

# Investigating Your Health: Amazing Antioxidants

Name: \_\_\_\_\_

**Objective:** Investigate fruits by comparing the nutrients of frozen, dried, and canned fruit. Develop or research recipes to learn about ways you can add more fruit to your diet.

**Antioxidants** are vitamins and other nutrients that protect your body from harmful molecules that are found in the environment or created by the body. These substances can contribute to cancer and heart disease. Your body can protect itself against these molecules to an extent; however, it isn't completely effective in destroying them. Therefore, eating fruits high in antioxidants will help your body destroy these harmful substances. Vitamins A, C, E, and the mineral zinc are common antioxidants in our diet. Vitamin C is the most common antioxidant, and is needed to heal cuts and protect bones and teeth. Citrus fruits including grapefruit, lemon, lime, orange, and tangerine are the highest in Vitamin C. Vitamin A is found in colorful fruits,

like apricots and cantaloupe. Vitamin A helps your eyes. Vitamin E and zinc help your immune system and can be found in many different foods. The mineral selenium and the phytochemicals lycopene, lutein, and beta-carotene are also antioxidants.

As with vegetables, you should eat 1 ½ cups of fruit every day. For example, you can drink ½-cup of orange with breakfast and eat 1 banana for a snack in the afternoon to meet this recommendation. Most of us do not eat enough fruits. It's easy to add fruits to your diet. Instead of eating potato chips as a snack, eat a piece of fruit like an apple, orange, or banana. You can keep it in your backpack and eat it when you are hungry. You could also have a fruit salad for dessert or add fruit to your cereal in the morning. Try to eat dried fruit instead of candy. They're just as sweet and good for you too! Use the *Try This at Home* recipe to make a fruit snack!



## PART A: Antioxidants in Fruit

- Go to the grocery store and look at the Nutrition Facts label on one frozen, one dried, and one canned fruit. Try to find the same fruit for each kind. If you are unable to go to the grocery store, use the handout provided by your teacher or access the nutrient database on USDA's website. Complete the Nutrition Facts Labels below.

USDA Nutrient Database: <http://ndb.nal.usda.gov/ndb/search/list>

Frozen Fruit:

Dried Fruit:

Canned Fruit:

Frozen Fruit:		Dried Fruit:		Canned Fruit:	
<b>Nutrition Facts</b>		<b>Nutrition Facts</b>		<b>Nutrition Facts</b>	
Serving Size _____		Serving Size _____		Serving Size _____	
<b>Calories</b> _____		<b>Calories</b> _____		<b>Calories</b> _____	
<b>Total Fat</b> _____		<b>Total Fat</b> _____		<b>Total Fat</b> _____	
<b>Sodium</b> _____		<b>Sodium</b> _____		<b>Sodium</b> _____	
<b>Total Carbohydrates</b> _____		<b>Total Carbohydrates</b> _____		<b>Total Carbohydrates</b> _____	
Dietary Fiber _____		Dietary Fiber _____		Dietary Fiber _____	
Sugars _____		Sugars _____		Sugars _____	
<b>Protein</b> _____		<b>Protein</b> _____		<b>Protein</b> _____	
Vitamin A ____% Vitamin C ____%		Vitamin A ____% Vitamin C ____%		Vitamin A ____% Vitamin C ____%	
Vitamin E ____% Calcium ____%		Vitamin E ____% Calcium ____%		Vitamin E ____% Calcium ____%	
Iron ____% Thiamin ____%		Iron ____% Thiamin ____%		Iron ____% Thiamin ____%	
Niacin ____% Folate ____%		Niacin ____% Folate ____%		Niacin ____% Folate ____%	
Vitamin B <sub>12</sub> ____% Zinc ____%		Vitamin B <sub>12</sub> ____% Zinc ____%		Vitamin B <sub>12</sub> ____% Zinc ____%	
Magnesium ____%		Magnesium ____%		Magnesium ____%	

2. Before you begin, compare the serving size for each label. If the serving sizes are different use the space below the labels to standardize each label so that you can compare their nutritional content. Ask your teacher for help if you have to standardize your labels.

**Frozen Fruit:**

**Dried Fruit:**

**Canned Fruit:**

<b>Nutrition Facts</b>	
<b>Serving Size</b>	_____
<hr/>	
<b>Calories</b>	_____
<hr/>	
<b>Total Fat</b>	_____
<b>Sodium</b>	_____
<b>Total Carbohydrates</b>	_____
Dietary Fiber	_____
Sugars	_____
<b>Protein</b>	_____
<hr/>	
Vitamin A ____%	Vitamin C ____%
Vitamin E ____%	Calcium ____%
Iron ____%	Thiamin ____%
Niacin ____%	Folate ____%
Vitamin B <sub>12</sub> ____%	Zinc ____%
Magnesium ____%	

<b>Nutrition Facts</b>	
<b>Serving Size</b>	_____
<hr/>	
<b>Calories</b>	_____
<hr/>	
<b>Total Fat</b>	_____
<b>Sodium</b>	_____
<b>Total Carbohydrates</b>	_____
Dietary Fiber	_____
Sugars	_____
<b>Protein</b>	_____
<hr/>	
Vitamin A ____%	Vitamin C ____%
Vitamin E ____%	Calcium ____%
Iron ____%	Thiamin ____%
Niacin ____%	Folate ____%
Vitamin B <sub>12</sub> ____%	Zinc ____%
Magnesium ____%	

<b>Nutrition Facts</b>	
<b>Serving Size</b>	_____
<hr/>	
<b>Calories</b>	_____
<hr/>	
<b>Total Fat</b>	_____
<b>Sodium</b>	_____
<b>Total Carbohydrates</b>	_____
Dietary Fiber	_____
Sugars	_____
<b>Protein</b>	_____
<hr/>	
Vitamin A ____%	Vitamin C ____%
Vitamin E ____%	Calcium ____%
Iron ____%	Thiamin ____%
Niacin ____%	Folate ____%
Vitamin B <sub>12</sub> ____%	Zinc ____%
Magnesium ____%	

3. Identify which of the listed vitamins and minerals are antioxidants. Circle each in the standardized labels.

4. Which fruit has the highest % Daily Value for each antioxidant? List the fruit, the antioxidant, and the amount below.

5. Describe other differences between the fruit types.

6. Infer why these differences occur.

## **PART B: Everyday Fruits**

Create three recipes, one for each meal – breakfast, lunch & dinner, using fruit as a main ingredient.

### **RECIPE #1: BREAKFAST**

### **RECIPE #2: LUNCH**

### **RECIPE #2: DINNER**