

Charlotte P. Brennand, PhD

Food Science Specialist

## What It Is

Nonfat dry milk is a wholesome dairy product made from fresh milk. Only the cream and water are removed. It still contains the calcium and other minerals, the vitamins, natural sugar and high quality protein that make liquid milk such a valuable food.

## Storing Dry Milk

Dry milk should be stored in a tightly covered container. A tight cover is necessary so the milk powder will not take up moisture and become lumpy. It will keep at room temperature for several months. For longer storage it is necessary to keep it stored in a cool, dry place. After milk has been mixed with water, it should be stored in the refrigerator like fresh milk.

## How to Make Fluid Skim Milk

Dry milk can be mixed quickly with water to make fluid skim milk. Measure the powdered milk into a bowl and add about half of the water needed. Stir, shake, beat with wire whip or beat with mixer on slow speed to disperse milk. Add enough water to make the amount of milk desired. Non-instant milk powder is easier to disperse if the water is slightly warm, but not hot.

| FOR: | USE: |  |  |
| :--- | :--- | :--- | :--- |
|  | Instant Nonfat Dry Milk | Non-Instant Powder Milk | Water |
| 1 quart milk | $11 / 3$ cups | $3 / 4$ cup | $33 / 4$ cups |
| 1 pint milk | $2 / 3$ cup | $3 / 8$ cup | $13 / 4$ cups +2 Tbls. |
| 1 cup milk | $1 / 3$ cup | 3 Tbls. | Scant cup |
| $1 / 2$ cup milk | 3 Tbls. | $11 / 2$ Tbls. | $1 / 2$ cup |
| $1 / 4$ cup milk | $11 / 2$ Tbls. | 2 teaspoons | $1 / 4$ cup |

## Use Dry Milk in Any Recipe

- In any recipe calling for milk, simply add the dry milk to other dry ingredients. Sift to blend, then add water for the milk called for in the recipe.
- For use in meat loaf, hamburgers, etc., use $1 / 4$ to $1 / 2$ cup per pound of meat.
- In mashed potatoes: mash cooked potatoes, then add $1 / 4$ cup dry milk for each cup of potatoes. Use either the water potatoes were cooked in or fresh milk to give the right consistency.
- Cooked cereals: Add $1 / 4$ to $1 / 2$ cup dry milk to each cup of cereal before cooking.
- Following are some recipes for using dry milk.


## Drinks

## Buttermilk

$1 / 2$ cup buttermilk
3 cups warm water


1 cup nonfat dry milk or $11 / 3$ cup nonfat dry milk
Put buttermilk, water and nonfat dry milk in a big, clean jar and stir or shake until powder is dissolved. Cover the jar with a lid or clean cloth. Let stand at warm room temperature until it clabbers, about 10 hours in the winter or 5 hours in the summer. After it clabbers, store in the refrigerator. Save $1 / 2$ cup to mix buttermilk next time. Buy commercial buttermilk occasionally for a fresh "start."

## Cocoa—Chocolate Milk Mix

1 cup cocoa
$3 / 4$ cup sugar
$1 / 2$ teaspoon salt
4 cups dry milk
Combine ingredients and store in a tightly covered container. To Use: For every cup of cocoa or chocolate milk desired, use $1 / 2$ cup mix and 1 cup water. Combine part of the water with mix to make a smooth paste. Add remaining water and blend well. Heat cocoa or chill for chocolate milk.

## Banana Milk

1 cup water
$1 / 4$ cup nonfat dry milk
2 ripe bananas, mashed
1 cup fluid milk
Combine part of water with nonfat dry milk to make a smooth paste. Blend in rest of water. Add bananas and fluid milk; beat until smooth. Chill. Serves six.

## Spice Milk

2 cups nonfat dry milk
$1 / 2$ teaspoon cinnamon
$1 / 2$ teaspoon nutmeg
1 tablespoon sugar
$1 / 4$ teaspoon salt
$11 / 2$ quarts fluid milk
Combine dry ingredients. Add part of milk to make a smooth paste. Blend in rest of milk and stir until smooth. Serves six.

## Grape Milk

2 cups water
1 cup nonfat dry milk
1 cup fluid milk
$21 / 4$ cups grape juice
Combine part of water with nonfat dry milk to make a smooth paste. Blend in rest of water, grape juice, and milk. Chill. Serves six.

## Desserts

## Chocolate Peanut Butter Float

1 tablespoon plus 1 teaspoon cocoa
2 tablespoons peanut butter
4 scoops vanilla ice cream


2 tablespoons water
$1 / 2$ cup nonfat dry milk
$11 / 2$ cups water
2 tablespoons sugar
dash salt

Mix cocoa, sugar and salt in a small saucepan. Add 2 tablespoons water and blend. Heat over medium high heat until mixture starts to boil, stirring continuously. Lower heat and simmer 2-3 minutes. (If needed, another 1 teaspoon of water may be added to prevent scorching.)

Remove pan from heat. Pour syrup into a blender. Add nonfat dry milk, $11 / 2$ cups water and peanut butter to the blender. Blend at high speed briefly. Add 2 scoops of ice cream and blend until just smooth. Pour into two serving glasses. Add a scoop of ice cream to each glass. Serve immediately.

## Bread Pudding

2 cups milk
$11 / 2$ cups soft bread cubes
1 tablespoon margarine or butter
$1 / 4$ cup sugar
$1 / 4$ teaspoon salt
$1 / 3$ cup raisins or nuts
2 eggs, beaten

Heat milk; add bread cubes and butter or margarine. Add sugar, salt and raisins or nuts to eggs, then slowly stir in some of the hot milk mixture. Add remainder of hot milk. Pour into a greased baking dish and set in a pan of hot water. Bake at $350^{\circ} \mathrm{F} 1$ hour or until set. Serve immediately.

## Easy Rice Pudding

$1 / 4$ teaspoon salt
2 cups water
$1 / 4$ cup uncooked rice
$1 / 4$ cup raisins
3/4 cup nonfat dry milk
$1 / 4$ cup sugar
1 cup water
$3 / 4$ teaspoon vanilla
Cinnamon or nutmeg, if desired
Add salt to water, bring to a boil, and stir rice into boiling water. Bring back to boiling point and lower heat until the water is just bubbling. Add raisins, cover tightly and cook slowly for 20 minutes. Combine dry milk and sugar, stir into water until mixed. Stir into rice, add vanilla. Simmer 10 minutes or until flavors are blended. Chill. Serve sprinkled lightly with cinnamon or nutmeg, if desired. Makes six servings, approximately $1 / 2$ cup each.

## Vanilla Pudding Mix

$11 / 2$ cups sugar
2½ cups nonfat dry milk
$11 / 4$ cups flour
1 teaspoon salt
Stir the ingredients together until well mixed. Store in a tightly covered container in a cool place. Makes enough mix for 24 servings.

## Variations:

## Chocolate Pudding Mix

Add $3 / 4$ cup cocoa and $1 / 4$ cup more sugar to above ingredients before stirring.

## Caramel Pudding Mix

Substitute $11 / 2$ cups packed brown sugar for granulated sugar.

## To Make Pudding (from Mix):

$11 / 4$ cups pudding mix
$2 \frac{1}{2}$ cups warm water
$3 / 4$ teaspoon vanilla
1 tablespoon margarine or butter
1 egg , beaten
Combine mix with water in top of double boiler. Place over boiling water and cook until thickened, stirring constantly. Cover and cook 5 minutes longer. Add the butter or margarine. Remove from heat and beat half of the hot mixture into the egg. Blend slowly into the remaining hot mixture. Cook over hot water for 1 minute. Stir in vanilla and chill. Serves six.

## Whipped Topping

$1 / 2$ cup ice cold water
$1 / 2$ cup sugar
$1 / 2$ cup nonfat dry milk
2 tablespoons lemon juice
Put water into an ice cold bowl. Add milk and beat with a cold egg beater until stiff. Add sugar slowly while beating. Add lemon juice and beat only until well mixed.

## Whipped Topping No. 2

6 tablespoons nonfat dry milk
1 cup water
2 teaspoons gelatin
$11 / 2$ tablespoons cold water
$1 / 4$ cup sugar
1 teaspoon vanilla
Dissolve the milk in the cup of water and scald. Soak the gelatin in cold water.
Combine the scalded milk, dissolved gelatin and sugar. Stir and chill in the refrigerator until it jells. Now beat the mixture until it acquires the consistency of whipped cream. Add the vanilla and whip again.

## Cream of Potato Soup

$2^{112}$ cups cubed potatoes
1 tablespoon chopped onion
$11 / 2$ teaspoons salt
$1 / 2$ cup nonfat dry milk
1 tablespoon flour
2 tablespoons butter or margarine
4 cups liquid (cooking liquid from potatoes, plus water or fluid milk)
Cover potatoes and onion with boiling water. Add salt and cook until tender. Drain the liquid and save. Mash potatoes, or put them through a sieve. Add dry milk and flour to liquid. Beat until smooth. Add butter or margarine. Cook over low heat, or boiling water, until slightly thickened, about 15 minutes, stirring as necessary to prevent sticking and lumping. Combine with potatoes, and reheat. Serves six.

## Corn Pudding

3 eggs
2 cups liquid (corn liquid plus water or fluid milk)
$1 / 2$ cup dry milk
2 tablespoons melted fat
2 cups drained cooked corn
1 teaspoon salt
pepper
Combine eggs and liquid, and add dry milk. Beat until smooth. Add other ingredients. Pour into a greased baking dish and bake in a moderate oven ( $350^{\circ} \mathrm{F}$ ) until set, about 50 minutes. Serves six. NOTE: Other vegetables may be used in place of the corn.

