

## Freeze-drying vs. Dehydrating

### Shelf Life

There is a direct correlation between moisture content and shelf life. The higher the moisture content, the shorter the shelf life. We will compare moisture content of dehydrated and freeze-dried foods.

**Dehydrated food** can lose quite a bit of moisture—up to 90 percent! However, do-it-yourself home dehydrators may only remove 80% of the water in food, leaving it with a shorter shelf life. However, most top end dehydrated food will still maintain a shelf life of up to 15 years, and depending on the type of food, in some cases up to 25 years.

**Freeze-dried food**, on the other hand, is much more suitable for long-term storage. Because 98-99 percent of the moisture in food being freeze-dried is removed during the process, it has a shelf life of usually 25 years or more.

In both cases, cooler temperatures will help lengthen shelf life. It is recommended that food be stored in a cool, dark and dry location at temperatures below 70 degrees Fahrenheit.

### Preparation for Eating

**Freeze-dried meals** prepare easily. Since everything is pre-cooked, all you need to do is add water, wait a few minutes, and your meal is ready for eating! Best of all, it tastes so close to the original that you might not be able to tell any difference.

**Dehydrated food** is different in the way it's prepared for consumption. Instead of letting your food soak for a few minutes, it needs to be cooked. In most cases it needs to be boiled to rehydrate enough to taste like the food it used to be. This can take 20+ minutes, depending on the food. While it's not a huge issue, it can make a big difference if you're in a hurry, or you don't have cooking equipment, or a stove and fuel handy.

### Nutrition

Freeze-dried food maintains most of its nutrients throughout the process, and once rehydrated, is very similar in nutritional value to its fresh counterpart. In contrast to dehydrated food where only around 60-75% of the original nutrients are retained. In freeze-dried food about 97% of the nutrients are retained.

### Taste

Flavor is important in food. If it doesn't taste good, why would we even want to eat it? Fortunately, both freeze-dried and dehydrated foods taste great. It is said that the taste of freeze-dried food is essentially held in the food, as the process involves very little heat. This keeps in the flavor, retains original texture, and secures the natural aromas. Because heat is used in the dehydrating process foods tend to lose some of the original flavor, texture, and aromas. Most people agree that freeze-dried food wins the taste test.

### Weight

If you keep your stored food in your pantry or with your emergency food storage until used, weight really isn't an issue. Both dehydrated and freeze-dried food are delicious treats and great meals to take on camping trips, hikes, and even in your bug-out bag. Dehydrated food is heavier than freeze-dried food because of the higher moisture content. Freeze-dried food is the top choice if weight is a critical factor.

## Rehydration – Yes or No

Both water and cooking is required if you want to rehydrate a meal from dehydrated food. Some dehydrated foods can be snacked on without rehydration. Many freeze-dried foods, such as fruits, vegetables, and even meats, can be snacked on without rehydrating, making them a handy eat-on-the-go option. The texture and taste of freeze-dried food is much closer to the original than dehydrated food.

## Types of Food

Most types of fruit and some vegetables don't require much, or any cooking before either being freeze-dried or dehydrated and these usually don't require cooking when rehydrating. However, dehydrated meals that includes lots of fibrous vegetables and meat do require cooking as part of the rehydration process. Provided that the same meal is pre-cooked and then freeze-dried it doesn't require cooking before eating.

## Pro & Cons

There are pros and cons to both dehydrated and freeze-dried food, so in the end it all boils down to what you're looking for, how you intend to use it and how much you want to invest in its purchase. The time required to freeze-dry is a little longer, though not by much.

## Dehydrating

Pros –

- Equipment is far less expensive
- Equipment requires very little maintenance

Cons –

- Shorter shelf life
- Less nutrients preserved
- Less flavor retained
- More difficult to rehydrate
- Food weighs more

## Freeze-drying

Pros –

- Longer shelf life
- More nutrients preserved
- More flavor retained
- Easier to rehydrate
- Most foods can be eaten without rehydrating
- Food weighs less

Cons – Freeze-drying

- Equipment is expensive
- Equipment is far more difficult to maintain

The bottom line is Taste vs. Cost. Why would anyone choose dehydrating? Because it is far cheaper.