

POWDER POWER!
IT'S MORE THAN JUST MILK!



Instant Nonfat Dry Milk Powder

PRODUCT INFORMATION

for Food & Nutrition Educators

This background information accompanies two duplicating masters for using instant nonfat dry milk powder:

- **Instant Nonfat Dry Milk Powder - Tips & Recipes** includes nutrition and storage information along with recipes for beverages, main dishes and breads. It tests at a sixth grade reading level.
- **Instant Nonfat Dry Milk Powder - Easy to Use & Good for You** is intended for readers who would benefit from pictures showing how to reconstitute the milk. It tests at a fourth grade reading level.

Reconstituting (Mixing) Instant Nonfat Dry Milk Powder

- For about one cup: Combine $\frac{1}{3}$ cup nonfat dry milk powder with 1 cup water.
- For about one quart: Combine $1\frac{1}{3}$ cups nonfat dry milk powder with $3\frac{3}{4}$ cups water.
- For best results, put water in screw-top jar, add nonfat dry milk powder and shake until dissolved. Or, combine powder and water in a pitcher and stir. Don't mind the bubbles; they will disappear after a while. Refrigerate; the flavor is better when the milk is cold.
- Most dry milk today is instant and dissolves easily in water. Non-instant dry milk powder does not dissolve well and is best suited for inclusion in a recipe as a dry ingredient (such as casseroles or baked goods).

Nutrition

- Nonfat dry milk is made by removing water from pasteurized fat free milk. Processing to dry milk has minimal impact on its nutritional value. It contains all the protein, vitamins and minerals found in fresh, fluid nonfat milk.
- Nonfat dry milk is an excellent source of **calcium**.
- Dry milk is an excellent **high-protein** food that is low in cost. When added to main dishes, it can extend the more expensive protein of meats, fish, poultry and eggs. It can also be used in combination with dried beans, peanut butter and cheese. Adding nonfat dry milk powder to beverages and other recipes is an effective way to boost the protein content of the meal. This is especially helpful for people who may need to fortify their diets with extra protein, such as seniors, cancer patients and rapidly growing teens. One serving ($\frac{1}{3}$ cup) of nonfat dry milk powder has 8 grams of protein, which is roughly equivalent to:
 - 1 ounce cooked beef, pork, turkey or chicken
 - 1 egg
 - 1 ounce tuna or other fish
 - 2-inch cube of cheddar cheese
 - 2 tablespoons peanut butter
 - $\frac{1}{2}$ cup cooked dried beans or peas

- There is **no fat** in nonfat dry milk.
- Most nonfat dry milk has added **Vitamin D** and **Vitamin A**, just like regular milk. Check the label to be sure.
- One cup of reconstituted milk contains **about 80 calories**.
- People with **lactose intolerance** may have trouble with nonfat dry milk. Ask them to try $\frac{1}{2}$ cup to 1 cup of milk with meals. Many can handle some milk with a meal but not on an empty stomach.
- Health professionals recommend that **children under 2 years of age** drink whole milk or reduced fat (2%) milk instead of non-fat milk. Infants and toddlers need the fat from milk, which is a large part of their daily diet, to help their brains and bodies develop normally. But, it is fine for young children to eat foods that contain nonfat dry milk as an ingredient.

Calcium Is Important

- Throughout the life cycle, calcium is needed to promote good health and prevent disease. **Osteoporosis** is a preventable condition that has its roots in childhood and the teen years, which are the most critical times for building bone mass. Dairy calcium along with lots of fruits and vegetables has been shown to lower blood pressure in many people with moderate **hypertension**. Adequate calcium in the diet may help prevent **colon cancer**.
- Most Americans do not meet their needs for calcium. Recommended daily intake is:

Age	Calcium	Servings of milk
Children (4-8 years)	800 mg	3 cups
Pre-teens & teens (9-18 years)	1,300 mg	4 cups
Adults (19-50 years)	1,000 mg	3 cups
Older adults (50+ years)	1,200 mg	4 cups

- Instant nonfat dry milk contains 300 mg (milligrams) of calcium per serving. A serving equals $\frac{1}{3}$ cup dry powder or 1 cup after combining with water.
- The easiest way to get enough calcium is to include milk or other dairy products at every meal.
- Using nonfat dry milk in cooking is an excellent way to increase the calcium content of the total diet. This is especially important for individuals who don't care to drink milk as a beverage.

Tips for Using Instant Nonfat Dry Milk Powder in Other Foods

- In **cooked cereals**, add 3 tablespoons of nonfat dry milk powder to each $\frac{1}{2}$ cup of uncooked cereal (such as oatmeal, Cream of Wheat®, Malt O'Meal® or other cereal grain) prior to cooking. Use the same amount of water as called for in the package directions when cooking the cereal.
- For a thicker and more nutritious **milkshake**, add 1 or 2 tablespoons of nonfat dry milk powder per serving.
- Substitute nonfat dry milk powder for non-dairy creamer in **coffee and tea** for more calcium and no fat.
- Add $\frac{1}{4}$ cup nonfat dry milk powder to each cup of fluid milk when making **biscuits, muffins, pancakes, yeast breads, cookies and cakes**. (This will cause the products to be firmer and to brown faster. Lowering the baking temperature or reducing the amount of sugar will reduce this browning effect.)
- Add $\frac{1}{2}$ cup nonfat dry milk powder when reconstituting a can of **soup**.
- Add $\frac{1}{2}$ cup nonfat dry milk powder per can of condensed soup when making **casseroles**, such as tuna and noodles with cream of mushroom soup.
- Add nonfat dry milk powder when making **mashed potatoes**, using $\frac{1}{3}$ cup per 4 servings.
- Add $\frac{1}{4}$ cup nonfat dry milk powder for every pound of **ground meat** before browning. Add $\frac{1}{3}$ cup nonfat dry milk powder for every pound of ground meat when making meatloaf or meatballs.
- Add $\frac{1}{4}$ cup nonfat dry milk powder to each cup of fluid milk, or add $\frac{1}{2}$ cup nonfat dry milk powder to each cup of water or broth when making **puddings, custards, gravies and sauces**. (This may make the product slightly thicker.)
- Use nonfat dry milk powder in recipes that call for milk, adding $\frac{1}{3}$ cup nonfat dry milk powder to the dry ingredients and substituting water for fluid milk. This works for **cake mixes, regular and instant puddings, flan, breads** and more.

Tips for Drinking Instant Nonfat Dry Milk

- Some families prefer to combine reconstituted dry milk with regular fluid milk. This could be fat free (nonfat), low fat (1%) or reduced fat (2%) milk.
- Refrigerate reconstituted milk before drinking, preferably overnight. It tastes better when cold.
- Try adding a pinch of sugar or a few drops of vanilla to help a family adjust to the slight difference in flavor.
- Add some flavoring such as chocolate or strawberry syrup or even Kool-Aid®.

Storage

- Keep unopened boxes and packages in a cool (under 70°F), dry place. Unopened, it can be stored for one year. Some flavor changes may occur if storage and shipping temperatures reach 90°F or above for long periods of time.
- After opening the package, keep dry milk powder dry. Storing it covered will prevent flavor changes which can occur over time if it has contact with air. Refrigeration isn't necessary until it is reconstituted (mixed with water).
- After reconstituting the dry milk with water, store in the refrigerator. It will remain fresh for up to seven days if kept refrigerated and should be treated the same as other fluid milk products. Keep it covered so it won't pick up flavors from other foods in the refrigerator.
- Because nonfat dry milk powder has no moisture and no fat, it is safe and shelf-stable for a long time. Flavor changes may occur after many months, but that doesn't mean that it has "gone bad." If the flavor of the reconstituted milk becomes flat, it is still safe and nutritious to use as an ingredient.
- Nonfat dry milk has a very low bacterial count. Avoid introducing bacteria from other sources through cross-contamination. Keep it in its original box - there's no need to transfer it to another container for storage.

