

A photograph of a glass bottle of A2 Milk with a purple and white striped straw, and a block of butter on a teal plate. The bottle has a purple circular logo that says 'The a2 Milk Company'. The background is a solid blue color.

for the love of lactose

We all scream for ice cream,
but do you moo for A2?

BY MICHAEL A. MILLER

Are you cursing your genes for lactose intolerance as the season of ice cream cones and smoothies heats up? Your inability to digest dairy might be genetic, but it's not necessarily your parents' fault. Dairy cows underwent a genetic evolution several thousand years ago, which may have led many to erroneously believe they are lactose intolerant.

Protein in cows' milk is split into two major groups—casein and whey. About one-third of casein proteins are beta caseins, which have two common variants—A1 and A2. Despite the non-chronological monikers, A2 beta-casein is the ancient original and A1 is the result of the genetic evolution several millennia ago.

homemade butter

3-4 liters whole milk (a2 Milk)

Sea salt (optional)

To turn the a2 Milk into cream, bring the milk to a soft boil until it turns foamy, and collect the fats rising to the top with a slotted spoon. Put the collected fats in a clean container and pop in the fridge for a day. When you first get it out of the fridge it will look lumpy, but if you give a quick whizz in the blender it will become smooth and creamy. Leave it to rest out of the fridge for a few hours and then put back into the blender and start blending on low-speed, gradually working your way up to high-speed. It will go through several different stages before finally turning into butter. *Recipe courtesy of Andrea Soranidis.*

// thepetitecook.com

When you digest the A1 protein, a peptide fragment called beta casomorphin 7 (BCM-7) is created. Research suggests this may cause inflammation high up in the small intestine, slowing digestion and saddling A1 milk drinkers with gas, bloating, nausea, diarrhea, and constipation—copycat symptoms of lactose intolerance. Since BCM-7 isn't created during digestion of A2 protein, some experts believe that a portion of lactose intolerance is actually A1 protein intolerance in disguise. Additionally, BCM-7 may even decrease the production of lactase, the enzyme required to break down lactose, meaning A1 protein consumption may not only mimic but also exasperate lactose intolerance.

Although more independent research needs to be done, New Zealand-based a2 Milk Company could be onto something. With more than 8 percent of the cow's milk market in Australia, they launched A2 milk in the United States in January to create a gentler digestive experience for more Americans who can't cope with inflammatory trouble-maker BCM-7.

Like the genes that code for green eyes or blue, modern cows are genetically coded to produce A1 protein, A2 protein, or a blend of the two in their milk. It's the high-yield Holstein cows in the United States that typically produce A1 milk while Guernsey, Jersey, and Asian herds are predominately A2. A genetic test of bovine hair samples determines the protein makeup of cow's milk, and only about 30 percent of dairy cattle in the United States produce A2 milk, according to Bonnie Johnson, RD, vice president of scientific affairs at the a2 Milk Company. The company partners with family farms across the United States for A2 protein production cows.

Excluding lactose from your daily menu is a hefty hit to anybody's dietary lifestyle. There's just so much you can do with dairy—and can't do without it. We curated recipes for three staple dairy-based ingredients for you to weave into your favorite dishes.



homemade yogurt

**½ gallon whole milk (a2 Milk)
Powdered yogurt culture (follow manufacturer's instructions for quantities)
Crockpot (with mason jars that fit inside) or a yogurt maker
Meat thermometer**

Attach your meat thermometer to a large pot and add your A2 Milk to it. Heat the milk over medium to low heat until it starts to boil, stirring occasionally to prevent skin and foam forming on top. Remove the pot from heat and allow the milk to cool until it reaches 100 degrees. Gently stir in the powdered yogurt culture according to the amount required, stirring until completely incorporated throughout. Ladle the milk mixture into the yogurt maker pots (or mason jars if you're using a crockpot instead). Arrange jars nicely inside yogurt maker/ crockpot. Set the temperature to 110 degrees and incubate for about 5 hours or overnight. The longer you keep it in, the thicker and more tart your yogurt will be. *Recipe courtesy of Andrea Soranidis. // thepetitecook.com*



homemade double cream

1 gallon whole milk (a2 Milk) In a large pot over medium-low heat, bring the milk to a soft boil until it turns foamy. Collect the fats rising to the top with a slotted spoon and transfer into a clean airtight container. Allow to rest in the fridge for about a day, so that the cream can set. When you first get it out of the fridge, it will look a bit lumpy. Give it a quick whizz in the blender and the cream will become smooth and silky, ready to be used in your favorite recipes. *Recipe courtesy of Andrea Soranidis. // thepetitecook.com*