

IEHA Lesson

COOKING WITH HONEY



Lesson developed by Janet Steffens, M.Ed. Floyd County Indiana (Area 2)

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Lesson Overview: Honey is used for cooking and adds flavor, moisture and small amounts of nutrients to the diet. It makes a good spread for breads and tasty sandwich fillings when mixed with other ingredients. Use honey as a sweetener for fruits, beverages and in any food that is sweetened including baked goods. This lesson provides amazing facts about honey, tips for cooking with honey and delicious recipes to try at home.

Participants will learn:

- Amazing facts about honey and bees
- How honey compares to sugar in calories and carbohydrates
- How to substitute honey for sugar in cooking
- Where to store honey
- Why honey should not be used in a sugar-restricted diet
- Why honey should not be given to infants and children under one year old



Lesson Objectives:

- Participants will demonstrate their knowledge of cooking with honey by pairing choices correctly on Appendix sheet 1 in this lesson.
- Participants will prepare foods, substituting honey for part of the sugar in the recipes, using the substitution guidelines in this lesson.

Lesson Activities for this program:

1. A participant will choose a muffin recipe and prepare it by substituting honey for half the sugar in the recipe. Another participant will prepare the same recipe using only granulated sugar as a sweetener. The participants will sample both muffin recipes and discuss the flavors and textures.
2. A participant will demonstrate the preparation of a recipe using honey as an ingredient to highlight the cooking with honey tips in this lesson.

Honey – Amazing Facts:

- Bees have been producing honey for about 150 million years.
- Americans consume about 1.3 pounds of honey per person each year.
- Bees must visit 2 million flowers and fly 55,000 miles to make a pound of honey.
- The average worker bee makes only about 1/12 teaspoon of honey in its lifetime.



How does Honey Compare to Sugar?

Honey contains 17 grams of carbohydrates and has 68 calories per tablespoon. Sugar has 15 grams of carbohydrates and 49 calories per tablespoon. Honey tastes sweeter than sugar so you may use less. Honey adds flavor, moisture and small amounts of vitamins and minerals to the diet.

Michigan State University Extension recommends using locally grown honey in place of jelly and jams on peanut butter sandwiches or replacing table sugar as coffee and tea sweeteners to enjoy the natural energy boost honey provides.

Note: Do not feed honey to infants under one year of age because their immune systems are not strong enough to combat the bacteria in honey. According to the National Honey Board, infants are susceptible to the disease “infant botulism” which is caused by spores of the bacterium *Clostridium botulinum* that is present in natural foods. These spores are consumed without harm by older children and adults.

How to Substitute Honey for Sugar:

- Honey can be used in place of up to half the sugar called for in recipes for sauces, marinades, dressings, and baking.
- When baking, for every cup of honey used do the following:
 - Reduce liquid by $\frac{1}{4}$ cup
 - Add $\frac{1}{2}$ teaspoon baking soda to reduce acidity and cause more even browning
 - Reduce oven temperature by 25 degrees
 - For easy removal from measuring cups, spray utensil with non-stick spray before adding honey.



Where to Store Honey:

Honey is easy to store. According to the University of Missouri Extension Service, honey should be stored in an airtight container in a dry place. The best temperature range for storage is between 50 and 70 degrees Fahrenheit. If it begins to crystallize, it is still fine to use, just heat it gently in a pan of warm water and stir before using. Do not heat honey in a plastic container.

Serving Ideas and Recipes for Cooking with Honey.

- Add honey to a glass of water for an energy boost when you are working outdoors.
- Peanut butter and honey sandwiches on whole wheat bread provide a high-energy snack with a good combination of fats, carbohydrates and protein.
- Sweeten fruits, frozen desserts, baked goods, meat glazes, custards, fillings, frostings, cobblers, puddings, candied vegetables and salad dressings with honey.

Using Honey in a Sugar-Restricted Diet

- Honey is not recommended for a sugar-restricted diet. It contains glucose and fructose and has similar effects in the human body as sugar.
- Persons with diabetes should limit consumption of both sugar and honey.

Let's Start Cooking with Honey

Following are some delicious recipes using honey to try at home. As described earlier in this lesson, favorite recipes can be adapted by replacing up to half the sugar in the recipe with honey. Follow the guidelines for cooking with honey mentioned in **this lesson**.

Orange Banana Smoothie

Ingredients:

1-banana, sliced
1-6 ounce carton unsweetened plain yogurt
 $\frac{3}{4}$ -cup skim milk
 $\frac{1}{2}$ cup orange juice
 $\frac{1}{4}$ -cup honey

Steps:

1. Put all ingredients into a blender
2. Blend until smooth
3. Pour into a glass to serve

Honey Apple Salad

Ingredients:

3 $\frac{1}{2}$ cups red apples, diced
2 tablespoons lemon juice
2 cups green seedless grapes
1 cup celery, sliced
 $\frac{1}{2}$ cup dried cranberries

(Honey Apple Salad, continued)

½-cup mayonnaise

¼-cup honey

2 tablespoons low-fat sour cream

½-teaspoon salt

½ cups chopped walnuts

Steps:

1. In a large bowl, toss apples with lemon juice. Add grapes, cranberries and celery.
2. In small bowl, combine mayonnaise, honey, sour cream and salt. Pour over fruit mixture and toss to coat. Stir in nuts. Serves 6-8

Sweet and Spicy Stir-Fry

Ingredients:

8 ounces lean pork or beef sliced into thin strips

1 bag frozen stir-fry vegetables

2 cups shredded cabbage

Nonfat vegetable cooking spray

Sauce:

1-tablespoon cornstarch

1/3 cup water

¼ cup reduced-sodium soy sauce

¼-cup ketchup

¼-cup honey

Steps:

1. Spray large skillet with cooking spray. Add meat and cook over medium heat until browned.
2. Add cabbage and thawed stir-fry vegetables
3. Mix cornstarch and water in small bowl; stir until cornstarch is dissolved
4. Add soy sauce, ketchup, honey, and mix.
5. Pour sauce over ingredients in skillet and toss well. Reduce heat and simmer for 10 minutes. Serves 4

Honey Coffee Cake

Ingredients:

1 ½ cup whole wheat flour

1 ½ cup all-purpose flour

(Honey Coffee Cake, continued)

1-cup sugar

1-cup (2 sticks) unsalted butter

1-cup local honey

2 large eggs

1-cup hot water

1-teaspoon baking soda

Steps:

1. Preheat oven to 350 degrees and flour a 9 x 13" pan.
2. In a large bowl, mix together flour and sugar. Cut in butter until mixture is crumbly. Remove and save 1 cup of this mixture.
3. To the remaining crumb mixture, add honey, eggs, hot water and baking soda. Beat until smooth.
4. Pour batter into the prepared pan. Sprinkle the reserved crumbs evenly over the top.
5. Bake for 35-40 minutes depending on your oven, until toothpick comes out clean.
6. Remove from oven and cool to lukewarm before serving.

Recipe makes one cake (24 servings)

Honey Garlic Salad Dressing

Ingredients:

1-cup olive oil

6 tablespoons red wine vinegar

3 tablespoons local honey

2 large cloves garlic

Salt and pepper to taste

Steps:

1. Combine all ingredients in a jar and shake well
2. Drizzle over salad and toss

Resources:

Michigan State University Extension (<http://www.msue.msu.edu>)

North Carolina Cooperative Extension (<https://growingsmallfarms.ces.ncsu.edu/honeyrecipes/>)

University of Missouri Extension (<http://extension.missouri.edu/explore/shop/>)

National Honey Board (www.honey.com)

Cooking with Honey - Test Your Knowledge

Test your “cooking with honey” knowledge by drawing a line from the word or phrase on the left to match it with the correct phrase on the right.

- | | |
|----------------------------|---|
| 1. Honey | Disease caused by feeding honey to infants under one year |
| 2. ¼ cup | Reduces acidity of baked goods and causes browning |
| 3. 25 degrees | Amount of honey used per person by Americans each year |
| 4. Non-stick cooking spray | Amount to reduce liquid in a recipe for each cup of honey |
| 5. Heat in warm water | Reduce oven temperature for each cup of honey used |
| 6. Infant botulism | What to do if honey starts to crystallize |
| 7. 1.3 pounds | 17 grams of carbohydrate & 68 calories per teaspoon |
| 8. ½ teaspoon baking soda | What to use to keep honey from sticking to utensils |

COOKING WITH HONEY FACT SHEET

Americans consume about 1.3 pounds of honey per person each year.

Properties of Honey:

- Contains 17 grams of carbohydrates and 68 calories per Tablespoon.
- Sugar contains 15 grams of carbohydrates and 49 calories per tablespoon.
- Tastes sweeter than sugar so you may use less.
- Adds flavor as well as vitamins and minerals.

Guidelines for Substituting Honey for Sugar:

- For sauces, marinades, dressings and for baking, substitute honey for up to half the sugar called for in the recipe.
- When baking, every cup of honey used:
 - ◆ Reduce liquid by $\frac{1}{4}$ cup
 - ◆ Add $\frac{1}{2}$ teaspoon baking soda to reduce acidity and cause more even browning
 - ◆ Reduce oven temperature by 25 degrees

Honey Cooking Tips:

- For easy removal from measuring cups, spray utensil with non-stick spray before adding honey.
- Store in airtight container at room temperature. If honey begins to crystallize, heat it gently and stir. It is fine to use.
- Honey is not recommended for infants under one year of age.

Serving Ideas for Honey:

- Add honey to your glass of water for an energy boost when you are working out.
- Peanut butter and honey sandwiches on whole wheat bread provide a high-energy snack with a good combination of fats, carbohydrates and protein.

Resource: National Honey Board: <http://www.honey.com/nhb/about-honey/>