Milk, Soy Milk, Almond Milk, or Rice Milk – Which is Better? 
Managing milk choices & lactose intolerance

By Andrea Holwegner BSc, RD

With so many different choices available to us in the milk section these days it can be challenging to know what to choose. How you answer the question “which is better?” depends on a few things such as food philosophy, taste, age and if you have an allergy or intolerance. Passionate debates happen around this subject since food choices are very personal. There is also a wide variety of nutrition myths when it comes to milk and soy milk that further complicate matters. The good news is that there is something for everyone as these beverages supply several nutrients the most important being calcium.

Why is getting enough calcium so important?

Regardless of which option you choose getting enough calcium is important for a few reasons:

BONE HEALTH Low calcium intake throughout life is a risk factor for osteoporosis or brittle bones. Over 30 years of research has shown that higher calcium intakes lead to greater bone gain during growth, reduced loss with age, and reduced fracture risk.

BLOOD PRESSURE LOWERING Calcium has been shown to lower blood pressure in adults and to reduce the risk of preeclampsia and high blood pressure during pregnancy. This effect was clearly demonstrated in the DASH study in which low-fat milk products lowered blood pressure sufficiently to reduce adverse cardiovascular outcomes by 25-30%.

COLON CANCER PROTECTION Higher calcium intakes may reduce the risk of colon cancer because unabsorbed dietary calcium complexes with free fatty acids and bile acids that can serve as cancer promoters. Low calcium intakes remove this protection.

WEIGHT CONTROL New research supports that dietary calcium and milk products regulate
metabolism and can prevent and manage obesity. Research from the NHANES III study also demonstrates a significant reduction in the odds of being obese associated with increasing dietary calcium intake. Research from the University of Tennessee has shown that calcium and dairy products may reduce the amount of fat stored in fat cells and increase the amount of fat these cells burn. Calcium rich products significantly enhance the effectiveness and efficiency of weight control diets, with substantially greater effects exerted by dairy than by calcium supplements. This shows that there are likely other components of milk products other than calcium that help with weight control.

Who might select milk over other fortified beverages?

As a whole the number one reason Canadians select any food is based on taste. Those that are foodies that prefer to consume food in its most natural form will often select milk over other fortified beverages (after all fortified beverages were once soybeans, almonds and rice and have been heavily processed to produce a liquid). Milk also has the advantage of containing other vitamins and minerals outside of calcium. Unlike almond milk and rice milk, regular milk is a good source of protein (1 cup or 250 ml has 9 grams of protein which is more than an egg which has 6g).

Who might select soymilk, almond milk or rice milk?

Those that prefer a strict vegetarian lifestyle will select soymilk, almond milk or rice milk. Those that have a lactose intolerance or milk allergy or simply prefer the taste may also choose to go with one of these beverages instead. If you are consuming these beverages be sure to shake the cartons vigorously to mix up the calcium that can settle in the bottom of cartons and drop the level you are consuming.

What is a lactose intolerance?

Up to 75% of the world’s population has a lactose intolerance. Lactose intolerances vary widely with some people not being able to tolerate any amount of lactose containing foods such as milk and other dairy foods and others being able to tolerate small amounts.

Lactose is the carbohydrate in milk. Lactose is made up of two sugar units joined together. When it is broken down into single units of sugar during digestion by the lactase enzyme the body can easily digest it. If it can’t due to a lactose intolerance due to a lack of the lactase enzyme, you will experience gas, bloating, cramping, nausea and diarrhea.
Your doctor can run a test called a breath hydrogen test (not for infants and toddlers). Alternatively you can eliminate lactose containing foods for a week and then reintroduce them for a week and document symptoms.

If you have a lactose intolerance here are some things you can do:

- Reduce the amount of lactose containing foods you consume (some individuals can tolerate small amounts of milk or yogurt and cheese which contain less lactose).
- Try over-the-counter lactase enzyme supplements (pills or drops) when consuming lactose containing foods.
- Try lactose hydrolyzed milk such as Lactaid or Lacteeze
- If you can’t tolerate many dairy foods be sure to look for alternatives such as soy milk, rice milk or almond milk that are fortified with calcium and vitamin D.

Note that a lactose intolerance is different than a milk allergy. A lactose intolerance is a digestive issue related to an inability to break down the carbohydrate in milk (lactose) whereas a milk allergy is an immune related reaction to milk protein. Symptoms of a milk allergy could be hives, red itchy skin, swelling of face/lips/throat/tongue/eyes or cramps/diarrhea/vomiting.

How do I know if I am getting enough calcium?

It will be difficult to get enough calcium if you don’t eat any dairy products or calcium fortified milks. This is because although many foods are high in calcium our body lacks the ability to unlock calcium in plant based foods because they naturally contain substances called oxalates and phytates. For example—although spinach has a high amount of calcium, you would need to eat 7 1/2 cups of spinach to get the same amount of calcium in one glass of milk!

A comprehensive set of nutrient reference values known as DRI’s (Dietary Reference Intakes) have been developed for the healthy population of North America. The DRI for calcium is listed below:

<table>
<thead>
<tr>
<th>AGE</th>
<th>ADEQUATE DAILY INTAKE (Males and Females)</th>
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<tbody>
<tr>
<td>1-3 years</td>
<td>700 mg</td>
</tr>
<tr>
<td>4-8 years</td>
<td>1000 mg</td>
</tr>
<tr>
<td>9-18 years</td>
<td>1300 mg</td>
</tr>
<tr>
<td>19-50 years</td>
<td>1000 mg</td>
</tr>
<tr>
<td>51–70+ years</td>
<td>1000 mg males; 1200 mg females</td>
</tr>
</tbody>
</table>
Over 70 years 1200 mg
Pregnant/Nursing 14-18 years 1300 mg
Pregnant/Nursing 19-50 years 1000 mg

For an adult between the ages of 19-50 years consuming 3-4 servings of milk/calcium enriched products and a varied diet of other foods will meet the recommendation. One serving of milk/calcium enriched products is equal to 1 cup (250 ml) milk/fortified soy/rice/almond milk, ¾ cup (175 g) yogurt, and 50 g cheese (3” X 1” X 1” piece).

Andrea Holwegner, known as the Chocoholic Dietitian, is founder and president of Health Stand Nutrition Consulting Inc., a member of the Canadian Association of Professional Speakers and a media expert for the Dietitians of Canada. For nutrition counselling information and to sign up for a free monthly newsletter loaded with nutrition tips, recipes and more visit www.healthstandnutrition.com. Twitter @chocoholicRD.