

LESSON 8: DIABETES

Recipes for Health

Prepared by Common Threads

ABOUT THIS LESSON

In this lesson, participants will be introduced to diabetes management and how to establish consistency in eating habits. Participants will identify myths and facts about diabetes and the importance of always reading nutrition labels. Notice that whole foods don't actually come with nutrition labels!

KEY UNDERSTANDINGS

Nutrition

- Participants will be able to (PWBAT) learn Diabetes Management
- PWBAT read nutrition labels
- PWBAT meal plan

Culinary

- PWBAT practice various knife skills: julienne, mincing, peeling
- PWBAT articulate the benefits of oil-free cooking and demonstrate how to sauté without oil
- PWBAT identify common flavors in Asian cuisines

MATERIALS NEEDED

- Printed recipes for each participant
- Ingredients
- Cooking equipment
- Lesson Canva Slide Deck

BEFOREHAND

Steps to successfully set up your classroom for learning:

- Set up the mise en place to organize recipe ingredients so they are ready for participants to use (e.g. wash produce, divide up ingredients for each group)
- Have participants wash their hands
- Marinate chicken (let marinate in the refrigerator for at least 2 hours or overnight)
- If using tofu, place tofu on a rimmed plate and top with a weight plate to press the tofu for at least 15 minutes
- Freeze the bananas

LESSON PLAN

DURATION - 120 minutes

- 20 min Nutrition (Presented by Registered Dietitian or Nutritionist)
- 75 min Cooking + Cleaning (Conducted by Chef Instructor)
- 15 min Eating + Goal Setting
- 10 min Conclusion

MENU - Chinese Stir-Fry

- Chicken and Veggie Stir Fry
- Multi-Purpose Sauce
- Banana "Ice Cream"

BACKGROUND INFORMATION

- Carbohydrates Myths about Diabetes - there is a lot of misinformation about diabetes. Here are some common myths and evidence they are not true!

(Source: <https://www.diabetes.org/tools-support/diabetes-prevention/diabetes-myths>)

Myth: People with diabetes should eat special diabetic foods.

Fact: A healthy meal plan for people with diabetes is generally the same as a healthy eating plan for anyone - minimizing processed foods, choosing foods low in saturated and trans-fat, and being mindful of the amount of carbohydrates consumed. Diabetics are advised to limit their carbohydrates ("CHO") to 15g for snacks and 45-60g for meals. Everyone benefits from lean protein, non-starchy vegetables, whole grains, healthy fats and fruit. "Diabetic" foods generally offer no special benefit other than they have counted the CHO for you and have removed refined grains and sugars. Some use stevia extract as the sweetener, a natural plant extract that does not raise insulin. Some may use sugar alcohols to sweeten a food that also doesn't raise insulin, but this can have a laxative effect. Regardless, any meal that contains any amount CHO will raise your blood glucose and initiate release of insulin. Best to choose whole foods that are high in fiber for your CHO choices.

Myth: If you have diabetes, you should only eat small amounts of starchy foods, such as bread, potatoes and pasta.

Fact: Starchy foods can be part of a healthy meal plan, but portion size is key. Whole grain breads, cereals, pasta, rice and starchy vegetables like potatoes, sweet potatoes, peas and corn can be included in your meals and snacks. In addition to these starchy foods, fruits, beans, milk, yogurt, and sweets are also sources of carbohydrate that count in your meal plan.

The key is to know the quality and quantity of the CHO you are eating. So how much carbohydrate can you have? The amount of carbohydrate you need will vary based on many factors. You and your health care team can figure out the right amount for you. Typically, a

maximum of 15g CHO/snack and maximum of 45-60g CHO/meal are recommended for people with prediabetes and diabetes. Once you know how much carb to eat at a meal, choose your food and the portion size to match.

Myth: People with diabetes can't eat sweets or chocolate.

Fact: Desserts can be eaten by people with diabetes. The key to desserts and treats is to have a small portion and save them for special occasions so eat the majority of your meal from whole food sources. If eating chocolate, choose the highest cocoa content that is palatable for you to minimize sugar and maximize fiber intake. 70% cacao is a good target. If eating pastries or cakes, be mindful of how much refined CHO you are consuming as all pastries and cakes are made with refined CHO.

Myth: Fruit is a healthy food. Therefore, it is ok to eat as much of it as you wish.

Fact: Fruit is a healthy food. They contain fiber and lots of vitamins and minerals, but they also contain simple sugars and do raise blood glucose and have to be accounted for in your meal plan. It is unwise to eat copious amounts of fruit in one sitting. Talk to your dietitian about the amount, frequency and types of fruits you should eat.

- Now that we have debunked those myths, let's talk about what you really need to do to properly manage your diabetes or possibly put it into remission¹ (having an A1c less than 6.5% for at least three months after stopping medications). For those who have been diagnosed with prediabetes or diabetes the most important source of tailored, evidenced-based nutritional guidance is to work with your healthcare team including a registered dietitian nutritionist (RDN) and/or a Certified Diabetes Care and Education Specialist (CDCES). This can be an RDN or a registered nurse (RN).
 - In general, nutritional guidance related to diabetes prevention or management focuses on calorie and carbohydrate control along with quality of food consumed.
 - Meal/Snack Frequency - Eating when you are hungry and not eating because the clock says so is a mindful eating strategy that helps regulate calorie intake and helps with weight management goals. Breakfast, lunch, dinner, and two snacks are the maximum frequency of food consumption, but mindful eating should take precedence.
 - Daily calorie goal - this individualized number is best ascertained through consultation with your RDN! Maintaining or achieving a healthy weight is important for diabetes prevention. Rather than counting calories, use the diabetes Plate Method in order to control portion size and define the makeup of your meal.
 - Carbohydrate control - spreading carbohydrate servings throughout the day
 - A maximum of 45-60g at meals
 - A maximum of 15g at snacks
 - Plate Method² - this is another method for keeping your carbohydrate intake in line with your needs. In this method, rather than counting carbohydrates in 15g portions,

¹ <https://www.diabetes.org/newsroom/press-releases/2021/international-experts-outline-diabetes-remission-diagnosis-criteria>

² <https://www.diabetesfoodhub.org/articles/what-is-the-diabetes-plate-method.html>

here we use a standard 9" plate divided into half for non-starchy vegetables and dark leafy greens, and then the other half is divided into quarters between protein and starchy carbs. This is a visual method and may not be as accurate as carb counting and actually measuring your food.

- General healthy eating principles also apply to those with diabetes
 - Limit saturated fat, sodium, and processed foods
 - Consume vegetables, fruits, and fiber!
- Review the importance of reading the nutrition label as you review the labels for the lesson's recipe
 - Calories: 360 per serving; remind participants about serving size and servings per container. Consuming multiple servings and not adjusting the nutrition info accordingly could result in excess calorie intake and excessive carbohydrate intake at a given meal.
 - Total Carbohydrate: 43 grams (recommendation from ADA maximum 45-60 grams per meal); remind participants to look at total carbohydrate (sugar, complex carbs, and fiber) as all carbohydrate types affect blood sugar and not just the Total Sugars
 - Fat: 4 grams (low in fat!)
 - The Chicken Stir Fry is full of non-starchy vegetables (peppers, carrots, broccoli, bean sprouts). These vegetables are full of vitamins, minerals, fiber, and phytochemicals, but provide minimal calories and carbohydrates. Starchy vegetables (such as potatoes and corn) have more carbohydrates than non-starchy vegetables.
- Point out that today the participants will learn to sauté without oil. While some oils have unsaturated fats that are beneficial for our hearts, each tablespoon of oil has 120 calories and 14g of fat. This means in a typical stir fry we may add 360 calories and 42g of fat to our dish before we even get any food in the pan! Cooking without oil is a great way to reduce calorie and fat intake.

INTRODUCTION - 20 MINUTES

Nutrition Presentation

1. Introduce participants to the class topics and the myths and facts of diabetes.
2. Present the proper management of diabetes with nutritional guidance
3. Review the nutrition label as a source of information.

Nutrition Labels:

Stir Fry	Multi-Purpose Sauce	Banana Ice Cream
<p>Nutrition Facts</p> <p>6 servings per container Serving size (414g)</p> <hr/> <p>Amount per serving Calories 370</p> <hr/> <p>% Daily Value*</p> <p>Total Fat 6g 8% Saturated Fat 0.5g 3% Trans Fat 0g</p> <p>Cholesterol 30mg 10% Sodium 960mg 42% Total Carbohydrate 58g 21% Dietary Fiber 5g 18% Total Sugars 18g Includes 11g Added Sugars 22%</p> <p>Protein 21g</p> <hr/> <p>Vitamin D 0mcg 0% Calcium 165mg 15% Iron 3mg 15% Potassium 462mg 10%</p> <p><small>*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small></p>	<p>Nutrition Facts</p> <p>20 servings per container Serving size 1/2 Tablespoon (14g)</p> <hr/> <p>Amount per serving Calories 15</p> <hr/> <p>% Daily Value*</p> <p>Total Fat 0g 0% Saturated Fat 0g 0% Trans Fat 0g</p> <p>Cholesterol 0mg 0% Sodium 270mg 12% Total Carbohydrate 4g 1% Dietary Fiber 0g 0% Total Sugars 4g Includes 3g Added Sugars 6%</p> <p>Protein 0g</p> <hr/> <p>Vitamin D 0mcg 0% Calcium 1mg 0% Iron 0mg 0% Potassium 3mg 0%</p> <p><small>*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small></p>	<p>Nutrition Facts</p> <p>4 servings per container Serving size 1/2 Cup (160g)</p> <hr/> <p>Amount per serving Calories 130</p> <hr/> <p>% Daily Value*</p> <p>Total Fat 1.5g 2% Saturated Fat 1g 5% Trans Fat 0g</p> <p>Cholesterol 0mg 0% Sodium 0mg 0% Total Carbohydrate 33g 12% Dietary Fiber 5g 18% Total Sugars 17g Includes 0g Added Sugars 0%</p> <p>Protein 2g</p> <hr/> <p>Vitamin D 0mcg 0% Calcium 24mg 2% Iron 1mg 6% Potassium 481mg 10%</p> <p><small>*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small></p>

<i>For one serving of each recipe</i>	
Calories	515
Total fat	7.5 g
Total Carbohydrate	95 g
Total Fiber	10 g
Sodium	1230 mg
Protein	23 g

- Nutritional Fact:** Our main starch for this meal is brown rice. Why is it brown? Because the entire grain is being used and that includes the bran and germ, which contain lots of fiber and fatty acids, and the endosperm, the starchy portion. The reason why whole grains are not used in processed foods is because the bran and germ contain fatty acids that can go rancid quickly. By removing them and leaving only the starchy endosperm the shelf life of the product is greatly increased. Choose whole grains and whole foods to get the full nutritional benefits.
- Cultural Fact:** Stir frying is a Chinese cooking technique involving a wok with high heat in which ingredients are tossed in a small amount of oil and constantly moved to prevent burning.

CLASSROOM COOKING + CLEANING - 75 MINUTES

1. Have participants put on aprons, hats/hair nets, and wash hands.

2. Introduce the recipes that the participants will be making in today's class.
 - Point out how to sauté without oil
3. Review recipes and demo:
 - Knife skills
 - Proper measurement for wet ingredients
 - Peeling garlic techniques
 - Sautéing skills
4. Working in groups of 3-5, have each group prepare the following recipe. The recommended order is:
 - Multipurpose Sauce
 - Stir-Fry
 - Banana Ice cream

EATING AND GOAL SETTING - 15 MINUTES

1. Participants gather to enjoy the meal together.
2. As a group or in pairs, discuss what was learned in class today and have participants set simple and realistic goals about what they can incorporate from today's class into the coming week.

CONCLUSION - 10 MINUTES

1. Answer any remaining questions.
2. Review the Key Understandings for this lesson.
3. Clean-up dining area.

RECIPES:

Multi-Purpose Sauce

Yields 10 servings

Ingredients:

- 2T rice vinegar
- 1/4 C soy sauce, low sodium
- 1 Tbsp honey
- 1/8 tsp pepper
- 1/2 tsp salt
- 1/4 tsp cayenne pepper

Directions:

1. Mise en Place

- Measure out the ingredients.

2. Prepare the Multi-Purpose Sauce

- In a medium bowl, add vinegar, soy sauce, honey, pepper, salt, and cayenne pepper.
- Whisk together until well combined.

3. Serving recommendations

- Use sauce to make a stir-fry.
- 1/4 C of sauce can flavor a dish for 4-6 people.
- Save the rest in an airtight container in the fridge.
- When stored correctly, sauce can last several weeks.

Stir Fry

Yields 4 servings

Ingredients:

- 1/2 C Multi-Purpose Sauce
- 2 boneless skinless chicken breast, or 14 oz package of firm Tofu
- 1 red bell pepper, sliced
- 1/2 red onion, sliced
- 2 C green beans, frozen or fresh
- 1 C bean sprouts
- 1 carrot, diced
- 1/2 zucchini, diced
- 2 cloves garlic, peeled and minced
- 1 tsp fresh ginger, peeled and grated
- 1 Tbsp cornstarch

- 1 Tbsp sesame seeds, optional
- 3 C brown rice or 10 oz. soba noodles
- Salt and pepper to taste

Directions:

2. Mise en Place

- Make Multi-purpose sauce recipe
- Cube and marinate chicken or press and cube Tofu
- Chop red pepper, onion, green beans
- Shred carrot, and slice zucchini
- Peel and mince garlic
- Measure out the ingredients

3. Prepare Protein

- If using chicken, cut the raw chicken into small cubes and place chicken and $\frac{1}{4}$ C Multi-purpose sauce (see recipe) in a bowl. Ensure the chicken is thoroughly coated with marinade. Place plastic wrap over top of bowl and let marinate in refrigerator for at least 2 hours or overnight. When ready to prepare stir fry, remove the bowl from the refrigerator and lightly pat dry to remove excess marinade.
- If using tofu, place tofu on a rimmed plate and top with a weight plate to press the tofu for at least 15 minutes. Cut the tofu into cubes

4. Prepare Veggies and Sauce

- a. In a bowl, combine chopped red pepper, onion, and green beans, and set aside
- b. In another bowl, combine the garlic, ginger, carrots, zucchini, bean sprouts, and sesame seeds. Set aside.
- c. Whisk together $\frac{1}{4}$ C Multipurpose Sauce with cornstarch and set aside

5. Cook Protein

- Place a large sauté pan on a high heat burner. *This is very fast so make sure you have all your ingredients ready to go into the pan*
- Once the pan is hot, quickly add the chicken or tofu and stir-fry until cooked through.
- Remove the chicken or tofu from the pan and set aside. If the chicken or tofu sticks, add 1-2 tablespoons of water to the pan and stir lightly to unstick.

6. Cook Vegetables

- Being very careful, add peppers, onion, and green beans to the pan. Cook on medium-high heat until the vegetables begin to caramelize. If the vegetables stick, add 1-2 tablespoons of water to the pan and stir lightly to unstick the vegetables.
- Add the carrot, zucchini, bean sprouts, garlic, sesame seeds, sauce, cooked chicken, and seasoning and cook on medium heat for two more minutes.

Banana Ice Cream

Yields 4 servings

Ingredients:

- 4 bananas, ripe, peeled, and frozen
- 1/2 C blueberries, optional topping
- 1 Tbsp unsweetened shredded coconut, optional topping
- 1/2 C strawberries, optional topping
- 1-2 tsp cinnamon, optional topping
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Directions:

1. Mise en Place

- Before freezing, peel each banana.
- Break bananas into small chunks.
- Place the bananas on a plate or in a plastic baggie.
- Freeze for at least 3 hours.

2. Prepare Ice Cream

- Place frozen bananas into a food processor or blender and blend, scraping down the sides periodically.
- If you would like a creamier ice cream consistency add milk, almond milk, or water at this point.
- Blend until smooth and creamy.
- Top with healthy toppings!

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