

Lacto-Fermented Spicy Carrots

Catherine Brown, Plant-based Chef & Culinary Nutritionist at [A Seat at My Table](#)



Move over plain carrot sticks. Meet the new kid on the block! Garlicky, a little salty, crisp and just spicy enough, these carrots are the bomb diggity!

Lacto-fermentation has been around for a long time. If you've been curious about making some lacto-fermented foods yourself, but not sure where to start, this is the PERFECT recipe to get you started. It is super EASY and requires no special equipment.

First though, you may be wondering *what is lacto-fermentation*, and *does it involve dairy*? Lacto-fermentation is an anaerobic preservation and fermentation method for fruits and vegetables. It relies on naturally occurring lactic acid bacteria to ferment the sugars in the plants to lactic acid. The lactic acid bacteria provide flavor and the acid prevents spoilage. The process also reduces the phytic acid content naturally contained in many plants, making the nutrients contained within more readily absorbed during digestion. This process creates lactobacillus, a probiotic that, once digested, will increase healthy gut microbes. Eating fermented foods have been shown to improve digestion, increase immunity and digestion, and even curb cravings.

Sometimes dairy whey is used to jump start the process, but this is not necessary. You can save a bundle by making your own! Let's get started!

Total Time: 5-10 days Prep Time: 15 minutes Cook/Bake Time: none

Here's what you'll need to make one quart:

- 3 - 4 cups filtered water*
- 1 Tbsp unrefined, non-iodized sea salt without any anti-caking agents, etc.
- 1.5 - 2 lbs carrots
- 1/2 of a jalapeno pepper
- 3 large cloves of garlic

* Non-chlorinated water is important so the naturally-occurring bacteria is not destroyed.

The Process:

1. Wash your containers, knife, cutting board, peeler and spoon in hot soapy water. They do not need to be sterilized, but they do need to be thoroughly clean.
2. Wash and dry the carrots and jalapeno.
3. Carrots can be left unpeeled or peeled as long as they have been thoroughly scrubbed. Do not use any vegetable soap.
4. The garlic cloves can be smashed and left intact, sliced or chopped. I smashed mine with the flat side of my chef's knife.
5. The jalapeno can be diced or sliced. If you want a little extra heat, use the whole pepper. I like the look of the slices.
6. There are two methods used to introduce the salt to the vegetables. For carrot sticks, I prefer the brine method. Bring 1 cup of the filtered water to a boil and dissolve the salt into the hot water and allow to cool. Add two more cups of cold filtered water to the salt water. Stir with a clean spoon to combine.
7. You want the carrots to have about 2" of headspace inside the jar. Use one carrot to determine the proper length, then use this as your measure for cutting all the rest. You want the carrots to be uniform in shape.
8. Add the garlic to the bottom of the jar, tilt the jar and begin packing in the carrots. Arrange the jalapeno slices randomly around the sides of the jar as you continue to load the carrots. Keep packing until you can't fit any more. Alternating thin and thick ends will help you pack more into the jar. They should be tightly wedged. This will ensure they stay submerged during the initial fermentation process.
9. Now pour the salt water over the carrot sticks until completely covered.
10. If you are using mason jars (or any other type of regular screw-top jar), do not tighten the lid completely. Leave it secure, but easily removed with one hand. If you have fermentation lids with pressure-release valves, you can tighten them as usual. Label and date the jar.
11. Store your jar/s at room temperature on a dark shelf or out of direct light where you can attend to it easily (don't put them somewhere where you might forget about them).
12. The warmer the room temperature, the quicker the fermentation will happen. Ideal ambient temperature is 60-70 degrees Fahrenheit. If you are concerned at all about your room temperature, just leave the jar/s out for 24-48 hours to begin the fermentation process and then store the jar in the refrigerator, cold root cellar or basement. It will take much longer for the veg to acquire a nice tanginess, but they will eventually get there.

13. If left at room temperature, begin tasting after about three days. If you prefer more tanginess and a softer texture, allow the veg to continue fermenting at room temperature. When you are satisfied with the flavor and texture, tighten the lid and refrigerate or store in a cold (not freezing) basement or root cellar. The carrots will keep in the refrigerator for at least 9 months... if they last that long!

GENERAL NOTES:

- Expect the veg to change color. Some vegetables will brighten or become a much deeper color, others will lose some or most of their color.
- Expect the liquid to become cloudy. You may also see white mold on top. This is perfectly NORMAL and a sign that good bacteria are doing their job. No need to panic. If it bothers you, remove it with a CLEAN non-reactive utensil.
- Expect to see bubbles, both around the edges at the top and coming up from the bottom. This is NORMAL. You may hear a slight release of pressure when you unscrew the lids. If you've tightened your lids a bit too much, a bit of the liquid may spew out. Replace as needed to keep the veg covered.
- By day 3-4 you will notice a slightly sour or acidic smell, not like vinegar, but sort of sour. This is also NORMAL and a good indicator that it's time to start tasting. Be sure to use a CLEAN non-reactive utensil each time you taste.
- If you are using regular, finger-tightened lids, some liquid may seep out. I am keeping my jars on a paper towel-lined tray to avoid a messy clean-up.
- If you notice ANY red or pink mold or black scum, or you smell an unmistakable putrid, rotten-egg smell, this is a sign that something has gone astray. Toss the batch and start over. I have yet to see this happen.
- Any combinations that include garlic and/or onions are going to permeate the room while fermenting if you are using regular, loosely tightened lids. This is not necessarily a concern, just something to be aware of.
- Regular servings of lacto-fermented vegetables are one of the most delicious ways to increase the healthy microflora in your gut. The process has also been shown to increase absorption of nutrients contained in the vegetables and/or reduce phytic acid levels. Phytic acid can inhibit the absorption of certain nutrients. In fact, a push is being made to have fermented foods included in world-wide food guide. You can read more about this [here](#).
- Let me know how it goes. I'm here to help you!

This recipe was adapted from [The Real Food Dietitians](#) and from my [Lacto-Fermented Moroccan-Spiced Carrots](#).

If you make this recipe, I'd love to hear how you and your family or guests liked it! Snap a photo and tag me too, #chefcatherinebrown. [I love seeing what you make!](#)

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