

commodity information sheet

MILK POWDER

description

Milk powder is made by drying fluid milk. The powder can be easily transported and stored, and then reconstituted by adding water. The most common varieties of powdered milk are dried whole milk, dried skim milk (DSM), and fortified dried skim milk.

uses

The UNHCR, UNICEF, WFP, WHO and CIDA all have policies governing the use of milk powder in food aid programs to prevent its misuse in child feeding. Due to the limitations listed below, most organizations recommend that milk powder be used only in well-supervised therapeutic feeding programs, *not* for take-home distribution. Depending on specific reconstitution ratios, one kilogram of milk powder will make around 2.5 l of milk.

limitations

Milk powder has a number of limitations and should be used with extreme caution in food assistance programs. Some of the main concerns are listed below:

- **infant malnutrition:** The misuse of powdered milk and formulas as a breast milk substitute has been a major problem in child malnutrition. Young infants fed on powdered milk fill their bellies but do not receive sufficient nutrition or protection from disease. Incorrect dilutions of milk powder in water can result in toxic effects or undernutrition. *Clearly communicate the dangers of feeding milk powder to infants.*
- **diarrhea:** Milk powder may cause or worsen diarrhea. The fat content of whole milk powder may cause diarrhea in famine situations. Using any milk powder in areas where there is unclean water increases the risk of diarrhea and other water-borne illnesses, especially among young children. In many parts of the world, people cannot digest the lactose sugar found in milk. This can cause diarrhea in older children and adults. *Only use milk powder in areas where cow's milk is traditionally consumed.*
- **vitamin deficiency:** Vitamin A is found in the fat of whole milk. Regular skim milk powder contains little vitamin A. *To counter vitamin-A deficiency blindness, use only vitamin A fortified milk powder.*
- **cost:** As detailed below, milk powder is fairly costly, especially when compared with possible substitutes such as a corn-soy blend.

nutritional information

Nutritional content per 100g

Source: USDA

variety	energy (kcal)	protein (g)	fat (g)	vitamin A (IU)
Dried Whole Milk	500	26	27	920
Dried Skim Milk	360	35	1	36
Fortified Dried Skim Milk*	360	35	1	2370

* Fortified dried skim milk generally contains enhanced vitamin A and D content.

cost

Depending on price fluctuations, for an equivalent amount of protein, milk powder may be two to seven times the cost of beans, five times the cost of lentils, and eight times the cost of peas. Milk powder may be up to seven times the cost of an acceptable therapeutic feeding substitute such as corn-soy blend.

shelf life

After eight months, fortified skim milk powder may have lost its vitamin A content and should be treated as unfortified dried skim milk. After two years of storage, skim milk powder should be inspected to determine fitness for human consumption.

substitutes

Corn-soy blend (CSB) may be an acceptable substitute for milk powder in therapeutic feeding formulas.

The best nutrition an infant can receive is exclusive breastfeeding for the first six months and continued breastfeeding up to at least two years of age, coupled with safe, nutritious, locally available foods.