guidelines:
- Refer to Risk 6 if appetite is poor.

8) Lack of nutritional variety

Desired Change: Improve nutritional variety.

Nutrition Handouts (as applicable):
- Canada's Food Guide to Healthy Eating
- Cooking for One or Two

Other Guidelines:
- If attempts to improve diet fail, suggest client consult with a doctor or dietitian regarding an appropriate vitamin and mineral supplement.

9) Special diet needed

Desired Change: Provide appropriate dietary guidelines.

Nutrition Handouts (as applicable):

- How to Lose/Gain Weight
- How to Reduce Salt (no added salt diet)
- Keeping Your Bones Strong
- Soft Foods
- Reducing Constipation
- Resource List, e.g., private practice and government dietitians, diabetes education centres

Other Guidelines:

- The Nutrition Handouts include recommendations for simple, single dietary modifications. A few complex dietary modifications are listed on page 13.
- For simple, single diet modification that are not listed here such as diet recommendations for hiatal hernia, consult the current Diet Manual (see Nutrition Handout — Resource List).
- Refer to a dietitian for salt restrictions other than "no added salt".

10) Lack of physical activity

Desired Change: Promote safe and regular physical activity.

Nutrition Handouts (as applicable):

- Helpful Hints for Active Living
- Resource List

Other Guidelines:

- Canada's Physical Activity Guide and Supplement for Older Adults.
- Specific exercise recommendations to the DSW made by the CC will need to be individualized and take into account any specific restrictions from the doctor.
- Refer to Risk 17 — Multiple medicines, for any that might cause dizziness.
- Consult occupational therapist, or physiotherapist, for specific exercises (such as passive exercises for paralysis) or for proper use of cane or walker.

11) Osteoporosis risk

Desired Change: Strengthen bones and reduce risk of falls.

Nutrition Handouts (as applicable):
- Canada's Food Guide to Healthy Eating
- Keeping Your Bones Strong (can be used also for elderly who already have osteoporosis)

Other Guidelines:
- Refer to Risk 17 — Multiple medicines.

12 & 13) Chewing or swallowing problems

Desired Change: Improve or ease chewing and/or swallowing.

Nutrition Handouts (as applicable):
- Soft Foods
- Resource List, see dysphagia outpatient clinics and dental services

Other Guidelines:
- Refer to Risk 17 — Multiple medicines.
- If there is a notable change in chewing or swallowing ability refer to Appendix 1: Screening Tool for Swallowing Disorders.
- Refer to Appendix 2: Safe Feeding and Swallowing Techniques.
- Refer for swallowing assessment if needed, and follow closely.
- Assist client with dental hygiene.

14) Low fluid intake

Desired Change: Promote drinking water or other fluids.

Nutrition Handouts (as applicable):
- Drinking Fluids
- Resource List, e.g., dysphagia out-patient clinic if related to swallowing problems

Other Guidelines:
- Refer to Risk 12 and 13 if low fluid intake is related to chewing or swallowing problems.
- Refer to Risk 17 — Multiple medicines.
- In a few cases, there may be contraindications to increasing fluid intake. For example, renal failure, congestive heart failure, severe edema, or the late stages of a terminal illness.

15) Excess alcohol intake

Desired Change: Reduce or avoid alcohol, or if unable, counter nutritionally-negative effects of drinking.

Nutrition Handouts (as applicable):
- Canada's Food Guide to Healthy Eating
- Resource List, e.g., alcohol counselling centres and resources

Other Guidelines:
- Refer to Risk 17 — Multiple medicines. Alcohol and most medications do not mix. Ask the doctor or pharmacist whether alcohol will interfere with client's medications or increase health risks. Advise client.
- If attempts to encourage your client to stop or reduce excess alcohol have been unsuccessful, then encourage a balanced food intake with a good source of protein, and suggest she discuss with her doctor about taking appropriate vitamin and mineral pills.

16) Smoking

Desired Change: Reduce or stop smoking, or if unable, counter nutritionally-negative effects of smoking.

Nutrition Handouts (as applicable):
- Canada's Food Guide to Healthy Eating (encourage foods rich in vitamin C)
- Resource List

Other Guidelines:
- Make suggestions for smoking cessation; maybe your client just needs that extra bit of encouragement to make the change to become a non-smoker. Refer to public health, health educator, and/or family doctor for assistance.
- If attempts to encourage your clients to eat a healthy diet rich in vitamin C, and to stop or reduce smoking have been unsuccessful, then suggest your client discuss with her doctor about taking vitamin C (100 mg daily is appropriate) alone or in a multivitamin pill.

17) Multiple medicines (drug interactions or inappropriate use of medications)

Desired Change: Reduce negative nutritional effects of multiple medicines.

Nutrition Handouts (as applicable):
- Resource List, e.g., see Drug Information

Other Guidelines:
- Refer to Appendix 3: Nutritional Problems Related to Use of Medications.
- Review medications with client.
- If needed, consult with pharmacist and doctor about any conflict between drugs and food.
- Make sure client knows whether the medications should be taken before or after eating, or with food.
- Recommend client buy all their prescription drugs from the same pharmacy. The pharmacist should have a record of all drugs and can inform your client of possible problems.
- Educate the client and their family about medication use and its relationship to nutritional status and health.

18) Constipation

Desired Change: Relieve constipation.

Nutrition Handouts (as applicable):
- Exercise Ideas
- Drinking Fluids
- Reducing Constipation
- Resource List, e.g., high fibre cookbooks

Other Guidelines:
- Clients who suffer nerve or muscle damage to their bowel because of age, adhesions from surgery, laxative abuse, etc., may have atonic constipation (no muscle tone). They do not always respond to increased fibre since fibre increases the bulk of an already distended colon. In the immobile person, obstruction is a possibility. For them, laxatives, suppositories and/or enemas may be necessary. These should be a secondary step not primary.
- Clients with diverticulitis will need to restrict seeds, popcorn, etc., that may get caught in the bowel pockets.
- For bed-ridden clients, establish a schedule for toileting, and assist client to respond promptly to urge to defecate.
- If client is dependent on laxatives, beware of the risk of dehydration and low blood potassium that can result.

19) Diarrhea

Desired Change: Relieve diarrhea.

Nutrition Handouts (as applicable):

- Drinking Fluids
- Keeping Food Safe
- Resource List

Other Guidelines:

- Refer to Risk 17 — Multiple medicines.
- Consult doctor if severe diarrhea and/or vomiting lasts longer than 12-24 hours, if there is fresh blood or black stools, or client is showing signs of dehydration.
- Avoid red liquids or foods (e.g., red Kool-Aid or beets) that can make the stool look bloody.

20) Changes to skin, soft tissue or hair

Desired Change: Maintain healthy and intact skin, tissue and hair.

Nutrition Handouts (as applicable):

- Canada's Food Guide to Healthy Eating

Other Guidelines:

- Appropriate hygiene, skin and foot care.
- Encourage client to see her doctor if unusual signs do not go away.
- Vitamin or other nutrient supplementation may be recommended by the doctor or dietitian if deficiency is suspected or has been diagnosed.

Appendix 1: Screening Tool for Swallowing Disorders
Annexe 1 : Outil de dépistage des troubles de déglutition

Client's name: _____
Nom du client :
Date of Evaluation: _____
Date de l'évaluation :

THE CLIENT
LE CLIENT

1.	leaves food in mouth after swallowing *a encore de la nourriture dans la bouche après avoir avalé*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
2.	drools *bave*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
3.	has a dry mouth *a la bouche sèche*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
4.	has difficulty chewing *a de la difficulté à mastiquer*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
5.	clears throat while eating or drinking *se racle la gorge quand il mange ou boit*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
6.	coughs while eating or drinking *tousse quand il mange ou boit*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
7.	complains of food sticking in mouth or throat *se plaint que la nourriture reste collée dans sa bouche ou sa gorge*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
8.	voice sounds gurgly *a comme des « gargouillis » dans la voix*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
9.	has ongoing chest congestion *a la poitrine constamment congestionnée*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
10.	complains of heartburn *se plaint de brûlures d'estomac*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
11.	"burps-up" food or liquid *régurgite des aliments ou liquides*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒

12.	has required the Heimlich maneuver *a dû subir la manœuvre de Heimlich*	Yes ❒ *Oui* ❒	No ❒ date _____ *Non* ❒ *date* _____
13.	has a history of recent pneumonia *a récemment souffert de pneumonie*	Yes ❒ *Oui* ❒	No ❒ date _____ *Non* ❒ *date* _____
14.	has lost weight unintentionally *a perdu du poids sans le vouloir*	Yes ❒ *Oui* ❒	No ❒ date _____ *Non* ❒ *date* _____
15.	takes a long time to eat a meal *prends beaucoup de temps pour manger un repas*	Yes ❒ *Oui* ❒	No ❒ date _____ *Non* ❒ *date* _____
16.	eats very quickly *mange très vite*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
17.	has poor dentition *n'a pas une bonne dentition*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
18.	has pain during swallowing *a mal quand il avale*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒
19.	complains of difficulty swallowing *se plaint d'avoir de la difficulté à avaler*	Yes ❒ *Oui* ❒	No ❒ *Non* ❒

Please describe the diet textures that the client is currently eating at meals:
Veuillez décrire la consistance des aliments que le client mange actuellement aux repas :

_____

Comments:_____
Commentaires : _____
_____
_____

Case co-ordinator signature: _____ Date:_____
Signature du coordonnateur de dossier : *Date :*

Source: Developed with assistance from the Department of Communication Disorders, Deer Lodge Centre.
Source : Produit avec l'aide du Department of Communications Disorders du Deer Lodge Centre.

Appendix 2: Safe Feeding and Swallowing Techniques

1. The Environment

- The environment should be distraction free. The client needs to concentrate on chewing and swallowing. For example, turn off the television and radio, and limit talking.

2. Positioning for Safe Feeding and Swallowing

- **In a chair**
  The safest position to swallow is seated upright with the hips flexed to 90 degrees, feet on the floor or supported, and the head in a neutral or slightly forward position.
- **In the bed**
  Seat your client as upright as possible, using pillows to support where needed.
- **After eating**
  Keep your client in the upright position for 20-30 minutes after the end of the meal in order to reduce the risk of reflux after eating.
- **When feeding clients**
  Sit (when possible) at eye level facing your client. You should be seated either across from or on the stronger side of the person that you are feeding. The person being fed should never need to raise their chin to receive food or liquid.

3. Feeding and Swallowing Techniques

- Have the person eat slowly and take small sips and bites.
- Give only one teaspoon-sized portion of food in the mouth at a time and ensure that the person has fully swallowed it before giving more. Watch the person's "Adam's Apple" to make sure that a swallow has occurred. The Adam's Apple rises up and down during the act of swallowing.
- If the person has not swallowed all of the food, try presenting an empty teaspoon into their mouth, this may trigger a reflexive response to swallow. Other strategies are to gently stroke the person's throat and to verbally encourage swallowing.
- If the person has weakness on one side of the face and tends to pocket food in that cheek, try applying gentle pressure on the weak cheek while the person is chewing. This will help to keep the food in the stronger side of the mouth. When feeding, place the food into the stronger side of the client's mouth.

- If the person has difficulty drinking liquids, try using a cut-out cup for drinking. This will decrease the amount of head extension that the person needs to do while drinking.
- A head forward (or chin tuck) position during swallowing helps to protect the airway and may be helpful in reducing coughing during meals.
- If liquids are the main concern (i.e., your client coughs and chokes frequently when drinking) try using a thickening agent in all liquids (including soup).
- Alternate sips of liquid every few mouthfuls of food (making sure the mouth is empty first).
- Allow for rest periods between bites/sips or part way through the meal, especially for people who seem to cough more as the meal continues.
- Have the person try to swallow more than once for each bite or sip. If the person's throat muscles are weak, the extra swallow will help to clear the throat between mouthfuls.
- Make sure the temperature of the food is pleasing to the client.
- If the client's eyesight is poor, or you suspect cognitive deficits, tell the client what you are putting in their mouth before each mouthful.
- As much as possible (unless requested by the client) do not mix up their food. Present one food at a time on a fork/spoon.

4. Important Observations During Feeding

- Listen to the person's voice, and for coughing or throat clearing throughout the meal. Discontinue providing any food or liquid that consistently produces coughing, choking or a wet, gurgly voice during or shortly after swallowing.
- Listen to the person's breathing rate before, during and after the meal. An increase in congestion and breath rate associated with eating may indicate a swallowing problem.
- Watch for changes in body temperature. Increases in temperature could be a symptom of aspiration.

Source: Developed with assistance from the Department of Communications Disorders, Deer Lodge Centre.

Appendix 3: Examples of Nutritional Problems Related to Use of Medications

Drug or Drug Group	Possible Nutrition-Related Problem
ACE-inhibitors e.g., captopril	Dry mouth, loss of taste, anorexia, nausea, gastritis, weight loss, and hyperkalemia. May cause proteinuria.
Antacids	Phosphate depletion; muscle weakness; bone weakening.
Antidepressants e.g., tricyclic antidepressants such as amitriptyline	Dry mouth and weight gain.
Antihistamines	Dry mouth, loss of appetite.
Antiparkinsonian Agents e.g., L-dopa	Postural hypotension, faintness, fear of falls that may limit shopping and cooking. Dry mouth is common with drugs used for control of Parkinson's disease.
Antipsychotic Agents e.g., thioridazine	Can cause altered appetite, weight gain, dry mouth and constipation. It can also cause nausea, vomiting, anorexia, taste alterations, fluid imbalance and sodium depletion.
Anti-seizure Drugs e.g., Dilantin (phenytoin)	Dilantin can inhibit insulin release and negatively effect the metabolism of vitamin D, as well as other nutrients. It may cause folic acid deficiency with anemia.
Aspirin and other NSAIDs (non-steroidal anti-inflammatory drugs) e.g., ibuprofen and indomethacin	NSAIDs can cause anemia, as well as decreased appetite, nausea, heartburn, diarrhea, and gastrointestinal ulceration. Aspirin can increase the urinary excretion of vitamin C and zinc, increasing the dietary need for these.
Asthma Therapy e.g., theophylline (bronchodilator)	Rapid heart rate, nervousness, lightheadedness that may limit shopping and cooking. The side effects of theophylline also include nausea, vomiting, anorexia and diarrhea.
Beta-adrenergic Blocking Agents e.g., propranolol	These may be associated with a variety of stomach or bowel side effects including nausea, vomiting, diarrhea, constipation, and cramping.

Drug or Drug Group	Possible Nutrition-Related Problem
Codeine, morphine and opiates (pain killers)	Constipation, nausea, vomiting, loss of appetite and dry mouth.
Corticosteroids e.g., prednisone	Depending on the dose, the adverse effects can include stomach and bowel irritation, peptic ulcer, increased appetite and weight gain, hyperglycemia, increased risk for osteoporosis (due to effect on calcium and vitamin D), and possible low blood potassium.
Diabetes Therapy Insulin and oral hypoglycemic agents	Low blood sugar and confusion that may limit shopping and cooking. Appetite can be altered — weight gain may occur.
Digoxin	Digoxin toxicity can result in nausea, vomiting and loss of appetite.
Diuretics e.g., furosemide	Increased urination, stress incontinence that may limit shopping and cooking. Diuretics can cause fluid and electrolyte imbalance (such as low potassium and magnesium), low zinc levels, dehydration, nausea, vomiting, diarrhea, cramping, gastric irritation, constipation, anorexia, hyperglycemia, hyperuricemia and hyperlipidemia.
Iron supplements	Constipation, diarrhea, nausea and vomiting.
Laxatives	Potassium deficiency and malabsorption.
Methotrexate (for tumor treatment)	Decreased ability to swallow. Nausea, vomiting and loss of appetite.
Vitamins in mega doses (10-100 times the recommended daily intake of the vitamin)	Vitamin pills given in mega doses can also have nutritional effects. Consult the Diet Manual or other reference book such as the Merck Manual for the most recent recommended nutrient intakes for specific vitamins or minerals. For example, mega doses of niacin (self dosage or prescribed as a lipid lowering agent) can increase blood sugars and can be toxic to the liver, and mega doses of vitamin D can lead to kidney failure in the elderly.

This table highlights some possible nutrition-related problems with some common drugs in the elderly. For a more complete listing of common side effects refer to an updated CPS or other drug manual (see Nutrition Handout — Resource List).

Source: Adapted from Nutrition Screening Initiative, Nutrition Interventions Manual for Professionals Caring for Older Americans (1992), Washington.

C. Nutrition Observation Form

(for direct service workers)

Formulaire d'observation de l'alimentation

(pour les travailleurs de première ligne)

Client's name: _____
Nom du client :

Age: _____ PHIN: _____
Âge : *NIP :*

Information provided by: _____
Renseignements fournis par :

Please record any changes that you have observed:
Veuillez indiquer tous les changements que vous avez remarqués :

Weight: _____
Poids :

_____

_____

_____

_____

Eating Habits/Appetite: _____
Habitudes alimentaires, appétit :

_____

_____

_____

Swallowing or feeding difficulties: _____
Difficulté à avaler ou à manger :

_____

_____

_____

_____

Nutrition Observation Form
Formulaire d'observation de l'alimentation

Exercise habits: _____
Exercice physique :
_____

_____

_____

_____

Bowel habits: _____
Fonctionnement des intestins :
_____

_____

_____

_____

Alcohol/smoking/medication use: _____
Alcool, cigarettes, médicaments :
_____

_____

_____

_____

_____

Other (such as general appearance, skin color, mental state): _____
Autres (apparence générale, couleur de la peau, état mental) :
_____

_____

_____

_____

Signature: _____ Date: _____
Signature : *Date :*

D. Nutrition Handouts

(for clients and their families, and direct service workers)

The Nutrition Handouts are designed to be used by Home Care clients and their families and are written in the "you" format with the message directed at the client. In this format, they can also be utilized by direct service workers for self-education and as a tool when working with clients. These sheets may also be useful to other Home Care staff and to health care professionals working outside the Home Care program. The Resource List is the only Nutrition Handout that is directed primarily to Home Care staff.

Features of Nutrition Handouts

- plain language
- large font
- practical information
- manageable size
- bilingual

Nutrition Handouts address key nutrition areas only

The Nutrition Handouts do not cover all nutrition areas. The topics that are presented in the Nutrition Handouts are those that were identified by direct service workers, and also those that relate directly to the Nutrition Questionnaire. These Handouts will provide nutritional guidance for clients and direct service workers. However, there may be some nutrition questions that will not be answered with these Handouts. The last Nutrition Handout is a Resource List and includes listings for dietitians and other health care professionals.

Brand names used in Nutrition Handouts

Brand names are only used in the Nutrition Handouts where it was felt the information would be more understandable and usable. For example, a consumer may be confused as to the meaning of flavoured gelatin crystals, but Jello is well understood. To keep the Nutrition Handouts as simple as possible, the registered trade marks ™ or ® do not appear on the Nutrition Handouts themselves. Registered brand names that are used in the Nutrition Handouts are listed in the side bar on the next page. Use of a brand name does not imply endorsement. Direct service workers may wish to encourage their clients to buy non-brand name products that are similar but are often less expensive.

Nutrition Handouts
Feuilles de renseignements nutritionnels

Canada's Food Guide to Healthy Eating
Le Guide alimentaire canadien pour manger sainement

Cooking for One or Two
La cuisine pour une ou deux personnes

Food Budgeting
Votre budget alimentaire

Grocery Shopping List
Liste d'épicerie

How to Gain Weight
Comment gagner du poids

Improving Your Appetite
Pour stimuler votre appétit

How to Lose Weight
Comment perdre du poids

How to Reduce Salt
Comment réduire votre consommation de sel

Helpful Hints for Active Living
Conseils utiles pour une vie active

Keeping Your Bones Strong
Des os solides

Soft Foods
Aliments mous

Drinking Fluids
Les liquides

Reducing Constipation
La constipation

Keeping Food Safe
La salubrité des aliments

Resource List
Liste de ressources

Brand names used in Nutrition Handouts
Marques de commerce utilisées dans les feuilles de renseignements

Accent
Adolph's
All Bran
Boost
Bovril
Bran Buds
Bran Flakes
Carnation Instant Breakfast
Co-Salt
Corn Bran
Crystal Light
Depends
Diamond Crystal Salt Substitute
Eno
Ensure
Equal
Fosomax
Gatorade
Glucerna
Grape Nuts
Half Salt
Hamburger Helper
Herbamore
K-Salt
Kool-Aid
Kraft Dinner
Lawry's Natural Choice
Lean Cuisine
Lite Salt
Marmite
Mrs. Dash
Muslix
Nature's Seasons
Neocurtasal
Nile Spice
NoSalt
Nu-Salt
Nutrasweet
OXO
Perrier water
Pulmocare
Red River Cereal
Resource
Savorite
Shredded Wheat
Shreddies
Silvan water
Spam
Spike
Splenda
Sugar Twin
Sunny Boy cereal
Sustacal
Sweet'N Low
Tang
V-8 juice
Vege-Sal
Vegemite
Vegit
Velveeta
Weight Watchers
Wheetabix
Worcestershire Sauce