

## Preserving Food With Less Sugar

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### Treva Williams, Extension Educator, Family and Consumer Sciences

Whether by personal choice or due to special dietary needs, many people are looking for way to reduce their sugar intake. Commercially prepared food suitable for those on special meal plans can be costly due to slightly different production procedures. Preserving food at home can be a practical way to save money, even when reducing sugar, if fresh produce and the necessary equipment are available.

Sugar is one form of carbohydrate in our diets. Since carbohydrates affect blood glucose levels more than any other nutrient, this fact sheet offers lower carbohydrate recipes that can be helpful for both individuals with diabetes and those who are simply wanting a lower carbohydrate diet.

Products identified as “low in added sugar” or “no added sugar” may still contain carbohydrates. Many foods contain starches and natural sugars which contribute to the total carbohydrate content of the product. Individuals with diabetes must consider the total carbohydrate content per serving, especially if they are on a carbohydrate counting meal plan.



Granulated table sugar (sucrose) is the most frequently used sweetener in canning and freezing. Sugar helps preserve the color, texture and flavor of the food. The sugar in jams and jellies helps the gel to form, and increases the flavor. When large amounts of sugar are used in a recipe, the sugar also acts as a preservative by inhibiting microbial activity; thus, recipes should not be modified or adapted. While honey, corn syrup and brown sugar can be used as substitutes for granulated sugar, these alternatives do not reduce the calorie or total carbohydrate content.

Some low-sugar foods can be easily and safely preserved at home; however, the color, texture and flavor of these foods may be different than expected and may be less acceptable. It may be beneficial to try the selected recipe(s) prior to preserving large amounts in order to determine if you and/or your family like the final product.

### Canning

Fruit can be safely canned without sugar for the diabetic or reduced-calorie, reduced-carbohydrate meal plan. Added sugar does not act as a preservative in canned fruit. However, fruit canned without added sugar can be somewhat softer than a similar product packed in sugar syrup.

Flavor changes and loss of color may also occur in fruit preserved without added sugar. The fruit still contains natural sugars that must be considered in the reduced-carbohydrate meal plan. To can fruit without added sugar, try some of the following options:

- Extract juice\* from the fruit being canned and use it for the packing liquid.
- Extract juice\* from other fruit, preferably a mild-flavored fruit, or use unsweetened apple, pineapple or white grape juice for the packing liquid.
- Use water as the packing liquid.

Non-nutritive sweeteners such as saccharin, aspartame or sucralose should be added just before serving home canned fruit. Sucralose also can be added to canning liquids before canning fruits. Bitterness and off-flavors may develop when saccharin is used in canning. The sweetness of aspartame decreases when heated.

*\*To extract juice, thoroughly crush ripe, juicy fruit. Heat the fruit to simmering (185 to 210 degrees Fahrenheit) over low heat. Strain through a jelly bag or cheese cloth.*

## Freezing

Fruits can be frozen without added sugar because sugar is not used as a preservative. Plan to use frozen fruit within one year for best quality. Serve fruit before it is completely thawed to maintain a firmer texture. This is especially important, as fruit frozen without added sugar may have a softer texture.

Non-nutritive sweeteners may be used in place of sugar when freezing fruits. Labels on the products give the equivalents to a standard amount of sugar. Follow the directions to determine the amount of sweetener needed. These sweeteners give a sweet flavor but do not furnish beneficial effects of sugar, such as thickness of syrup and color protection.

## Pickling

It is possible to pickle some foods without adding sugar; however, a heat stable sweetener such as sucralose must be used. Remember, the naturally occurring carbohydrates (starches and sugar) still must be counted in a reduced-carbohydrate meal plan.

## No-Sugar-Added Sweet Pickle Cucumber Slices

3½ lbs. of pickling cucumbers  
Boiling water to cover sliced cucumbers  
4 cups cider vinegar (5 percent)  
3 cups sucralose  
1 tablespoon canning salt  
1 cup water  
1 tablespoon mustard seed  
1 tablespoon whole allspice  
1 tablespoon celery seed  
4 one-inch cinnamon sticks

**Yield:** About 4 or 5 pint jars

1. Wash and rinse pint canning jars; keep hot until ready to use. Prepare lids according to manufacturer's directions.

2. Wash cucumbers. Slice 1/16-inch off the blossom ends and discard. Slice cucumbers into ¼-inch slices. Pour boiling water over the cucumber slices and let stand 5 to 10 minutes. Drain off hot water and pour cold water over the cucumbers. Let cold water run continuously over the cucumber slices, or change water frequently until cucumbers are cooled. Drain slices well.
3. Mix vinegar, 1 cup water, sucralose and all spices in a 10-quart Dutch oven or stockpot. Bring to a boil. Add drained cucumber slices carefully to the boiling liquid. Return to a boil.
4. Place one cinnamon stick in each jar, if desired. With a slotted spoon, fill hot pickle slices into clean, hot pint jars, leaving ½-inch headspace. Cover with boiling hot pickling brine, leaving ½-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel; apply two-piece metal canning lids.
5. Process in a boiling water canner for 10 minutes if at altitude of less than 1,000 feet. For altitudes of 1,001 to 6,000 feet, process the pickles in a boiling water bath for 15 minutes. Let cool, undisturbed 12 to 24 hours, then check to make sure they are sealed.

## No-Sugar-Added Pickled Beets

- 7 lbs. of 2- to 2½-inch diameter beets
- 4 to 6 onions (2 to 2½-inch diameter), if desired
- 6 cups vinegar (5 percent)
- 1½ teaspoons canning or pickling salt
- 2 cups sucralose
- 3 cups water
- 2 cinnamon sticks
- 12 whole cloves



**Yield:** About 8 pints

1. Wash and rinse pint canning jars; keep hot until ready to use. Prepare lids according to manufacturer's directions.
2. Trim off beet tops, leaving 1 inch of stem and roots to prevent bleeding of color. Wash thoroughly. Sort beets according to size. Cover similar sizes together with boiling water and cook until tender (about 25 to 30 minutes). *Caution: Drain and discard liquid.*
3. Cool beets. Trim off roots and stems and slip off skins. Slice into ¼-inch slices. Peel, wash and thinly slice onions.
4. Combine vinegar, salt, sucralose and fresh water in large Dutch oven. Tie cinnamon sticks and cloves in cheesecloth bag and add to vinegar mixture. Bring to a boil. Add beets and onions. Simmer 5 minutes. Remove spice bag.
5. With a slotted spoon, fill hot beets and onion slices into clean, hot pint jars, leaving ½-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel; apply two-piece metal canning lids.
6. Process in a boiling water canner for 30 minutes if at altitude of less than 1,000 feet. For altitudes of 1,001 to 3,000 feet, process the pickled beets in a boiling water bath for 35 minutes, for 3,001 to 6,000 feet altitude, process for 40 minutes. Let cool, undisturbed 12 to 24 hours, then check to make sure they are sealed.

**Variation:** Pickled whole baby beets—Follow the directions above but use beets that are 1- to 1½-inches in diameter. Pack whole after trimming, cooking and peeling; do not slice.

## Jams and Jellies

Jams and jellies are made by cooking crushed fruit or fruit juice with sugar. Sugar must be present in the proper proportions with pectin and acid to form a gel. Sugar preserves the product, helping to prevent the growth of microorganisms. For these reasons, regular jam and jelly recipes cannot be made into sugar-free, reduced sugar or artificially sweetened products by altering the original recipe.

Jams and jellies without added sugar can be made in the following ways:

1. Regular pectin with special recipes—These special recipes were formulated so no added sugar was needed. However, each package of regular pectin does contain some sugar. Non-nutritive sweetener is often added.
2. Specially modified pectins—These pectins are not the same as regular pectin. They will say “light” or “less sugar” on the label. Follow the directions on the package. Some products are made with less sugar and some with non-nutritive sweeteners.
3. Recipes using gelatin—Some recipes use unflavored gelatin as the thickener for the jam or jelly. Non-nutritive sweetener is often added.
4. Long-boil methods—Boiling fruit pulp for extended periods of time will make a product thicken and resemble a jam, preserve or fruit butter. Non-nutritive sweetener may be added.

Since sugar is not used as a preservative in these products, be sure to process or store the products as directed. Some require longer processing in a boiling water bath, while some require refrigeration.

### Refrigerator Grape Spread (made with gelatin)

2 tablespoons unflavored gelatin powder  
1 bottle (24 oz) unsweetened grape juice  
2 tablespoons bottled lemon juice  
2 tablespoons liquid low-calorie sweetener

**Yield:** 3 half-pints

1. In a saucepan, soften the gelatin in the grape and lemon juices. To dissolve gelatin, bring to a full rolling boil, then boil 1 minute. Remove from heat.
2. Stir in sweetener.
3. Fill jars quickly, leaving ¼-inch headspace. Adjust lids. Seal, cool and store in refrigerator.

*Caution: Store in refrigerator and use within 4 weeks.*

### Refrigerated Apple Spread (made with gelatin)

2 tablespoons unflavored gelatin powder  
1 quart bottle unsweetened apple juice  
2 tablespoons bottled lemon juice  
2 tablespoons liquid low-calorie sweetener  
Food coloring, if desired

**Yield:** 4 half-pints

1. In a saucepan, soften the gelatin in the apple and lemon juices. To dissolve gelatin, bring to a full rolling boil, then boil 2 minutes. Remove from heat.
2. Stir in sweetener and food coloring, if desired.
3. Fill jars, leaving ¼-inch headspace. Adjust lids. Do not process or freeze.

*Caution: Store in refrigerator and use within 4 weeks.*

**Variation:** For spiced apple jelly, add 2 sticks of cinnamon and 4 whole cloves to mixture before boiling. Remove both spices before adding the sweetener and food coloring.

## References

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Updated in 2008 by Christine Kendle, Extension Educator, Family and Consumer Sciences; Daniel Remley, Extension Educator, Family and Consumer Sciences; and Katharine Shumaker, Extension Educator, Family and Consumer Sciences.

Originally authored by Marcia Jess, Extension Educator, Family and Consumer Sciences, retired.

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