

## Using Powdered Milk

I hear more complaints about powdered milk than any other traditional food storage item. In the last 5 years the way milk is dried has changed and the result is an improved product.

While you may not like it to just drink, there are some great things you can make using powdered milk. Sure, fresh is nicer, but in a pinch powdered milk would be a welcome part of food storage for most people. I like it because it is one of the few sources of animal protein that can be stored long term. While beans may be helpful, there are some amino acids and vitamins that are difficult to get from plant proteins.

For those who are lactose intolerant, it may be a good idea to store the pills that aid in digesting lactose. For those who are sensitive to A1 protein, it may be worth finding a good source of A2 or goat milk, or make plans for alternative protein sources.

There are some excellent books on the market for using non-instant powdered milk. This is the kind sold at the Home Storage Centers. If you are serious about using your milk I strongly recommend you get one. \*HSC milk now comes in Mylar pouches rather than cans, so I recommend you put these pouches in buckets to safeguard against rodents.

\*Tip—Non-instant powdered milk mixes best in a blender and with hot (not boiling) water. There is such a thing as a hand crank blender. While this won't do what your Vita Mix or Blendtec will do, it works great for simple things including blending powdered milk. If you don't have one, a wire whisk will do.

**\*\*\*\*\* Important Note—Whey milks like Morning Moo will not work well for much other than putting it on cereal or drinking it. Many of the milk solids have been removed and you are left with the whey (the part you drain off things like yogurt and cheese).** While instant powdered milk will work better for cottage cheese or whipped topping, the best milk for storage is non-instant powdered milk. It will be skim milk in most cases. This includes the milk from the Home Storage

Center. If you are lucky enough to have whole milk in your storage you can make better cheeses and other things, but it may not store quite as long and should be kept in a cool dry place.

Here are some of my favorite recipes for using powdered milk:

- **Note: For using powdered milk well you will need a thermometer that will measure temps under 200° F.**

## Yogurt

- Choose what you want to incubate the yogurt in. I like using a small insulated cooler or a thermal cooking bag or thermos. You can use a pan that you place in a clothes basket and pack tightly with towels and blankets all around it to help maintain heat.
- Make sure you have containers that you want to keep the yogurt in until you eat it if you don't want it just in the pan. My favorite containers by far are canning jars because they will keep the yogurt in and water out. These come in a lot of sizes, and you can reuse the lids because you are not really canning. Choose what fits inside of your cooler pan (the one you will put in your thermal bag), or whatever you are going to incubate in.
- Mix powdered milk according to directions and then add about 1 Tbsp. more powder per quart of milk for nicer and firmer yogurt.
- Heat milk to just barely starting to boil. Remove from heat and cover with a lid or plate to avoid a "skin" forming on the top. (Heating the milk prepares the proteins for fermentation.)
- Place a dish with 1 heaping tablespoon of yogurt that contains active cultures (or some you have already made) per quart of milk on the counter to warm a bit while the milk is cooling. (You can also purchase dried yogurt starter. Follow the directions on the package if you do.)
- Clean (and sterilize if desired) the container or containers you want to keep your yogurt in.
- When the milk cools to approx. 115°–116° mix a little bit into the dish of yogurt until it is smooth. Then stir it into the whole pan of milk.

- Pour the milk into the containers you have prepared, and screw on the lids.
- Place containers into the incubator you have chosen. If you have chosen a cooler or pan in a thermal bag or cooker fill around the jars with 115° water and close the incubator. Do not disturb for 8–10 hours.
- When the time has passed, check to see if the yogurt has set by tipping the jars. Place in the refrigerator to let it set further.
- Use plain or add jams or other sweeteners to eat as flavored yogurt.

## **Greek-style Yogurt, Sour Cream and Cream Cheese Substitutes**

Yogurt works well for cream cheese and sour cream substitutes. If you are using skim milk yogurt you may need to add just a little bit of flavorless oil to get the texture you want. Of course whole milk gives a better result.

All that you need to do is place a coffee filter inside of a strainer or colander and spoon it full of yogurt. The whey will drain out of the yogurt making it thicker. A little thicker makes Greek-style yogurt. More makes something very similar to sour cream. Very thick makes something like cream cheese.

## **Cream Soup Base**

(from *Cookin' with Powdered Milk* by Peggy Layton—see [www.PeggyLayton.net](http://www.PeggyLayton.net))

\*The following can be added to cooked or re-hydrated celery, potatoes, chicken, mushrooms, onions, corn, beans, or broccoli to make a soup. The book has more details.

2 Tbsps. salad oil  
 2 Tbsps. flour  
 2 Tbsps. butter or marg. powder (or fresh)  
 3¼ cups water  
 ½ tsp. salt  
 ¾ cups powdered milk

Add the flour to the oil and blend. Add the butter and margarine powder. Stir in all remaining ingredients and cook on low heat until thickened.

## **Sweetened Condensed Milk**

I like this for making caramel popcorn. It can also be used to make a cheesecake or 7-layer bar cookies—things you would like to have a can of condensed milk for.

In a blender, mix:  
 2 cups sugar  
 1 cup water  
 2 cups non-instant powdered milk (4 cups of instant)

Put sugar and water in a pan. While stirring, boil for 1 minute or until sugar is well dissolved.

If you have a blender, you can blend it on low and slowly add the milk powder until well mixed. If you do not have a blender, let the syrup cool to room temperature and whisk the milk powder into it gradually and until there are no lumps. Use just like the canned condensed milk.

\*This will store in the refrigerator for a long time.

## pudding

1¾ cups water  
⅓ cup sugar  
2 Tbsps. corn starch  
⅓ cup milk powder  
1 Tbsp flour  
2 eggs (or 2 Tbsp. egg powder)  
2 tsp vanilla extract  
2 Tbsp butter (or butter powder with 1 tsp coconut oil)

In a saucepan, mix sugar, corn starch, milk powder and egg powder. When well mixed, add water. Make sure that it is well blended and without lumps. (This step can be done in a blender.) Place over medium heat. Cook until thickened. Add vanilla and butter. Cool slightly. Dish into bowls or pie shell and let cool completely.

For chocolate pudding add 2 Tbsp. baking cocoa and 2 Tbsps. sugar to the dry ingredients.

For caramel pudding replace the sugar with packed brown sugar.

**Indian Burfi** (aka Barfi—derived from the Persian word for snow)—Milk sweet

1½ cup non-instant milk powder (or 2 cups instant)  
½ cup milk (reconstituted)  
½ cup sugar  
⅓ cup clarified butter (or coconut oil)  
¼ tsp ground cardamom  
2 Tbsps. chopped pistachios or almonds

Pour clarified butter into a pan over low heat. Add milk, milk powder, and sugar. Stir until blended and smooth. When mixture is smooth turn heat up to medium. Stir continually to keep from scorching until the mixture begins to pull together into a very loose ball. Stir in cardamom. Pour into a parchment paper-lined or buttered 8x8 pan. Press to edges with a spatula. Add nuts to the top and press them in. Let cool completely. Cut into squares.

## Ricotta-style Cheese and Uses for It

\*If you are making this not in a crisis and are able, it will turn out a lot better if you add some milk fat into it. I like to add about 3 Tbsps. of cream to a quart of milk.

- Mix milk according to the directions on the container it came in.
- Put milk in a pan over medium heat.
- Heat just until it barely shows the first signs of boiling.
- Remove from heat. Add 1 Tbsp of acid (lemon juice, vinegar, 1 tsp citric acid powder) per quart and stir it in.
- Wait 1–2 minutes. The milk should have separated so that you see little clumps with somewhat clearer solution around them. If it is not like that add just a little bit more of the acid and wait another minute.
- After about 3–5 minutes, pour the curdled milk into a colander lined with double layers of cheese cloth or even a clean cotton dish cloth (not terry). Let it drain until all of the whey or clearish liquid has drained off. To the part that is left you can add salt to taste. Place in a clean container and refrigerate.

Note: This can be used in a “mock lasagna” or “mock pizza.” It is nice melted on tortillas or used with pasta. I have even seen someone add cheddar cheese powder and a Tbsp of flavorless oil to this curd mixture and knead it in. Then they formed a block in a small loaf pan. Once it was cool, they used it to make cheese sandwiches.

Note 2: The whey you drain off can be used in soups and sauces or baking. You can also drink it if you want to, but it will be a bit tart from the acid used. Still, it does have some nutrition.