

## Ask the Expert: Water-Soluble Vitamins: What Should I Know?

Written by Christina Wilder, Undergraduate Student in College of Pharmacy, Purdue University

Vitamins are nutrients that help our bodies to function properly. Vitamins can be fat soluble or water soluble. Fat-soluble vitamins were discussed in [our April issue](#). Water soluble vitamins, including vitamin B complex and vitamin C, dissolve in water and cannot be stored by the body. Some groups of Americans, especially teens, low-income groups, and older adults, do not get enough water soluble vitamins, .

Vitamin C plays an important role in immunity and helps to keep skin and cartilage healthy. Citrus fruits, tomatoes, tomato juice, and potatoes are good sources of vitamin C in the American diet. The Recommended Dietary Allowance (RDA) is 90 milligram/day for males and 75 milligram/day (mg/day) for females over the age of 19.

Vitamin B is important for health and proper metabolism. Several different types of B vitamins help healthy body function. These different B vitamins are found in a variety of foods.

- Vitamin B1 (Thiamin) helps heart, muscle, and nerves to work. It is found in cereal, beans, milk, pork, nuts, oats, rice, and seeds. The RDA is 1.2 mg/day for males over 14 years old and 1.1 mg/day for females over 19 years old.
- Vitamin B3 (Nicotinic acid) improves cholesterol levels, helps with digestion, and keeps skin and nerves working properly. It is found in yeast, meat, fish, dairy products, seeds, beans, and green vegetables. The RDA is 16 mg/day for males over 14 years old and 14 mg/day for females over 14 years old.
- Vitamin B6 (Pyroxidine) helps the immune system. It can be found in liver, meat, fish, poultry, beans and legumes, and cereal. The RDA is 1.3-1.7 mg/day for males over 14 years old and 1.3-1.5 mg/day for females over 14 years old.
- Vitamin B12 (Cobalamin) plays a role in making new red blood cells, and in the nervous system. It is normally found in liver, yogurt, dairy products, fish, oysters, sardines. The RDA is 2.4 microgram/day for males and females over 14 years old.
- Folic acid and folate are also a form of B vitamin. Folic acid helps to make new proteins, and genetic material. Pregnant women must get enough folic acid to prevent birth defects in their babies. It is found in avocados, bananas, beets, asparagus and green vegetables. The RDA is 400 microgram/day for males and females over 14 years old.



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## Food Safety: Pasteurization

Written by Kristen Herrera, Undergraduate Student in Department of Pharmaceutical Sciences, Purdue University

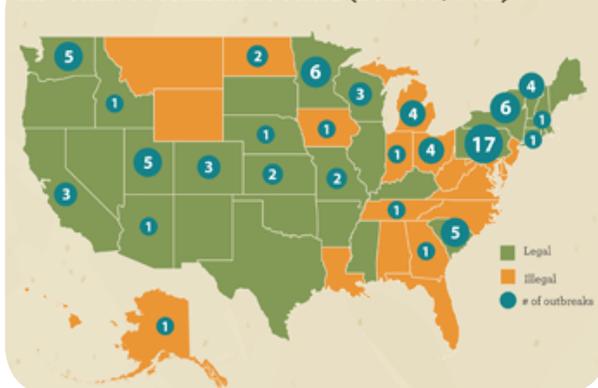
Pasteurization is a method of processing dairy to make sure that harmful bacteria are killed. Raw dairy products like milk are heated at a high temperature for certain length of time, killing harmful bacteria. Foods that are pasteurized keep the same smell, appearance, taste, and nutritional values of the original product. Pasteurized products do not cause lactose intolerance or allergic reactions any more or less than unpasteurized products.

The Food and Drug Administration (FDA) and the Centers for Disease Control and Prevention (CDC) state that the harm from consumption of raw dairy products is greater than any possible health benefits. Raw dairy products are not good sources of probiotics, or beneficial bacteria. There have been cases of food poisoning and even death caused by contamination from *Salmonella*, *E. coli*, *Listeria* and other bacteria in raw milk products. Signs of illnesses include vomiting, fevers, aches, and diarrhea. Children, older adults, people with weakened immune systems, and pregnant women are at a higher risk of getting ill from raw dairy. For these reasons, Indiana does not allow the sale of raw milk.

### Some germs linked to raw milk outbreaks



RAW MILK OUTBREAKS BY STATE (from 2007-2012)



Outbreaks linked to raw milk are more common in states where raw milk sales are legal.

To significantly reduce foodborne poisoning risks by dairy products, grocery shoppers should purchase yogurt, milk, and cheese items that say they are pasteurized on the labels. Expired foods should also be tossed out. Dairy products should be stored in the fridge in temperatures of at least 40 degrees Fahrenheit or colder to slow the growth of harmful bacteria. Staying informed about food safety for dairy foods can help you and your family stay healthy.

# MyPlate Guidance on Beverage Choices

Written by Quynh Nguyen, Undergraduate Student in Department of Pharmacy, Purdue University

Beverages are an important part of a diet. Beverages add a large amount of energy to U.S. diets. ChooseMyPlate.gov has made a user-friendly fact sheet on tips to choose healthy beverages that are based on the Dietary Guidelines for Americans.

Sugary beverages with many calories from added should be limited. From time to time, a sugary beverage can be a treat but should not be part of a daily diet. Water is an important drinking option. The body can balance water needs throughout the day, so you should drink water whenever you feel thirsty or during exercise. Drinking water between meals also helps manage daily calories intake. Drinking low fat milk is a great way to get additional nutrients like vitamins, calcium and potassium.

Checking serving sizes and nutritional values can help guide you to learn the amount of a beverage that is healthy for you. You can compare drinks by using SuperTracker.usda.gov to see nutritional values in beverage types.

Source: <https://choosemyplate-prod.azureedge.net/sites/default/files/tentips/DGTipsheet19MakeBetterBeverageChoices.pdf>; Photo: <https://www.hsph.harvard.edu/nutritionsource/healthy-drinks/beverages-public-health-concerns/>



## Apple & Apricot Pikelets

### Ingredients (18 servings)

**1/3 cup diced dried apricot**  
**1 tablespoon honey**  
**2 tablespoons hot water**  
**1 cup buttermilk**  
**1 large egg**  
**1 cup self-raising flour**  
**1/4 cup minute oats**  
**1 small apple (140g), peeled and grated**  
**Olive oil cooking spray**  
**Margarine spread or extra light spreadable cream cheese, to serve**



### Directions:

1. Combine apricots, honey and water in a bowl. Cool slightly.
2. Whisk buttermilk and egg together in a jug.
3. Sift flour into a bowl. Stir in oats and apple. Make a well in the centre. Add apricot mixture and buttermilk. Stir to form a thick batter.
4. Drop tablespoons of batter into hot non-stick frying pan greased with oil spray. Cook over medium heat for 2 minutes.
5. Turn pikelets and cook other side for a further 2 minutes or until golden. Remove from pan. Repeat with remaining batter.
6. Serve plain or lightly spread with margarine spread or extra light spreadable cream cheese.

### Apple & Apricot Pikelets

Per serving: 60 Calories, 2.0g Total Protein, 11.0g Total Carbohydrate, >0.4mg Total Dietary Fiber, 1.6g Total Sugars, 0.8g Total Fat, 0.3g Total Saturated Fat, 75mg Sodium

### Cheesy Vegetable Muffins

Per serving: 171 Calories, 5.5g Total Protein, 20.1g Total Carbohydrate, 1.9g Total Dietary Fiber, 3.6g Total Sugars, 7.2g Total Fat, 1.8g Total Saturated Fat, 251mg Sodium

Photos: <https://www.healthykids.nsw.gov.au/recipes/apple-and-apricot-pikelets.aspx>; <https://www.healthykids.nsw.gov.au/recipes/cheesy-vegetable-muffins.aspx>

## Cheesy Vegetable Muffins

### Ingredients (4 servings)

**2 cups self-raising flour**  
**1 1/2 cups lightly packed grated zucchini**  
**1 1/2 cups lightly packed grated carrot**  
**1/2 cup grated reduced fat tasty cheese**  
**1/4 cup olive oil**  
**125g can creamed corn**  
**3/4 cup reduced fat milk**  
**1 large egg**  
**Canola oil spray**



### Directions:

1. Preheat oven to 190°C (170°C fan-forced). Sift flour into a large bowl, stir in zucchini, carrot and cheese.
2. Whisk together oil, creamed corn, milk and egg. Add to flour mixture and stir until ingredients are just combined.
3. Lightly grease a 12 x 1/3 cup capacity non-stick muffin pan with cooking spray. Bake in oven for 25-30 minutes or until muffins are light golden and just firm to touch.

### Underlining denotes TEFAP commodity ingredients

Recipes Source: <https://www.healthykids.nsw.gov.au/recipes/apple-and-apricot-pikelets.aspx>; <https://www.healthykids.nsw.gov.au/recipes/cheesy-vegetable-muffins.aspx>



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Send comments and/or change of address to:  
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This newsletter is edited by Quynh Nguyen, Yibin Liu, PhD and Heather A. Eicher-Miller, PhD and is created by the Eicher-Miller Lab in the Department of Nutrition Science at Purdue University. This institution is an equal opportunity provider.

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IN THE NEWS

## Information Updates Required For IEFRN Database

Written by Wagma Mirzoy, Research Assistant in Department of Nutrition Science, Purdue University

Indiana's Emergency Food Resource Network (IEFRN) provides a list of resources for Indiana households that need emergency food and other services. You can access the list of resources and look for resources in your county by visiting our website at [www.purdue.edu/indianasefrnetwork/](http://www.purdue.edu/indianasefrnetwork/) and going to the Food Assistance Directory page.

Along with our efforts to assemble the list of over 1,3000 organizations and emergency resources, we want to ensure that the information we have for each organization is up to date. We are seeking your help to achieve these goals.

If you are part of an organization in the IEFRN database, or would like to be included on the website, please contact us at [iefrn@purdue.edu](mailto:iefrn@purdue.edu) with the most recent information about **your organization's name, address, phone number, email, hours of operation, and what resources you provide**. Any organization that provides emergency resources such as clothing, school supplies, and meals is welcome to contribute information.

We appreciate the work that you continuously do for the community and look forward to hearing from you!

**WHAT:** Want to have your organization featured on the IEFRN website? Want to reach out to more households in need in Indiana?

**WHERE:** Email us at [iefrn@purdue.edu](mailto:iefrn@purdue.edu) with information about your organization.

**WHEN:** As soon as you have a chance!

**WHY:** To provide the most accurate information about your organization to Indiana residents.