

4 Materials You Need to Grow Sprouts in a Jar

Growing sprouts at home is a simple process that requires only a few items that you might already have, including:

1. **One to two tablespoons of seeds:** Look for non-GMO, certified organic sprouting seeds, which you can find at most health food stores and some grocery stores. Depending on the size of your jar, you may be able to sprout up to half a cup of seeds. For the first time, consider starting with a smaller quantity of seeds. Make sure the seeds you purchase are specifically for sprouting and not for growing.
2. **A one-quart jar or container for soaking:** You can use a mason jar, canning jar, or wide-mouth container. You'll sprout your seeds inside of this jar.
3. **A sprouting lid or cover:** Your container will need a sprouting lid, which is a lid that has many fine holes in the top. You can purchase a pre-made sprouting kit that includes a sprouting jar and sprouting lid, or create a DIY seed sprouter by simply covering your container with cheesecloth and securing it with a rubber band. You can also cut out a circle of needlepoint mesh to top your container to serve as a sprouting lid.
4. **A strainer:** You can use a colander or any strainer with very fine holes that can catch the sprout seeds.

How to Grow Sprouts in a Jar

Growing your own sprouts is more cost-effective than buying pre-prepared sprouts from the grocery store. Better yet, they grow to an edible size within a few days. Here is a step-by-step guide for growing sprouts at home:

1. **Soak the seeds.** Fill your container or glass jar with either cool or warm water. Pour your desired amount of the seeds into your container, ensuring they have at least one inch of water above them. Cover the jar with a sprouting lid or cheesecloth. Place the jar in a location that's not in direct sunlight but will keep the sprouts at room temperature.
2. **Leave for 24 hours.** Allow the seeds to soak in the water undisturbed for a full day.
3. **Drain and rinse the sprouts.** After your sprouts have sat for a day, drain the water they've been soaking in. Strain the water out of the container using the cheesecloth as a strainer. If there is some water left over, use a strainer to drain your beans. Put the seeds back in the container and give them a good rinsing with cool water a few times. Set the jar with your drained and rinsed beans somewhere in your kitchen out of direct sunlight. Store the jar on its side to give your beans some breathing room.
4. **Repeatedly soak and rinse.** Repeat the rinsing and draining process for up to five days. Germination should begin by the first day, and the sprouts should grow larger and longer with each successive soaking. Rinse your beans at least once a day, but you can do so up to four times a day.
5. **Remove the hulls.** Add the raw sprouts to a large bowl of fresh water and use your hands to push down on them gently. You should see the brown hulls rise to the top, and you can easily skim them off. Repeat until very few hulls rise to the surface. You don't have to worry about getting all of them. Once you remove the hulls, you can eat the sprouts.

The Food Safety of Sprouts Factsheet

[Click here for the PDF version of this factsheet \(PDF, 281 KB\)](#)

Sprouts are the immature growth that is produced from a germinated seed. Depending on the seed type, the sprout is generally harvested 1 to 8 days after germination. At harvest the sprout will have a stem (1 to 3 inches in length) and two small leaves. The varieties of sprouts that are most commonly consumed are alfalfa, mung bean, red clover, radish, broccoli and wheat grass. Sprouts are most commonly consumed raw or lightly cooked as they provide a crisp texture to sandwiches, salads and stir-fries. Unfortunately, the environment that the sprout needs for growth, combined with the fact that they are generally eaten raw or only lightly cooked, has caused many foodborne illness outbreaks.

Sprouts and Foodborne Illness

Between 1996 and 2010, there were 34 reported foodborne illness outbreaks related to the consumption of sprouts. These outbreaks resulted in 2,150 cases of illness, 123 hospitalizations and one death. In the past 5 years (2011 to 2016), the Centers for Disease Control and Prevention have reported 9 foodborne illness outbreaks that resulted from the consumption of sprouts. Due to the high number of outbreaks, sprouts have been labeled as a “high risk” food. This means that people with compromised immune systems, such as children, elderly, pregnant women and those who are sick or taking medications that impair the immune system, should avoid eating sprouts.

What Causes Sprouts to be “High Risk”?

Sprout seeds can often be the starting point of a foodborne illness outbreak. This is because the seeds can potentially become contaminated during production while growing in the field. In the field, contamination can come from irrigation water, animal manure, wild animals or unsanitary practices or dirty hands of field workers. Upon harvest, seeds can be introduced to contamination from transportation containers and vehicles, equipment, rodents, pests and workers.

Some varieties of seeds naturally have rough outer surfaces that can allow for microorganisms to easily attach. Additionally, some seeds are put through a process called scarification in which the outer surface of the seed is abrasively rubbed to thin the outer seed coat and increase germination rates. This process can also create rough outer surfaces in which microorganisms can hide.

The growing environment of the sprout supports an ideal growing environment for microorganisms. Sprouts require adequate moisture and warm temperatures (about 70°F) both of which create ideal conditions for the rapid growth of microorganisms. One study reported that the number of microorganisms on a sprouting seed can reach up to 1 billion within 2-3 days of the sprouting process. It does not take many cells of microorganisms to cause someone to become sick. For example, someone can consume just one cell of *Salmonella* or 10 to 100 cells of *Escherichia coli* (*E. coli*) and become sick with a foodborne illness.

Safety of Commercially Grown Sprouts

In 2011, the Food Safety Modernization Act (FSMA) was signed into law. This act is a complete overhaul to the United States' food safety system shifting the focus from responding to foodborne illness outbreaks to prevention. Several components to this law are intended to prevent foodborne illness in manufactured foods and produce; however, one aspect of the law specifically addresses the production of sprouts. Those who are producing sprouts for sale must comply with the regulations stated in the FSMA produce safety rule as well as four additional requirements that are specific to growing sprouts. These requirements are: (1) taking steps to prevent microorganisms on seeds; (2) testing irrigation water drained from growing sprouts; (3) testing of the sprout production areas (growing, harvesting, packing and holding) for *Listeria monocytogenes*; and (4) if any test results in a positive reading then corrective actions must be put into place so that contaminated sprouts are not released for sale. Additional educational trainings are also being given to sprout producers to teach them the new regulations and how to grow sprouts safely.

Growing Sprouts at Home

Growing sprouts at home does not make them any safer than those purchased from the grocery store. Care should be taken when they are grown at home to reduce the likelihood of the sprouts causing a foodborne illness. Seeds should be purchased from a commercial source, where the seeds are produced for sprouting only and pre-tested for the presence of illness causing microorganisms. Ensure that all containers and contact surfaces that touch the seeds and sprouts are kept clean. Place growing sprouts in an area of your home where they are not disturbed and are not located close to food production areas where raw foods can splash onto the sprouts. Keep pets away from the seeds and sprouts. Always wash hands properly when handling the seeds or sprouts, and ensure that the water used to irrigate the sprouts is fresh drinkable water and held in a clean container.

Handling Sprouts at Home

Whether you have purchased sprouts from the store, or grown them at home, you can reduce the chance of developing a foodborne illness from sprouts by following these guidelines:

1. Buy/consume only fresh sprouts that are kept refrigerated.

2. Do not buy/consume sprouts that are limp, slimy, moldy or have an off odor.
3. Keep sprouts refrigerated at 40°F or below.
4. Store sprouts in clean containers.
5. Wash hands properly with hot running water before touching sprouts.
6. Wash sprouts with cool running water directly before use.

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- 3 eggs, beaten
- 4 tablespoons butter (50 ml), softened
- 1 cup flour (250 ml)
- 1 cup milk (250 ml)
- 1 teaspoon salt (5 ml)
- 1 teaspoon baking powder (5 ml)
- 1/2 pound cheddar cheese (250 g), shredded
- 1 small onion, finely chopped
- 10 ounces (1 bag) fresh spinach (300 g),
cooked and chopped
- 5 ounces BEANSPROUTS (150 g)

In a large bowl, combine and mix well eggs, butter, flour, milk, salt and baking powder. Stir in cheese, onion, spinach and beansprouts. Spoon mixture into a 9" x 13" greased pan and level off. Bake at 350 degrees for 35 minutes. Remove from oven and cool 45 minutes. Cut into large squares for luncheon dish or bite size squares for appetizers. Good hot or cold. Recipe serves 6.

PERCENT U.S. RDA PER SERVING

Protein	38%
Vitamin A	32%