

# Meal Planning Made Easy

Focusing on nutrition to improve blood glucose  
control



- Measures have been taken, by the Utah Department of Health, Bureau of Health Promotions, to ensure no conflict of interest in this activity.
- CNE/CEU's are available for this live webinar. You must take the pre and post tests. 80% is required on the post test to receive CNE/CEU's.
- Certificates will be emailed out to you within two weeks

# Judy Harris, MPH, RD, CD, IBCLC

Judy Harris obtained her undergraduate degree in Nutrition and Dietetics in Florida. She is a Registered Dietitian, a Certified Dietitian in Utah and an International Board Certified Lactation Consultant. She has her Master in Public Health from the University of Utah. She has worked in public health for over 25 years, the majority working for the Women Infant and Child Program. She has worked in the roles of providing nutrition counseling and developing nutrition education materials. She was the State Breastfeeding Coordinator in Utah for approximately 15 years. She served on the first Board of Directors for the USLCA. She maintains memberships with national associations such as ILCA, USLCA, and AAND and state memberships such as UPHA, UBC, UAND. She is new to the Public Health Nutritionist position with us here at the Healthy Living Through Environment, Policy & Improved Clinical Care (EPICC) Program.



# Objectives

- Participants will be able to identify the different meal planning methods and when each is appropriate to use
  - Plate Method
  - Carbohydrate Equivalents
  - Carbohydrate Counting
- Participants will be able to teach clients the principles of each meal planning method
  - Plate Method: Identifying food sources
  - Meal exchanges: Identifying food sources and portion sizes
  - Carbohydrate Counting: Label reading and tracking
- Participants will encourage clients towards healthier eating patterns
  - Improving carbohydrate choices
  - Choosing healthy proteins and fats

# Overview

- Picking a plan
- Meal Planning
  - Plate Method
  - Carbohydrate Exchanges
  - Carbohydrate Counting
- Healthy Eating Patterns
- Case Study



# Meal Planning Success

- Blood Glucose Control through diet
- The key to success is finding the right treatment for the clients' individual needs
- Three methods that could be used for type 1, type 2 or gestational diabetes
  - Plate method
  - Carbohydrate exchanges
  - Carbohydrate Counting



# Scale of Control

Loose

- Plate Method

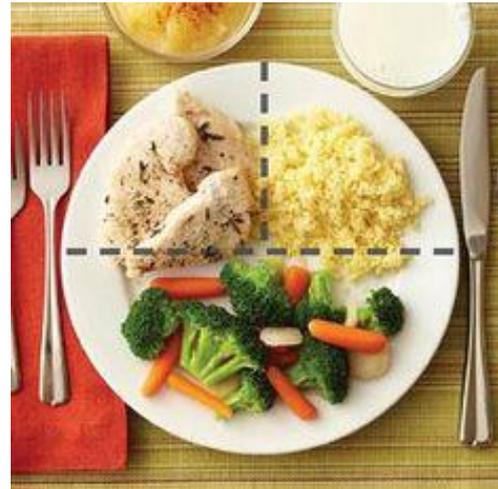
- Carbohydrate Exchanges

Tight

- Carbohydrate Counting

# Plate Method

- A visual method that helps control portion sizes and consistent carbohydrate intake throughout the day
- Ideal for patients who...
  - May have a lower understanding of diabetes
  - Have poor compliance to current treatment
  - Are T2DM or GDM



# Carbohydrate Exchanges

- A meal plan that converts standard carbohydrate amounts into servings or exchanges of carbohydrates
- Good for clients who...
  - Higher understanding of diabetes
  - May be overwhelmed by numbers or tracking

# Carbohydrate Counting

- Planning meals based on the specific amounts of carbohydrates in each food and tracking those amounts
- Good for clients who...
  - Want to maintain tight control of care
  - Have high compliance to treatment plan
  - Are highly motivated



# Teaching Meal Planning Methods

# The Plate Method

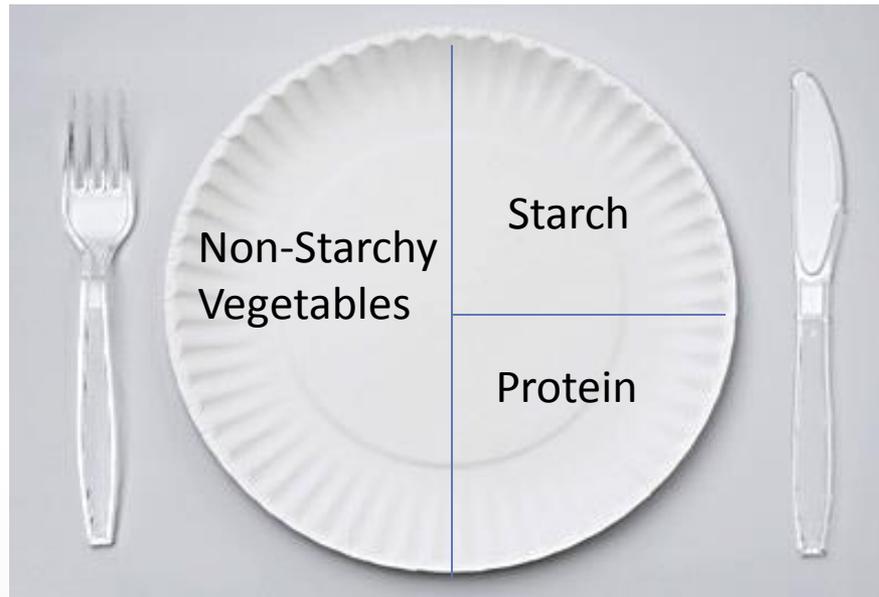
- What is it?



# Plate Method Visual

Fruit

Dairy



# Plate Method

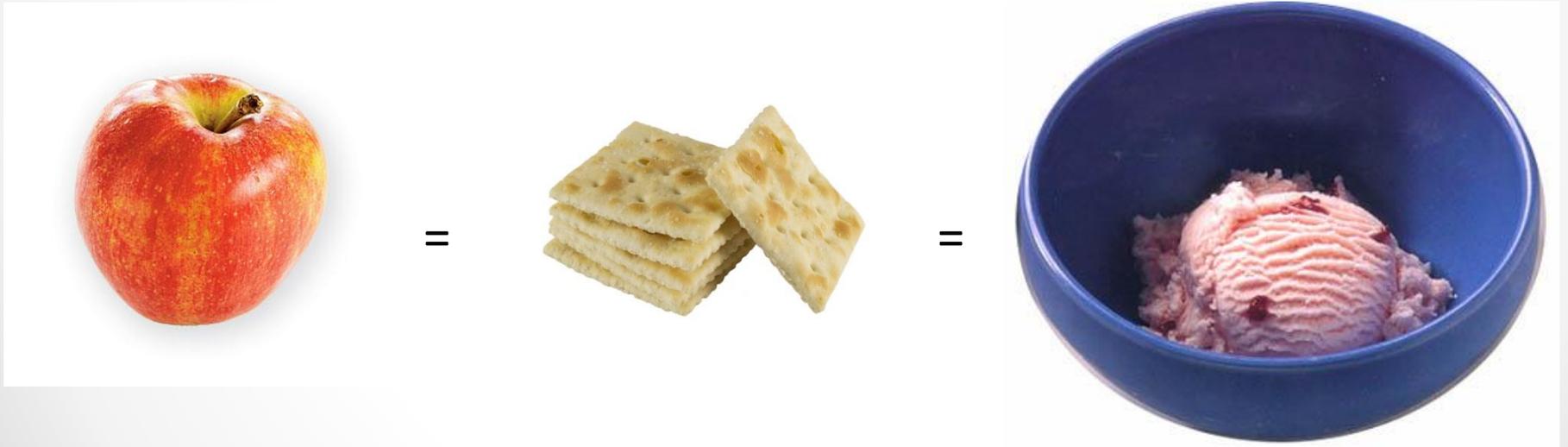
- What needs to be taught...
  - The purpose of the plate method
  - Food sources
    - What food groups contain the carbohydrates?
    - What is a starch?
    - What is the difference between starchy and non-starchy vegetables?

# Good Resources

- “Create Your Plate”. American Diabetes Association  
<http://www.diabetes.org/food-and-fitness/food/planning-meals/create-your-plate/?loc=ff-slabnav>
- “Idaho Plate Method”  
[platemethod.com](http://platemethod.com)
- Visual Aids
  - Paper plate
  - Food List with pictures of Non-Starchy Vegetables, Starches, Proteins, Fruits and Dairy
  - Food models

# Carbohydrate Exchanges

- What is it?



# Carbohydrate Exchanges

- What needs to be taught...
  - The purpose of using carbohydrate exchanges.
  - What is a carbohydrate exchange or serving?
  - How many to include per meal?
  - The different portions of carbohydrate exchanges

# Carbohydrate Exchanges

- Possible Meal Plans

Meal	Carbohydrate Exchanges
Breakfast	3-4
Lunch	3-4
Afternoon Snack	1-2
Dinner	3-4

Meal	Total Exchanges	Grains/Starchy Vegetables	Fruits	Dairy
Breakfast	<b>3-4</b>	1-2	1	1
Lunch	<b>3</b>	2	1	
Afternoon Snack	<b>2</b>	1	1	
Dinner	<b>4</b>	3		1

# Carbohydrate Exchanges

## Fruits

1 small piece  
½ c canned or  
frozen fruit  
2 T dried fruit  
1 c melon or  
berries  
½ c unsweetened  
juice

## Breads

1/3 c cooked pasta  
or rice  
½ c cooked  
oatmeal  
1 oz or slice of  
bread  
1, 6-in tortilla  
2 small cookies  
¾ oz pretzels or  
chips

## Starchy Vegetables

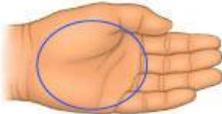
½ c cooked beans  
½ c cooked winter  
squash  
¼ large baked  
potato  
½ c cooked corn

## Dairy

1 c reduced fat  
milk  
1 c soy milk  
1 c sugar free  
yogurt  
½ c ice cream

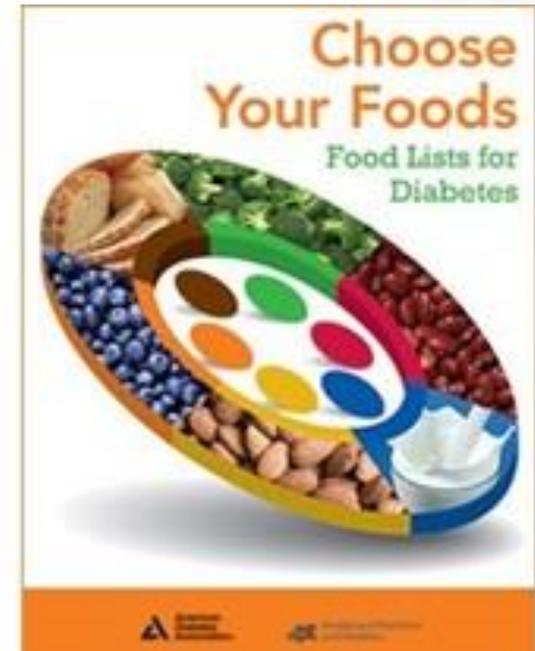
# Carbohydrate Exchanges

- Proper portion sizes is crucial
  - Use measuring cups
  - Visual estimate

Measurement	Size	Food item portion
1 cup	 Fist	 Medium fruit, green salad, frozen yogurt, pasta, rice, pretzels, snack food, ice cream
1/2 cup (4 ounces)	 Rounded handful	 Cooked vegetables, cup of fruit, pasta, rice, snack food, pretzels, nuts, small candy
3 ounces	 Deck of cards	 Fish, meat, poultry
1/4 cup	 Golf ball	 Dried fruit, such as raisins, apricots
1 1/2 ounces	 6 dice	 Cheese
1 teaspoon (tsp.)	 Tip of thumb	 Pat of butter

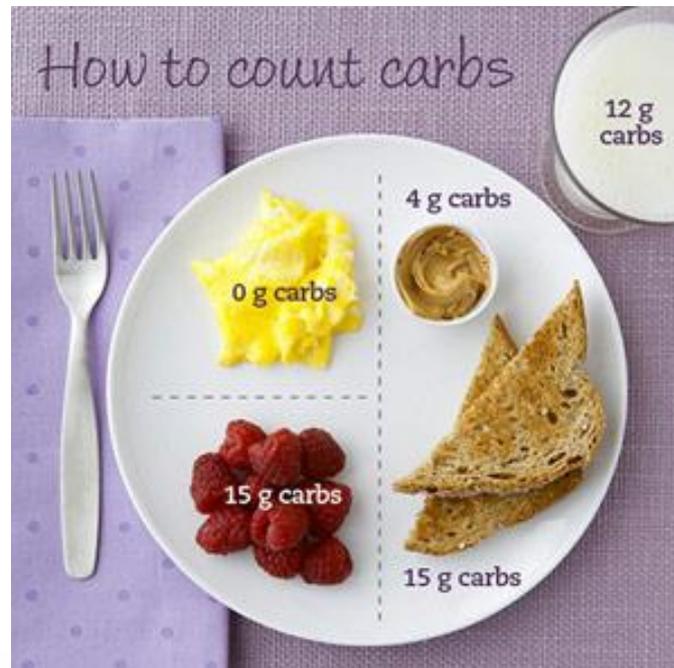
# Good Resources

- “Choose Your Foods: Food Lists for Diabetes” Academy of Nutrition and Dietetics
- “The Exchange List System for Diabetic Meal Planning”  
University of Arkansas  
Cooperative Extension Service.
  - Available at  
<http://www.uaex.edu/publications/pdf/fshed-86.pdf>



# Carbohydrate Counting

- What is it?



# Carbohydrate Counting

- What needs to be taught...
  - The purpose of carbohydrate counting
  - Reading food labels
  - Carbohydrate counts for food items without food label

# Carbohydrate Counting

- Reading Food Labels

## What To Look For

Toasted Whole Grain Cereal	
Nutrition Facts	
Serving Size 1 cup (30g)	
Serving Per Container About 11	
Amount Per Serving	
Calories 110	
Calories from Fat 10	
	% Daily Value
Total Fat 1g	1%
<b>Saturated Fat 0g</b>	0%
<b>Polyunsaturated Fat 0g</b>	0%
<b>Monounsaturated Fat 0g</b>	0%
Cholesterol 0mg	0%
Sodium 220 mg	9%
Potassium	3%
<b>Total Carbohydrate 24g</b>	<b>8%</b>
<b>Dietary Fiber 5g</b>	<b>13%</b>
<b>Sugar 4g</b>	
<b>Other Carbohydrate 17g</b>	
Protein 3g	

# Carbohydrate Counting

- What do you do when there is no food label?
  - Look it up online
  - Phone Apps
  - Recipes can be counted out by ingredient, or using online recipe builders
  - Most restaurants have nutrition facts to be available upon request
  - May have to estimate

# Good Resources

- “Carbohydrate Counting”. American Diabetes Association  
<http://www.diabetes.org/food-and-fitness/food/what-can-i-eat/understanding-carbohydrates/carbohydrate-counting.html>
- Calorie Trackers and Apps
  - “Calorie King” <http://www.calorieking.com/foods/>
  - “My Fitness Pal” <https://www.myfitnesspal.com/>
- Recipe Builder
  - “Calorie Count” [http://www.caloriecount.com/cc/recipe\\_analysis.php](http://www.caloriecount.com/cc/recipe_analysis.php)

# Improving Food Choices

- Possible long-term complications
  - Skin infections
  - Eye problems
  - Foot problems
  - Kidney disease
  - Heart disease

# Improving Carbohydrate Choices

- Grains and Starchy Vegetables
  - Whole wheat and other whole grains
  - Wild rice
  - Popcorn (with light or no butter added)
  - Beans
  - Potatoes with skins
  - Squashes
- Preparation methods



# Improving Carbohydrate Choices

- Fruits
  - Fresh
  - Frozen
  - No sugar added canned
  - Portion sizes with dried fruits



# Improving Carbohydrate Choices

- Dairy
  - Switch to lower fats
  - Pick lower fat, sugar free yogurts
  - Be careful of added sweeteners
  - Soy or almond milks fit



# Choosing Healthy Proteins and Fats

- Proteins
  - Best choices
    - Plant-based proteins
    - Fish and seafood
    - Chicken and other poultry
    - Cheese and eggs
  - Beef, Pork, Veal, Lamb
    - Choose the leanest options



# Choosing Healthy Proteins and Fats

- Fats
  - Unhealthy Fats
    - Saturated fat, Trans fat, Cholesterol
  - Healthy Fats
    - Monounsaturated fat, Polyunsaturated fat, Omega-3 fatty acids



# Good Resources

- “Protein Foods”. American Diabetes Association  
<http://www.diabetes.org/food-and-fitness/food/what-can-i-eat/making-healthy-food-choices/meat-and-plant-based-protein.html>
- “Fat”. American Diabetes Association  
<http://www.diabetes.org/food-and-fitness/food/what-can-i-eat/making-healthy-food-choices/fats-and-diabetes.html?loc=ff-slabnav>
- Evert A, et al. Nutrition therapy recommendations for the management of adults with diabetes. *Diabetes Care*. 2014;37:S120-S143.

# Case Study

JM: 42 yr old female; obese and T2DM

Current Typical Lunch

- Big Mac
- Large French Fries
- 30 oz Coke



# Case Study

JM: 42 yr old female, Obese and T2DM

Current Typical Lunch

Food	Estimated Exchanges	Actual Carbohydrate	Actual Calories
Big Mac	3	47 g	530 kcal
Large French Fries	4	67 g	510 kcal
30 fl oz Coca Cola	5	76 g	280 kcal
<b>TOTAL</b>	<b>12</b>	<b>190 g</b>	<b>1320 kcal</b>

# Case Study

JM: 42 yr old female, Obese and T2DM

New Lunch from McDonald's

New Lunch Food	Estimated Exchanges	Actual Carbohydrate	Actual Calories
Artisan Grilled Chicken Sandwich	2	47 g	360 kcal
Small French Fries	2	30 g	230 kcal
30 fl oz Diet Coke	0	0 g	0 kcal
Apple Slices	1	4 g	15 kcal
<b>TOTAL</b>	<b>5</b>	<b>77 g</b>	<b>605 kcal</b>

# Case Study

Menu	Estimated Exchanges	Carbohydrates	Calories
Old lunch -Big Mac -30 fl oz Coca Cola -Large French Fries	12	190 g	1320 kcal
New lunch -Grilled Chicken Sandwich -30 fl oz diet coke -Small French Fries -Apple Slices	5	77 g	605 kcal

# References

- Academy of Nutrition and Dietetics. Nutrition Care Manual: Carbohydrate counting for people with diabetes. Available at [https://www.nutritioncaremanual.org/client\\_ed.cfm?ncm\\_client\\_ed\\_id=123](https://www.nutritioncaremanual.org/client_ed.cfm?ncm_client_ed_id=123). Accessed May 12, 2015.
- Academy of Nutrition and Dietetics. Nutrition Care Manual: General guidance diabetes mellitus. Available at [https://www.nutritioncaremanual.org/topic.cfm?ncm\\_category\\_id=1&lv1=5517&lv2=255464&ncm\\_toc\\_id=255464&ncm\\_heading=Nutrition%20Care](https://www.nutritioncaremanual.org/topic.cfm?ncm_category_id=1&lv1=5517&lv2=255464&ncm_toc_id=255464&ncm_heading=Nutrition%20Care). Accessed May 12, 2015
- Academy of Nutrition and Dietetics. Nutrition Care Manual: Gestational diabetes nutrition therapy. Available at [https://www.nutritioncaremanual.org/client\\_ed.cfm?ncm\\_client\\_ed\\_id=51](https://www.nutritioncaremanual.org/client_ed.cfm?ncm_client_ed_id=51). Accessed May 11, 2015.
- Academy of Nutrition and Dietetics. Nutrition Care Manual: Type 2 diabetes mellitus. Available at [https://www.nutritioncaremanual.org/topic.cfm?ncm\\_category\\_id=1&lv1=5517&lv2=18469&ncm\\_toc\\_id=18469&ncm\\_heading=Nutrition%20Care](https://www.nutritioncaremanual.org/topic.cfm?ncm_category_id=1&lv1=5517&lv2=18469&ncm_toc_id=18469&ncm_heading=Nutrition%20Care). Accessed May 12, 2015
- American Diabetes Association. Available at [www.diabetes.org](http://www.diabetes.org). Accessed May 12, 2015.
- Brown LB. Planning single-event nutrition education: A new model. *J Fam Consum Sci*. 2011;103:41-52.
- Evert AB, Boucher JL, Cypress M, Dunbar SA, Franz MJ, Mayer-Davis EJ, Neumiller JJ, Nwankwo R, Verdi CL, Urbanski P, Yancy Jr WS. Nutrition therapy recommendations for the management of adults with diabetes. *Diabetes Care*. 2014;37:S120-S143
- Evert AB, Boucher JL, Cypress M, Dunbar SA, Franz MJ, Mayer-Davis EJ, Neumiller JJ, Nwankwo R, Verdi CL, Urbanski P, Yancy Jr WS. Nutrition therapy recommendations for the management of adults with diabetes. *Diabetes Care*. 2013;36:3821-3842.
- McDonald's. McDonald's USA nutrition facts for popular menu items. Available at <http://nutrition.mcdonalds.com/getnutrition/nutritionfacts.pdf>. Accessed May 12, 2015
- Pizzolato, P. A beginner's guide to carbohydrate counting. Available at <https://www.bd.com/resource.aspx?IDX=9850>. Accessed May 11, 2015.
- Pizzolato, P. Food portions and serving sizes in diabetes meal plans. Available at <https://www.bd.com/resource.aspx?IDX=9850>. Accessed May 11, 2015.
- Rodibaugh R. The exchange list system for diabetic meal planning. Available at <http://www.uaex.edu/publications/pdf/fshed-86.pdf>. Accessed May 11, 2015.