


Meal Planning Made Easier For Diabetes and Renal Disease


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Outline

- ▶ Reason for the development of the combined Diabetic and Renal Meal Plan
 - ▶ Change from Good Healthy Eating Guide meal planning method to Meal Planning Guide For Diabetes (Beyond the Basics)
 - ▶ Developing the Meal Planning for Diabetes and Renal tool
 - ▶ Client information shared by Renal Dietitian's
 - ▶ Develop a meal plan with clients at DTTC
 - ▶ Case Studies 1 & 2
 - ▶ Questions
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Reasons For Development of The Combined Meal Plan

- ▶ Attend both Kidney Function Clinic (KFC) and Diabetes Teaching & Treatment Centre(DTTC)
 - ▶ Confusion with combining a diabetic and renal diet
 - ▶ Meal Planning for Diabetes tool contained foods high in K, PO (limited food choices)
 - ▶ Consistent message from Dietitian's
 - ▶ Overall Goal: Educate clients about improving eating habits for both Diabetes and Renal Disease
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Good Healthy Eating Guide (GHEG)

* In a healthy meal plan, a Sugars choice can occasionally be substituted for other carbohydrates such as a Fruits & Vegetables choice.

STARCH FOODS										15 grams carbohydrate			
1	1	1	1/2 small	1 small	6	1/2	2						
1/2 cup	1/2 cup	1/2 cup	1/2 medium	1/2 medium	3	3							


FRUITS & VEGETABLES										10 grams carbohydrate			
1 small	1/2	1	1	1/2	1/2 medium	1	1	1	1				
1	1	1	1/4	1/2	1/2 small	1	10	2	1				
1	1	1	1	1	1	1	1						

MILK					6 grams carbohydrate				
1	1	1	1	1					

Note fat content. Healthier choices are skim, 1% and 2%.

SUGARS										10 grams carbohydrate			
1	1	2	4	1 small	2 large	1/2	1	1					

Good Healthy Eating Guide Symbols

	STARCH FOODS
	FRUITS & VEGETABLES
	MILK
	SUGARS*
	PROTEIN FOODS
	FATS & OILS
	EXTRAS
CARBOHYDRATES	

Changing from the GHEG to Beyond The Basics

- ▶ In 2002 survey of healthcare professionals and consumers—to see if a change in meal planning methods was needed
- ▶ Findings: symbols were misleading as people thought that the Canadian Diabetes Association (CDA) endorsed the products
- ▶ Consumers wanted more ethnic food choices
- ▶ Change so there is a common 15 gram portions size for all Carbohydrate foods
- ▶ Quebec and US were already using the 15 g CHO/serving

Meal Planning Guide For Diabetes (CDA – Beyond the Basics)

- ▶ All Carbohydrate (CHO) foods are listed in a quantity that equals *15 grams CHO (*Available CHO)
- ▶ Provided Ranges of CHO/meal
- ▶ Protein: no change in portion size
- ▶ Fat: no change in portion size
- ▶ CDA symbols no longer used and have been removed from food labels as of Dec 2006
- ▶ Main problem with the Meal Planning Guide: not specific in identifying high K or PO foods and the quantity of protein suggested was too high

Meal Planning For Diabetes and Renal Disease

- ▶ CHO targets: 45–60g or 60–75g CHO/meal
- ▶ CHO food groups–added guidelines to help manage K and PO
- ▶ Fruit/Veg: choose low–moderate K foods, to limit ½c of Veg that are low in CHO/high K
- ▶ Milk: limit 1 c/d
- ▶ Extras: limit dark colored diet pop – high PO
- ▶ Protein and Fat– identified high K & PO foods
- ▶ Provided a sample meal plan with recommended protein serving

Meal Planning Guide for Diabetes and Kidney Disease



Meal Planning Guide for Diabetes and Kidney Disease

This handout will help you choose a balanced amount of carbohydrate for diabetes. It will also balance protein, phosphorus, and potassium in amounts suggested for kidney disease. Working with your dietitian will help adapt the guide to suit your needs.

Carbohydrate Targets

Most Women and Less Active Men	Most Men and More Active Women
3-4 servings per meal	4-5 servings per meal
45-60 grams of carbohydrate per meal	60-75 grams of carbohydrate per meal
Total 150-200 grams of carbohydrate per day	Total 250-300 grams of carbohydrate per day

Carbohydrate Foods

1 serving = 15 grams of carbohydrate

Starches		Low to Moderate Potassium Fruits and Vegetables *	
1 Serving of Carbohydrate		Choose maximum 5 servings/day to manage Potassium	
1 Serving of Carbohydrate		1 Serving of Carbohydrate	
Bagel (4 1/2" diameter) – plain, Blueberry	1/4	Apple	1 medium
Barley (cooked)	1/3 cup (75 ml)	Applesauce, unsweetened	1/2 cup (125 mL)
Bread (30 grams by weight) White, 60% whole wheat, Raisin, French, Italian, Sourdough	1 slice	Berries (blueberries, raspberries)	1 cup (250 mL)
Cereal - Cream of Wheat, oatmeal, Cheerios, Corn Bran	1/4 cup (175 mL)	Canned Fruit (unsweetened)	1/2 cup (125 mL)
Cereal - Cornflakes, Special K, Rice Krispies, Crispix	1/2 cup (125 mL)	Cranberries, dried(sweetened)	3 Tbsp (45 mL)
Chapati/Roti (6" diameter)	1	Grapes, Cherries	15
Congee	1 cup	Peach	1 medium
Cookies (plain)	2	Persimmon	1 medium
Couscous (cooked)	1/2 cup (125 mL)	Pineapple	2 slices or 1/4 cup
Crackers, soda, unsalted	7 small	Tangerine	1 medium
English muffin	1/2	Watermelon	1 cup (250 mL)
Hamburger Bun	1/2	<u>Vegetable:</u>	
Kaiser bun	1/2 small	Corn (canned kernel)	1/2 cup (125 mL)
Melba toast	4 rectangular	Corn on the cob	1/2 medium
Muffin (not bran-type)	1/2 medium	Peas	1/2 cup (125ml)
Pasta (cooked)	1/2 cup (125 mL)	Potato (soaked)	1/2 cup
Pita (6" diameter)	1/2		
Plain roll	1 small		
Popcorn (unbuttered + unsalted)	3 cups(750 mL)		
Rice (cooked) or rice noodles	1/2 cup (75 mL)		
Rice cakes	2		
Tortilla (6" diameter)	1		

The following are low in carbohydrate but they still contain **Potassium**: (Limit to 1/2 cup)

Alfalfa sprouts, asparagus, beans (yellow/green), bean sprouts, bok choy, broccoli, brussel sprouts, cabbage, carrots, cauliflower, celery, cucumber, eggplant, kale, lettuce, mushrooms (raw), okra, onion, parsley, peppers, plum (1 med), radishes, rhubarb (unsweetened), spinach (raw), snow peas, strawberries, turnip, zucchini

* Available carbohydrate-corrected for fiber

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Carbohydrate Foods

1 serving = 15 grams of carbohydrate

Milk Products - High Phosphorus – limit 1 cup/day		Sugars	
1 Serving Carbohydrate		1 Serving of Carbohydrate	
Milk	1 cup (250 mL)	Candies, hard	5 small
Milk, buttermilk	1 cup (250 mL)	Cranberry sauce, sweetened	2 Tbsp (30 mL)
Milk, canned, evaporated	½ cup (125 mL)	Ketchup	3 Tbsp (45 mL)
Soy Beverage, unflavored	1 cup (250 mL)	Popsicle	1 bar (55 g)
Yogurt, plain/artificial sweetened	1 cup (250 mL)	Sherbet	½ cup (125 mL)
Ice cream	½ cup (125 mL)	Soft drink (regular)	½ cup (125 mL)
		Sugar, syrup, honey, jam, jelly	1 Tbsp (15 mL)
		Rice Dream	½ cup (125 mL)

To help balance your meal and delay the rise in blood sugars add these foods in moderate amounts to each meal

Protein Foods (1 serving = 7 grams of protein)		Fats (1 serving = 5 grams of fat)	
1 Serving of Protein		1 Serving of Fat	
Egg	1 large	Avocado (high Potassium)	1/6
Egg White Substitute	¾ cup (50 mL)	Butter or Margarine	1 tsp (5 mL)
Fish (canned)	¾ cup (50 mL)	Gravy	2 Tbsp (30 mL)
Fish	1 oz (30 g)	Mayonnaise, regular*	1 tsp (5 mL)
Meat (lean), Poultry	1 oz (30 g)	Oils	1 tsp (5 mL)
		Salad Dressing, regular*	1 tsp (5 mL)
High in Phosphorus:		Sour Cream, regular*	2 Tbsp (30 mL)
Cheese*	1 oz (30 g)	Cream Cheese, regular	1 Tbsp (30 mL)
Cheese, cottage*	¾ cup (50 mL)		
Cheese, feta*	½ cup (75 mL)	High in Potassium and Phosphorus:	
Peanut butter, Nut butter	2 Tbsp (30 mL)	Nuts: Almonds	7
Tofu	½ cup (75 mL)	Cashews	5
These foods also contain one serving of carbohydrate:		Peanuts	10
Cooked Dried Beans and Lentils	½ cup (125 mL)	Walnuts	4 halves
Milk / Yogurt / Soy beverage	1 cup (250 mL)	Sunflower Seeds	2 Tbsp shelled

*Check labels for low fat choices

Extras

Extras – watch portion size where indicated to manage carbohydrate and potassium

Beverages: Water, low salt broth or consommé, mineral water, soda water. Sugar free lemonade, sugar free iced tea or sugar free powdered drinks, sugar free soda pop. Plain coffee or tea (limit to 3-4 cups/day).
Avoid diet Coke/Pepsi & Dr Pepper, as they are high in Phosphorus.

Condiments: artificial sweeteners, chili sauce (1 Tbsp), flavourings and extracts, herb and spices, garlic, ginger, horseradish (not creamed), lemon or lime juice, mustard, pepper, vinegars (e.g. balsamic, flavoured wine, cider), worcestershire sauce (1 tsp)

Condiments to use in smaller quantities (5 g carbohydrate): BBQ sauce (1 Tbsp), fruit spread (no sugar added) (1 Tbsp), ketchup (1 Tbsp), relish (2 tsp), whipped topping light (2 Tbsp)

Dessert: diet popsicles, diet jello

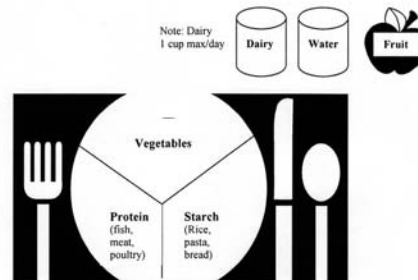
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Sample Meal Plan

	Breakfast	Snack	Lunch	Snack	Dinner	Snack
Carbohydrate Servings	3-5		3-5		3-5	1
Protein Serving	1		2		3	1
Fats Servings	1-2		1-2		1-2	
Extras	√	√	√	√	√	√


Additional Instructions:

1. Eat **three meals per day** at regular times and space meals no more than six hours apart. If your meals are far apart, you may benefit from a healthy snack.
2. **Snacks** can add variety to your diet, control your appetite and help manage your blood sugar. If you want to have snacks:
 - Eat less carbohydrate at your meals and add to snack times.
 - Add 1-2 carbohydrate foods for snacks when you are more active.
3. Choose the smaller servings for **lower calorie** requirements (adjust as needed).
4. **Fat** portions are optional at each meal but should be limited to 1-2 servings/meal.
5. Remember to try and **balance** your meals. Aim for at least 3 out of the 4 food groups at each meal as illustrated below.



Reference: Beyond the Basics: Meal Planning for Healthy Eating, Diabetes Prevention and Management

Client Information From Renal RD

- ▶ Sends lab results/Medication list from PROMIS
 - ▶ Nutrition Assessment includes: diet hx, anthropometrics, assess nutritional risk, food record, goals/plan and education patient has received: K, PO, NAS diet and protein
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Case Study #1 –KFC

- ▶ 56 year old male
- ▶ PMHx: CRF, DM Type 2 (x14years), HTN, CAD, Dyslipidemia
- ▶ Oral agents: Diamicron 160mg bid, Metformin 1g bid and other medications
- ▶ Seen by RD in the KFC and referred to DTTC
- ▶ Nutrition Assessment completed
- ▶ A1c 7.9%, K 5.0,, (PO & Ca within range), Creat 183, TG 2.71mmol/L
- ▶ Education given: K, PO (1/2 c beans 1-2/7d & 1 oz cheese @ HS + 1c milk/d) , and protein limited to 5-6 oz/d


Case Study #1 – DTTC

- ▶ A1c 8.9%, K 4.7, TG 7.23, Creat 229
- ▶ Start: 30/70 insulin & d/c diamicon & Metformin
- ▶ Nutrition Assessment reviewed: good appetite, Diet Hx: 3 meals/day with some snacking, energy needs: 1800 calories/d
- ▶ Patient interested in CHO targets
- ▶ Explained the action time of the insulin reinforcing the need to add snacks and reinforce limited protein servings at meals

Meal Plan

	Breakfast	Snack	Lunch	Snack	Dinner	Snack
CHO (serving)	3	1	4	1	4	1
Protein (serving)	1		2		2	1
Fat (serving)	1-2		1-2		1-2	1
Extra	X	X	X	X	X	X

Conclusion

- ▶ Explain how to use new meal planning method
 - ▶ Reinforced a low K diet, and 5 oz protein/d plus one glass milk (lactaid)
 - ▶ Follow up with PO/NAS information given 6 months prior to attending DTTC
 - ▶ Consistency of CHO at meals and snacks to help with blood sugar control
 - ▶ Consistent message from Dietitian's
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Case Study #2-KFC

- ▶ 59 year old woman
- ▶ PMHx: ESRF (start PD), Diabetes Type 2, HTN, Dyslipidemia
- ▶ Oral agents: Glyburide 10mg bid, Metformin 1g bid, NPH @HS
- ▶ Nutrition Assessment completed by renal RD
- ▶ Factors affecting nutrition status:
Constipation, poor appetite c/o bloating
- ▶ A1c 7%, K 3.5, PO 1.85, Calcium 2.44, Creatinine 585, lipid within range
- ▶ Other meds: lactulose, calcium acetate

Case Study#2 – Continued

- ▶ Energy requirements: 2000 cal/day
- ▶ Interested in CHO targets using meal plan
- ▶ Education:
 1. Reintroduce high potassium foods: aim for 2 servings/ day
 2. Increase to 8oz protein/d (focus on lean choices) plus limit 1 cup milk
 3. To watch calcium levels when reviewing next lab results
 4. Provide a new meal plan

Meal Plan

	Breakfast	snack	Lunch	Snack	Dinner	HS
CHO Servings	3	2	3	1	4	2
Protein Servings	1		3		3	1
Fat Servings	1-2		1-2		1-2	1
Extra	X	X	X	X	X	X

Conclusion

- ▶ Explained how to use new meal planning guide
- ▶ Reinforce HS snack
- ▶ Reviewed foods high in K
- ▶ Reinforce importance of regular intake of PO binder
- ▶ Challenges: when patients reach stage 3 1 / 2 – 4 – transition from eating whole grain bread, brown rice, bran cereals to white bread, white rice, limiting legumes. Obtain fibre from low K fruit/veg. In this case some high K foods OK

Questions ?

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