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# How to Dehydrate Food: Methods, Benefits, Tips, and More

Medically reviewed by Adrienne Seitz, MS, RD, LDN, Nutrition — Written by Rachael Ajmera, MS, RD on April 21, 2022

Methods   Benefits   Best foods   Storage   Tips   Downsides

## Bottom line

Dehydrating foods can be an easy and effective way to prolong the shelf-life of ingredients, maximize storage space, and enjoy your favorite foods all year long.

Dehydrating food is a preservation method used to extend the shelf-life of your food by removing its water content.

It is also one of the oldest and most widespread food preservation techniques, outdating many other modern methods like canning and freezing (1).

This article will explore a few of the methods used to dehydrate foods, as well as which foods can be dehydrated, the potential benefits, and downsides of the process.



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## Dehydration methods

There are several methods often used to dehydrate foods. Methods vary in terms of the way that they dry foods, the amount of time required, and the type of equipment needed.

Here are some of the most popular methods (2):

### Sun drying

Sun drying is one of the oldest and most simple methods used to dehydrate foods.

It involves laying foods, such as fruits like figs or [mangos](#), on a mesh screen or tray made with wooden dowels. Then, you cover the food with a second screen to deter pests and insects.

Food can be dried in any sunny area with low humidity and a minimum temperature of 86° F (30° C).

If using this method, it's also important to avoid screens made with hardware cloth, as these may oxidize and leave residue on your food.

However, keep in mind that foods like fruits may take several days to fully dry when using this method.

## Air drying

Like sun drying, air drying is a dehydration method that's so simple that it doesn't require any special equipment.

Similar to sun drying, air drying places food in the shade instead of the sun.

This can help protect foods from the sun's powerful rays, making it a good option for leafy greens, herbal teas, and spices.

## Solar drying

Solar dehydrators are powered by the sun, which can help dehydrate your foods without using any electricity.

Solar dehydrators often appear similar to a tabletop greenhouse. They can be purchased or made at home using materials that are readily available from your local hardware store.

## Oven drying

Your oven can be used to dry foods when you keep it temperature around 140° F (60° C).

Though oven drying can take around 6-10 hours depending on the specific food, this method may be beneficial for people who don't want to purchase any additional appliances.

Make sure your oven can be set to a temperature of 140° F (60° C) or less, as higher temperatures will cook food instead of drying it.

Additionally, be sure to prop the door open while dehydrating foods, which allows extra moisture to escape during the drying process.

## Electric dehydrators

Electric dehydrators are one of the most efficient and convenient methods used for drying foods.

These appliances are usually equipped with a timer and temperature gauge, along with fans to evenly distribute heat.

They also typically have multiple trays, allowing you to dehydrate several types of food simultaneously.

Electric dehydrators can range quite a bit in price. Some models start at around \$50 and higher end options may cost up to \$1,000.

While these electric dehydrators may be the most efficient dehydration method, they're not your best bet if you're on a budget.

## SUMMARY

There are several methods often used to dehydrate foods, including sun drying, air drying, solar drying, oven drying, and electric dehydrators.

## Benefits and uses

Food drying is often used to extend the shelf-life of ingredients and help them last longer.

By reducing the moisture content of foods, this process can prevent the growth of harmful contaminants, including types of bacteria and fungi that may [make you sick](#) (3 ).

This can be particularly beneficial for seasonal foods like fruits and vegetables by increasing their availability throughout the year — even in remote locations where they don't grow (4 ).

This method of food preservation also reduces the weight and bulk of foods, which can decrease packaging, handling, and transportation costs

for manufacturers (4<sup>4</sup>).

It also alters the taste and texture of food products, often giving dried foods like fruits a sweeter, more concentrated flavor.

While this may have both pros and cons, these foods can supply a variety of vitamins, minerals, and [antioxidants](#) if you enjoy them in place of sugary sweets or other processed foods (5<sup>5</sup>).

## SUMMARY

Drying can block the growth of harmful contaminants in foods, extending their shelf-life and year-round availability. It may also decrease the weight and bulk of foods while changing the taste and texture.

## Best foods to dehydrate

Many foods can be dehydrated — including fruits, vegetables, meats, [yogurt](#), and even pet food.

You can even dehydrate jams and sauces to free up storage space and help them last longer in the pantry.

However, keep in mind that foods that are high in fat or oil do not dehydrate well, as the fat can go rancid. Therefore, avoid drying foods like peanut butter or avocados and be sure to trim meat to remove any fat before dehydrating.

While nonfat dairy products can technically be dehydrated, it's not recommended and may be associated with a higher risk of foodborne illness.

Additionally, note that raw meat and poultry should be steamed, roasted, or cooked to an internal temperature of at least 160° F (71° C) and 165° F (74° C) to prevent foodborne illness even before drying (6).

Here are a few ideas for foods that you can try dehydrating:

- **Fruits:** apples, bananas, apricots, cherries, grapes, mangos, peaches
- **Vegetables:** carrots, beets, broccoli, cabbage, mushrooms, eggplant, zucchini
- **Lean meats:** beef, chicken, fish, jerky
- **Sauces and syrups:** jam, pizza sauce, maple syrup, spaghetti sauce, barbecue sauce, molasses
- **Herbs:** basil, dill, rosemary, oregano, thyme, sage, mint, lavender, marjoram

### SUMMARY

Foods like fruits, vegetables, lean meats, sauces, syrups, and herbs can be dehydrated. On the other hand, certain foods may not be suitable for drying, including foods high in fat or oil.

## Storage and shelf life

Exposure to heat and moisture may decrease the shelf-life of your dried foods.

For this reason, dried foods should be stored in an airtight container and placed in a cool and dry area (7).

The shelf-life for these foods can range from a few months to several years, depending on the specific ingredients and how you store the food.

Here is the recommended shelf-life for a few dried foods, according to the United States Department of Agriculture (USDA) (8):

- **Homemade jerky:** 1-2 months if stored in the pantry or refrigerator
- **Dried fruit:** 6 months if stored in the refrigerator or pantry, 1 month if stored in the pantry after opening

- **Dried herbs:** 1-2 years
- **Dried mushrooms:** 1-2 years if stored in the pantry, 3 months if stored in the panty after opening

## SUMMARY

Dehydrated foods should be stored in an airtight container in a cool, dry area. The shelf-life for these items depends on several factors and may range from several months to several years.

## Tips

Proper preparation is key when it comes to dehydrating foods. Be sure to slice foods evenly and aim for similar-sized pieces, which can help ensure that foods dehydrate at the same rate.

Fruits and vegetables should be between 1/4-inch (0.6-cm) to 1/2-inch (1.3-cm) thick, while meat, fish, and poultry should be even thinner, if possible.

Blanching, a preparation technique that involves immersing foods into boiling water then placing in ice water, can also help preserve the flavor of fruits and vegetables before drying.

Soaking sliced fruits in an acidic solution, such as citric acid or [lemon juice](#), can also prevent changes in color and texture.

Additionally, avoid drying ingredients with a stronger scent, such as garlic or onions, with other foods that have a more mild or neutral aroma.

## SUMMARY

Cutting foods evenly, blanching fruits and vegetables, and soaking sliced fruits in an acidic solution before drying them can be beneficial. You should also avoid drying foods with a strong

smell together with other ingredients that have a more mild aroma.

## Downsides

While dried foods can definitely be a healthy addition to a nutritious and well-rounded diet, they come with a few downsides that you should consider.

First, note that dried foods contain a similar set of nutrients as fresh foods, yet are packaged in a smaller and more condensed forms.

This can make it easier to overeat, which may lead to you consuming more calories, [sugar](#), or sodium (5<sup>✓</sup>).

Furthermore, dehydration could lead to some slight changes in the nutritional value of your foods. This may reduce the amount of certain vitamins and minerals, such as vitamin C and [beta-carotene](#) (9<sup>✓</sup>).

Finally, keep in mind that moisture is removed from foods during the dehydration process.

It's estimated that around 20-30% of your daily water intake comes from food sources, including foods with a high water content like fruits and vegetables (10<sup>✓</sup>).

For this reason, it's important to ensure you're drinking plenty of water or enjoying a variety of fresh fruits and vegetables. Eating dried foods require you to drink more water to meet your hydration needs.

SUMMARY

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alter the nutritional value of some ingredients and are not as hydrating as fresh foods.

## The bottom line

There are a variety of foods that can be dried, as well as many different methods that can be used.

However, keep in mind that dehydrating foods decreases the water content of your foods, may make it easier to overeat, or may slightly alter the nutritional value for some foods.

At any rate, enjoy your dried foods in moderation.

### Just one thing

*Try this today:* Dried fruit can be a portable and convenient snack option when you're on the go. A few of my personal favorite dried fruit snacks include fruit leather, [dried mango](#), and banana chips.

**healthline**

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### Written By

Rachael Ajmera, MS, RD

## Edited By

Brendan John Kiernan

## Medically Reviewed By

Adrienne Seitz, MS, RD, LDN

## Copy Edited By

Nutrition Copy Editors

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# Is Beef Jerky Good for You?

Medically reviewed by **Kathy W. Warwick, RDN, CDCES**, Nutrition — Written by Ryan Raman, MS, RD on March 13, 2020

[Nutrition & benefits](#) [Downsides](#) [Recipe](#) [Bottom line](#)

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## Beef Jerky: Is It Good for You?

Do you enjoy beef jerky but worry about how healthy it is? This video explains why beef jerky can be a good snack in moderation.

Beef jerky is a popular and convenient snack food.

Its name comes from the Quechua word “ch’arki,” which means dried, salted meat.

Beef jerky is made from lean cuts of beef that are marinated with various sauces, spices, and other additives. It then undergoes various processing

methods, such as curing, smoking, and drying, before its packaged for sale (1<sup>6</sup>).

Because jerky is considered a snack food, many people wonder whether it's a healthy or unhealthy option.

This article reviews whether beef jerky is good for you.

## Nutrition and potential benefits

Generally speaking, beef jerky is a healthy and nutritious snack.

One ounce (28 grams) of beef jerky contains the following nutrients (2<sup>6</sup>):

- **Calories:** 116
- **Protein:** 9.4 grams
- **Fat:** 7.3 grams
- **Carbs:** 3.1 grams
- **Fiber:** 0.5 grams
- **Zinc:** 21% of the Daily Value (DV)
- **Vitamin B12:** 12 % of the DV
- **Phosphorus:** 9% of the DV
- **Folate:** 9% of the DV
- **Iron:** 8% of the DV
- **Copper:** 7% of the DV
- **Choline:** 6% of the DV
- **Selenium:** 5% of the DV
- **Potassium:** 4% of the DV
- **Thiamine:** 4% of the DV
- **Magnesium:** 3% of the DV
- **Riboflavin:** 3% of the DV
- **Niacin:** 3% of the DV

It also provides small amounts of manganese, molybdenum, and pantothenic acid.

Given that it's **high in protein** and low in carbs, it has a healthier nutritional composition than many other snack foods and is suitable for various diets, such as low carb and paleo diets.



It's also high in various minerals, including zinc and iron, which are important for many functions, including immune and energy level support (3<sup>6</sup>, 4<sup>6</sup>).

What's more, beef jerky has a long shelf life and is **very portable**, which makes it a great option for travel, backpacking, and other situations in which you have limited access to fresh food and need a protein hit.

## SUMMARY

Beef jerky is a good source of protein and high in many vitamins and minerals, including zinc, iron, vitamin B12, phosphorus, and folate. It also has a long shelf life and is portable, making it a great on-the-go option.

## Downsides of beef jerky

Though beef jerky is a nutritious snack, it should be consumed in moderation.

It's very [high in sodium](#), with a 1-ounce (28-gram) serving providing roughly 22% of your daily sodium allowance, which is set at 2,300 mg per day (5<sup>✓</sup>).

Excessive sodium intake may harm several aspects of your health, including heart health, blood pressure, and stroke risk (2<sup>✓</sup>, 6<sup>✓</sup>).

That also makes it unsuitable for certain diets that restrict sodium intake (7<sup>✓</sup>).

Furthermore, beef jerky is highly processed. Numerous studies have shown a connection between diets high in [processed and cured red meats](#) like beef jerky and a higher risk of cancers, such as gastrointestinal cancers (8<sup>✓</sup>).

In addition, a recent study found that dried, cured meats like beef jerky may be contaminated with toxic substances called mycotoxins, which are produced by fungi that grow on meat. Research has linked mycotoxins to cancer (9<sup>✓</sup>).

In short, though beef jerky is a healthy snack, it's best consumed in moderation. Most of your diet should come from whole, unprocessed foods.

### SUMMARY

Though beef jerky is healthy, avoid eating too much of it, as it's high in sodium and may come with the same health risks that are linked to eating processed meats.

## How to make beef jerky at home

It's not difficult to make your own beef jerky at home.

Doing so is also a good way to control all the ingredients, especially sodium.

To make beef jerky at home, simply use a lean cut of beef, such as top round, eye of round, bottom round, sirloin tip, or flank steak, and slice the beef into thin slices.

After slicing, marinade the meat in herbs, [spices](#), and sauces of your choice. Afterward, pat the jerky strips dry to remove any excess marinade and place them in a meat dehydrator at 155–165°F (68–74°C) for approximately 4–5 hours — depending on the meat's thickness.

If you don't have a dehydrator, you can achieve similar results using an oven at a low temperature — approximately 140–170°F (60–75°C) for 4–5 hours.

What's more, it's a good idea to let the beef jerky dehydrate further at room temperature for an additional 24 hours before you package it. It may be best to freeze jerky if you are not going to eat it within 1 week or so.

## SUMMARY

Beef jerky is simple to make at home and allows you to control all the ingredients, particularly sodium.

## The bottom line

Beef jerky is a great snack food that's high in protein and a good source of various minerals, including zinc and iron.

However, store-bought varieties are high in sodium and may be associated with other risks, so it's best consumed in moderation as part of a [varied diet](#).

That said, making your own jerky is simple and can help control its sodium content.

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Written By

Ryan Raman

Edited By

Susanne Arthur

Medically Reviewed By

Kathy Warwick, RD, LD

Copy Edited By

Christina Guzik, BA, MBA

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