Section 4

Substitutions and Special Diets

Topics in this section include:

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- 4.2 Special Diets
- 4.3 Special Diets for Disease Management
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 - 4.3.2 Kidney (Renal)
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 - 4.3.4 Gluten-free Diet
 - 4.3.5 Low Lactose Diet
- 4.4 High Protein, High Calorie
- 4.5 <u>Snacks</u>



4.1 Overview

Menu substitutions occur for many different reasons, such as product unavailability, incorporating seasonal foods into the menu, ordering/shipping errors, preparation issues, equipment problems and/or adjustment for special diets.

The goal when making menu substitutions is to provide foods that contain the same nutrients. Foods within the same food group on <u>Canada's food guide</u>¹ contain similar nutrients. Most often, using another food item from the same food group on <u>Canada's food guide</u>¹ will meet the needs of residents on regular diets. For example, if roast chicken is not available, another Protein Food could be used, such as roast turkey or beef. If green peas are not available, any other dark green vegetable, such as asparagus or broccoli can be used. However, adaptation for special diets is more complex and food service staff will need an understanding of special diets to help meet residents' needs.



4.2 Special Diets

This section will provide guidance on how to make menu substitutions to meet the special diet needs of residents.

The regular menu may need to be adapted to meet the needs of residents with:

- Diets for disease management
- Food allergies or intolerances
- Cultural, religious, or personal considerations

A dietitian can provide more information on any type of special diet to the individual and/or the facility.

Diets for food allergies or intolerances and disease management are considered the main diet and are ordered first. Texture modified diets can be added in addition to the special diets when required. See Section 5 for more detailed information on Dysphagia (Texture Modified Diets).

Examples of special diets included in this toolkit are:

- Diabetes, Heart Healthy and Low sodium
- Kidney (Renal)
- Vegetarian
- Gluten-free
- Low Lactose
- High Protein, High Calorie

For more information on menu planning, refer to <u>How to Plan a Menu</u>, Section 2 of this toolkit.



4.3 Special Diets for Disease Management

4.3.1 Diabetes, Heart Healthy and Low Sodium

A well-planned regular menu using <u>Canada's food guide</u>¹ eliminates the need for special diabetes, heart healthy and low sodium menus. A menu, based on the *Canada's food guide plate*, includes meals and snacks prepared in a healthy way, with limited amounts of added fat, sugar, and sodium.

For more information on making low sodium substitutions, refer to Appendix 2F <u>Low</u> <u>Sodium Substitutions</u>.

Tips for diabetes:

Although a special menu is not necessary, considerations should be made for residents with diabetes. Carbohydrate distribution should be considered for residents with diabetes, where the goal is to offer consistent carbohydrate content at each meal. Sugarreduced items should be available to help promote good blood sugar control. This includes providing:

- Sugar substitutes instead of white or brown sugar.
- Condiments such as sugar-reduced or no sugar added spreads, syrups, and spices.



- Lower sugar beverages such as water, tea, coffee, and sugar-free soft drinks (for example, sugar-free lemonade or sugar-free flavoured water).
- Sugar-reduced dessert options, such as those listed below.



Diabetes-Friendly Desserts

Low fat, sugar-reduced whole grain muffins, cookies, or other baked goods in appropriate portions.

Sugar-free gelatin or mousse desserts

No sugar added custard

No sugar added milk pudding

No sugar added, fat-free or lower fat (less than 2% M.F.) yogurt or frozen yogurt

Fresh fruit or fruit canned in water or juice

Residents with diabetes may or may not need snacks. This will vary depending on the type of diabetes, medicines used to manage blood sugar and activity level of the individual. Snacks may be required if meals are 6 or more hours apart, but not when meals are closer together. The need for an evening snack will vary. If snacks are required, some healthy examples include:

- sandwich (meat and/or cheese filling)
- yogurt and fresh fruit
- milk and plain cookies (arrowroot, digestives)
- cheese and whole grain crackers with unsalted tops
- peanut butter and whole grain toast
- cottage cheese and fruit
- unsweetened fruit sauce and cheese
- cereal (sugar-reduced) and milk

See Section 2.7 for information on <u>Standardized Portion Sizes</u> for these foods.





4.3.2 Kidney (Renal) Diet

A kidney (renal) diet may be suggested for residents with kidney disease. This will vary depending on the resident's kidney function. The amounts of nutrients such as protein, sodium, potassium, phosphorous, or fluid needed may be different for each individual. A regular menu can be modified to meet the resident's dietary needs. Each resident can choose the recommended foods and the portions from the modified regular menu to meet their own dietary needs. A dietitian can be consulted to update a resident's care plan should the resident be unable to choose appropriate foods for their renal diet on their own.

The following information provides general guidance for food choices on a kidney diet that should be available so that residents can make choices as per their dietary needs.

Protein

The meal plan provided by the dietitian to a resident with kidney disease will specify the amount of protein needed per day.

Lean meats (beef, pork), poultry, fish, or eggs are the best sources of protein for these individuals. Beans, lentils, nuts and nut butters, seeds (pumpkin, sunflower), split peas, tofu, milk, yogurt, cheese, and soy beverages also contain protein.

Sodium

Individuals may have a specific sodium limit provided by their doctor or dietitian.

<u>Canada's food guide</u>¹ recommends choosing and preparing foods with little or no added salt (sodium). A lower salt menu is healthy for all residents, especially those with heart disease, kidney (renal) disease, high blood pressure, or diabetes.

Reducing the sodium content of the menu may decrease the enjoyment of the meal and as a result affect overall intake and quality of life. As such, high sodium foods can still be included on the menu and changes in the recipes and products purchased should focus on reducing sodium content.

A dietitian should be consulted if further sodium restrictions should be implemented beyond the levels in the menu.

Refer to Appendix 2F for Low Sodium Substitutions.



Potassium

Some residents with kidney disease may need to limit the servings of higher potassium foods they eat. They may be allowed smaller amounts of these foods depending on the diet ordered by their health professional. The resources below show foods which are lower and higher in potassium. Offer lower potassium food choices daily.

- Potassium and Your Kidney Diet
- Potassium Foods Pictorial

Phosphorous

Some residents with kidney disease may need to limit the number of higher phosphorus foods they eat. They may be allowed smaller amounts of these foods depending on the diet ordered by their health professional. The resources below show foods which are lower and higher in phosphorus. Offer lower phosphorus food choices with each meal.

- Higher Phosphorus Food Choices
- Phosphorus and Your Kidney Diet
- Phosphorus Foods (pictorial)

Fluids (kidney)

Some residents with kidney disease (and other health conditions, such as heart disease) may need to limit their fluid intake. A daily fluid limit may be advised by the doctor or dietitian.

What are fluids?

Anything liquid at room temperature is a fluid.

Examples of fluids include:

- All drinks (includes water, milk, juice, coffee, tea, and pop)
- Crushed ice and ice cubes
- Gelatin desserts
- Ice cream and sherbet
- Juice from canned fruit
- Nutrition supplement drinks (for example, Boost[®] or Ensure[®])



- Popsicles
- Sauces and gravy
- Soups and broth

Fluids provided at meals, snacks and medication administration should be considered if the resident has a daily fluid limit.

For more information on fluids, refer to <u>Hydration</u> in Section 9.







Kidney-friendly bagged meals

All residents should receive three regular meals (and snacks as necessary) each day to meet their nutrition needs. Those with kidney disease may have medical appointments, be receiving dialysis, may be enrolled in day programs, or be offsite during mealtimes. It is important to provide a well-balanced bagged meal in these cases.

A bagged meal should include a sandwich (or wrap, pita, etc.), fruit (lower potassium, if appropriate), beverage, and a dessert.



Guidelines for kidney-friendly bagged meals

Sandwich/Wrap/Pita

- Protein Foods:
 - Choose lean, fresh cooked and low sodium protein sources such as chicken, turkey breast, roast beef, pork, or fish, or healthy meat alternatives such as peanut butter or egg fillings.
 - Avoid processed meats (hot dogs, bacon, bologna, salami, sausages, ham, pepperoni).
 - If using canned meat/chicken or fish, choose ones with lower salt, or rinse salted products thoroughly to reduce salt content.



• Grain Products:

 Choose from: bagels, dinner rolls (white), flour tortillas, French bread, hamburger buns, Italian bread, light rye, pita bread, rice cakes, sourdough, or white bread.

• Spreads or condiments:

 Choose from: cranberry sauce, low fat cream cheese, mustard, horseradish, jam, jelly, ketchup (limit serving to 1 Tbsp/ 15 mL), low fat mayonnaise, salad dressing (low sodium), or low fat sour cream.

• Toppings:

 Choose from: bell peppers, cucumber, dark green lettuce (romaine and spinach), onions, roasted red peppers, tomato slice (1), or water chestnuts.

• Add flavour:

 Choose from: black pepper, curry powder, flavoured oil, mixed herb seasoning, olive oil, red pepper flakes, sweet pickle relish, or vinegar.



Build your own bagged meal (kidney-friendly)

	Option 1	Option 2	Option 3	Option 4	Option 5
Protein Foods	Turkey	Chicken	Egg salad	Tuna salad	Roast beef
Grain Foods	Small bagel (white)	White flour tortillas	Bread (60% whole wheat or white)	Pita (white)	Hamburger bun (white)
Vegetables and Fruits (drained canned fruit is acceptable)	Apple or mandarin oranges	Fruit cocktail or grapes	Pear or pineapple	Grapes or berries	Peach or applesauce
Beverage	Water, 100% fruit juice, low- fat milk, or fortified soy beverage	Water, 100% fruit juice, low-fat milk, or fortified soy beverage	Water, 100% fruit juice, low- fat milk, or fortified soy beverage	Water, 100% fruit juice, low- fat milk, or fortified soy beverage	Water, 100% fruit juice, low- fat milk, or fortified soy beverage
Desserts	Vanilla wafers	Sugar cookies	Graham crackers	Angel food cake	Lemon cake
Spread or Condiment	Cranberry sauce	Reduced fat mayonnaise or mustard	Reduced fat mayonnaise	Reduced fat mayonnaise	Horseradish

- Bagged meals provided to residents should be refrigerated after preparation until served to ensure food safety. If refrigeration is not available, an ice pack can be included in the bagged meal.
- Refer to Health Canada's <u>General Food Safety Tips on Safe Food Storage</u>² for detailed information for proper food storage.



Kidney Resources

Potassium

- Potassium and Your Kidney Diet
- Potassium Foods Pictorial

Phosphorus

- Higher Phosphorus Food Choices
- Phosphorus and Your Kidney Diet
- Phosphorus Foods (pictorial)

Kidney diet websites

Below is a list of websites helpful in planning a menu for a kidney (renal) diet:

- Kidney Foundation of Canada
- Kidney Community Kitchen
- National Kidney Foundation: List of Cookbooks



4.3.3 Vegetarian Diets

Usually, an individual who follows a vegetarian diet does not eat meat, poultry, or fish. However, there are many different kinds of vegetarian eating practices. A resident may choose to follow a vegetarian diet for health, ethical, environmental, personal, or religious reasons.

Common Vegetarian Diets

Semi-vegetarian	 may include some fish, and maybe even small amounts of meat or poultry
Lacto-ovo	includes eggs, milk, and milk productsexcludes red meats, poultry, and fish
Lacto	includes milk and milk productsexcludes red meats, poultry, fish, and eggs
Vegan	 excludes all foods of animal origin, including red meats, poultry, fish, eggs, honey, milk, and milk products

The type of vegetarian diet the resident follows will determine the options available. For more information, see <u>Canada's food guide</u>.¹

How many grams of protein should be provided daily on the menu?

It is suggested that an average of 100 grams of protein be provided daily on the menu.⁴ Providing protein foods at each meal and snack can maximize the amount of protein being provided over the day, resulting in higher protein intake overall.



Suggested protein distribution over the day⁴

Meal	Amount of Protein (g)
Breakfast	20-25
Morning beverage/snack	5
Lunch	25-30
Afternoon beverage/snack	10
Supper	25-30
Evening beverage/snack	10

Plant-based entrees in typical serving sizes may have a lower amount of protein compared to animal-based entrees. A minimum of 10–15 g protein per entrée and a total target of 25–30 g protein per meal is recommended.⁴ Additional protein will also come from soup, grains, vegetables, salad, beverage, desserts, and snacks eaten.

Vegetarian protein food choices and standard portion sizes

Food Item	Standardized Portion Size
Protein Foods	
Beans, lentils, or dried peas, cooked or canned	½ cup/ 125 mL
Hummus	1⁄4 cup/ 60 mL
Egg	1 large
Tofu	½ cup/ 125 mL
Nuts or seeds, shelled	1⁄4 cup/ 60 mL
Peanut butter or nut butter	1 tbsp/ 15 mL
Cooked fish, shellfish, poultry, and lean meat	2–3 oz/ 60–90 g
Milk (whole 3.25%, 2%, 1%, or skim)	1 cup/ 250 mL
Yogurt (plain and flavoured)	½ cup/ 125 mL
Cheese (cheddar, mozzarella, Swiss)	1 ½ oz/ 50 g
Soy beverage, calcium, and vitamin D fortified	1 cup/ 250 mL
Almond/Rice beverage, calcium, and vitamin D fortified (Note: Almond/Rice beverages contain little protein)	1 cup/ 250 mL



For a sample meal plan of a Lacto-Ovo Vegetarian Diet, see Appendix 4C.

High protein, high calorie resources:

- Adding Calories and Protein to Your Diet
- Adding Protein to Your Diet



4.3.4 Gluten-Free Diet

What is a gluten-free diet?¹

A gluten-free diet is one that completely avoids the following grains:

- wheat
- rye
- barley
- triticale
- spelt
- kamut



These grains contain a protein called gluten. Gluten can damage the lining of the small intestine in people who have celiac disease. When the lining is damaged, nutrients (like vitamins and minerals) are not absorbed. This may lead to health problems such as low iron, weak and brittle bones, itchy skin rash, and infertility.

If a resident has celiac disease, then the gluten-free diet should be strictly followed as it is the only way to keep the intestine healthy and reduce the risk of health problems.

A gluten-free diet can be tasty and nutritious. There are many gluten-free food choices available at grocery and specialty stores. Gluten-free foods can also be made easily.

What about oats?

Oats don't have gluten but as per the <u>Canadian Celiac Association</u>³ most commercially available oats in North America can be contaminated by other grains that have gluten in them. There are specially produced, pure, uncontaminated oats available for purchase. A small number of people with celiac disease may not tolerate oats.

What foods can be eaten on a gluten-free diet?

There are many foods that can be eaten on a gluten-free diet; some individuals can even tolerate pure, uncontaminated oats in small amounts. A dietitian can provide further dietary guidance for the residents or for the site.

To see a sample <u>Gluten-Free Diet</u>, see Appendix 4D.



Gluten-free baking and cooking

- When cooking or baking, it is important to keep foods gluten-free. Even a crumb from gluten-containing bread can affect the individual. Baking or cooking surfaces should be clean and gluten-free. Use these tips to keep foods from coming in contact with gluten (becoming "cross-contaminated").
- Cooking and baking with gluten-free flours can be a challenge and often requires experimenting and practice. For ideas and tips on adapting recipes or substituting with gluten-free flours, visit the <u>In the Kitchen</u> section of the <u>Canadian Celiac Association</u>³ website. The association offers reliable information about the gluten-free diet.

To avoid cross-contamination:

- Choose flours labelled gluten-free. Flours without the gluten-free claim may be cross-contaminated during production.
- Store all gluten-free products separately. Have a separate cupboard and containers for gluten-free products.
- Use clean equipment for gluten-free food preparation. Make sure all pots, pans, utensils, utensil drawers and counter spaces are clean before using. Use a separate strainer for gluten-free foods.
- Prepare and cook gluten-free foods separately from regular foods. Glass or metal dishes are best. Shared wooden utensils and wooden cutting boards may contribute to cross contamination. Have a separate cutting board and wooden utensils that are just for gluten-free foods.
- Use a separate strainer labelled "gluten-free only" for gluten-free foods. Do not use it for foods that contain gluten.
- Have a separate gluten-free toaster. It's best to have a separate toaster only for gluten-free bread. A shared toaster will have crumbs from gluten-containing breads. Another option is to use toaster bags. These re-useable bags cover your bread so it can be placed in any toaster.





• Use separate condiment containers. Have separate containers for items such as margarine, jam, peanut butter, honey, mayonnaise, relish, or mustard. A shared dish or jar may have crumbs from gluten-containing foods.

Resources:

- <u>Canadian Celiac Association</u> website
- AHS gluten-free handouts:
 <u>Gluten-Free Diet</u>

Fibre and the Gluten-Free Diet



4.3.5 Low Lactose Diet

Lactose is a type of sugar found in milk and milk products. Lactose may also be added to some processed and prepared foods.

Some residents may not be able to break down and digest lactose. This is called lactose intolerance. Residents may have symptoms such as gas, bloating, or diarrhea and may need to follow a Low Lactose diet.

It is important to note that lactose intolerance is not the same as a milk allergy. Residents with a milk allergy must avoid all milk products. Those with lactose intolerance can often tolerate small amounts of lactose in their diet.

See <u>Lactose Intolerance</u>, on MyHealth.alberta.ca for more information about managing lactose intolerance.



4.4 High Protein, High Calorie

A high protein, high calorie diet is used to improve nutrition status and help reduce the risk of malnutrition due to poor intake, decreased appetite, or weight loss. Protein provides building blocks for muscle and keeps the immune system strong. Eating extra protein and calories can help residents maintain or gain weight and improve strength.

Protein foods have important nutrients such as:

- protein
- vitamins
- minerals

How many grams of protein should be provided daily on the menu?

It is suggested that an average of 100 grams of protein be provided daily on the menu.⁴ Protein for meals and snacks should be included in the total. Providing protein foods at each meal and snack can maximize the amount of protein being provided over the day, resulting in higher protein intake overall.

Suggested	protein	distribution	over	the day ⁴
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Meal	Amount of Protein (g)
Breakfast	20-25
Morning beverage/snack	5
Lunch	25-30
Afternoon beverage/snack	10
Supper	25-30
Evening beverage/snack	10



Examples of high protein and/ or high calorie foods:

- Milk: Higher fat milks:
 - Whole or 2% Milk Fat (M.F.)
 - Evaporated milk, whole, or 2% M.F.
 - o Buttermilk, whole or 2% M.F.
- Cream, all types
- Fortified soy beverage
- Flavoured 2% milk such as chocolate, strawberry, or vanilla
- Skim milk powder
- Higher fat cheese (at least 28% M.F.)
- Cottage cheese, higher than 2% M.F.
- Greek-style yogurt, higher than 1% M.F.
- Eggs, all types
- Meat, fish, and poultry
- Nuts and seeds
 - o peanuts
 - o almonds
 - o cashews
 - o nut and seed butters
 - o sunflower seeds
- Beans, peas, and lentils
 - o brown, green, red, or other lentils
 - peas such as chickpeas and split peas
 - $\circ~$ dried beans such as black beans and kidney beans
- Tofu, soybeans, and other soy products
- Higher fat condiments and salad dressings
- Sauces and gravies
- Sweets and desserts
- Nutrition supplement drinks, puddings, or bars (Boost[®], Ensure[®])



Foods	Ingredients to add to increase protein and/ or calories
Hot or cold cereals	Skim milk powder, cream, butter/margarine, dried fruit
Cream soups or entrees	Grated cheese, cream, butter/margarine, milk powder, croutons
Appetizers	Chopped boiled eggs, diced meat/fish, cheese cubes
Mashed potatoes	Sour cream, cream, milk powder, butter/margarine
Pastas	Cheese, butter/margarine, cream, hard-boiled egg, or omelet pieces
Desserts	Cream, honey, chocolate syrup, nut butters
Fruit juice	Skim milk powder, honey, yogurt (smoothie)
Foods requiring thickening	Infant cereal instead of using modified starch-based thickeners

Examples of ingredients to add to increase protein and calories of food⁴

Tips to improve protein and calorie intake:

- Include a source of protein at each meal. Choose foods such as meat, fish, poultry, nuts, eggs, cheese, or milk.
- Offer snacks with protein between meals. A resident may not be able to eat a big meal at one sitting but may eat more if offered snacks throughout the day.
- Replace lower calorie drinks such as water, tea, coffee, and broth with more calorie-dense options such as milk, cream-based soup, and nutrition supplement drinks (Boost[®], Ensure[®]).
- Limit items labeled "light", "low fat", "fat-free", "low calorie" or "sugar-free."





High protein, high calorie recipes:

- Recipes to Help You Get Enough Calories & Protein
- High Protein, High Calorie Milk

High protein, high calorie resources:

- Adding Calories and Protein to Your Diet
- Adding Protein to Your Diet
- High Protein High Calorie Meal and Snack Ideas
- Making Smoothies with More Calories and Protein
- Nutrition Supplements

To see a sample <u>High Protein, High Calorie Diet</u>, see Appendix 4E.

For additional resources, see Appendix 2C, Nutrition Education Resources.

For more information on Malnutrition refer to section 8.0 of this toolkit.



4.5 Snacks

Snacks can support good health, provide energy, and prevent hunger between meals.

To provide residents with healthy snack options:

- Ensure snacks provide a variety of foods from <u>Canada's food guide</u>.¹
- Include a healthy drink at each snack. Offer water, lower fat milk or fortified soy beverage most often. Juice should be limited to ½ cup (125 mL) portion, 100% fruit juice, or low sodium vegetable juice, no more than once a day.
- Space snacks evenly between meals.
- Ensure that there are foods available to snack on throughout the day, as residents may be hungry outside of set meal and snack times.
 - Leave a bowl of prewashed fresh fruit on the counter. Fruits such as bananas or oranges are a good option for food safety reasons, as they need to be peeled before eating.
 - Keep fresh vegetables cut and readily available.
 - Stock protein-rich foods like peanut butter, yogurt, and cheese.
 - Have items like fruit cups, bread, whole grain crackers, cookies, muffins, loaves, and puddings available.

Snack ideas:

- whole grain toast with nut butter and banana
- green leafy salad with orange sections and almonds
- lower fat yogurt topped with frozen berries and walnuts
- lower fat cheese and whole grain crackers with cherry tomatoes
- sliced cucumber and red pepper with hummus or lower fat yogurt dip
- whole grain crackers topped with lower fat cottage cheese and peach slices
- whole grain English muffin topped with apple slices and melted lower fat cheese
- whole grain cereal with fruit slices and milk or unsweetened fortified plant-based beverage



Higher protein snack ideas

Protein foods make healthy and delicious snacks. Try these options:

- nuts and seeds
- hard-boiled eggs
- oven roasted chickpeas
- hummus with fresh veggies
- peanut butter on celery sticks
- yogurt with fresh fruit

For further healthy snack ideas, refer to <u>Canada's food guide: Healthy</u> <u>Snackshttps://food-guide.canada.ca/en/tips-for-healthy-eating/healthy-snacks/</u> or to the handout: <u>Healthy Snacking</u>.



References

- 1. Health Canada. Canada's food guide. [Online]. 2019 [cited 2021 March 3]. Available from: https://food-guide.canada.ca/en/
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