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CULINARY M E D I C I N E

Home Meal Preparation: A Powerful Medical Intervention

Abstract: *One of the principles of culinary medicine is to help patients learn how to make nutritious eating simple and easy. In this column, you will learn tools for preparing and storing food; a key component to successful home cooking. While this article is intended to help clinicians learn about food preparation, it is also designed to be used as an educational tool for patients.*

Keywords: cooking; nutrition; culinary medicine; lifestyle medicine; diet

The Case for Home Cooking

Home cooking is associated with numerous health benefits, including a reduced risk of type 2 diabetes mellitus and other chronic diseases.^{1,2} People who cook at home eat higher quality food, consume less calories, spend less money on food, and have less weight gain over time than those who dine out and eat prepared foods on a regular basis.³ Conversely, consuming prepared, ultraprocessed foods has been linked to increased rates of cardiometabolic diseases and overall cancer risk as well as breast cancer risk.⁴⁻⁶

We know home cooking using whole food plant-based ingredients is healthier, so why don't more people do it? How can we make home cooking an easy,

enjoyable, beneficial, and affordable option for healthy eating? This column will show you how to simplify home food preparation through batch cooking and food storage as well as provide knowledge about maximizing nutrient density in foods.

Knowing What to Cook

Start by focusing on foods that will optimize your health. A dietary pattern



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that is mostly plant based, and includes lots of vegetables, fruits, legumes, whole grains, nuts and seeds has the greatest health benefits.⁷ Dietary patterns that are composed of whole foods that are mostly plant based, such as the Mediterranean dietary pattern,⁸ have been shown in both large population studies and randomized clinical trials to reduce risk of heart disease, metabolic syndrome, diabetes, certain cancers

(specifically colon, breast, and prostate cancer), depression, and in older adults, improved mental and physical function.

To start cooking healthier, begin by making small changes, such as increasing your plant-based meals by one each week. Consider joining a global movement called "Meatless Monday," which suggests eliminating all meats on Monday, with a goal to reduce total meat consumption by 15%, for both personal

and environmental health. Try introducing one new vegetable into each day's menu in the form of a side dish, snack, or desert or replace one serving of a processed grain with a whole grain (switch your white pasta to farro). Simple changes will make it easier to optimize your chances for success.

Certain plant-based foods lend themselves well to batch cooking because they are so versatile and store

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well and they make great additions to so many different meals.

Beans and Legumes

Beans and legumes are incredibly versatile, nutritious, and inexpensive. Legumes are actually seeds from the Fabaceae family, commonly known as the legume, pea, or bean family. They are rich in plant protein, fiber, B-vitamins, iron, folate, calcium, potassium, phosphorus, and zinc. Evidence suggests that they can help reduce blood sugar, improve cholesterol levels, and control gut health. Legumes are so versatile; cook them with herbs and spices as a delicious side dish, add to soups, stews, and salads for added texture and protein or puree into a creamy dip without the added fat.

You can purchase beans canned (precooked) or in their natural state, dried. You will gain the most nutritional value from dried beans, if you do choose canned beans for their convenience, look for those with low sodium content.

Tips on Cooking Dried Legumes. Most dry beans (with the exception of peas and lentils) will need to be rinsed, soaked and cooked.

- Rinse beans in cold water and pick out any pebbles or stems.
- Cover the beans with 3 times the amount of water.
- Soak for 6 hours
- Alternatively, you can bring dried beans to a boil, take them off the burner, and let them soak for 2 hours. Soaking overnight or after boiling makes them less likely to cause gas. If you are not used to eating a lot of beans, try introducing them slowly into your diet.
- Cover rinsed bean with fresh water and cook.
- You can add onions, herbs and spices at any time during the cooking process but adding during the last ½ hour will produce stronger flavor.
- Wait to add acidic ingredients such as lemon juice, vinegar, tomatoes, wine, molasses until after the beans are fully cooked. Adding acids too early

can prevent the beans from becoming tender.

Whole Grains

Whole grains have been associated with reduced risk of heart disease, stroke, cancer, diabetes, and obesity. People who eat whole grains regularly have a lower risk of obesity and lower cholesterol levels.⁹ Whole grains are high in fiber and contain phytochemicals and antioxidants. Consuming just 3 servings of whole grains per day has been linked to significant risk reduction from chronic disease and lower mortality overall.⁹

There are many different varieties of whole grains beyond brown rice: wheat berries, barley, millet, amaranth, oats, spelt, rye, emmer, wild rice, quinoa, and more. The ancient grains, such as farro, bulgar, and barely are a great way to add texture and flavor to salads, soups, and stews. Once cooked, whole grains keep well in the refrigerator and take just a few minutes to heat up with a little water or stock. Try experimenting with a new grain you've never tried before.

Cooking Whole Grains. Here are 2 methods for cooking whole grains, the absorption method and the pasta method:

Absorption method: Cooking most grains is very similar to cooking rice. Put dry grain in a pan with water or broth, bring it to a boil, then simmer until the liquid is absorbed.

Pasta method: Some grains, like brown rice, farro, and wheat berries, can be cooked using the “pasta method,” where uncooked whole grains are placed in a large pot of boiling water, simmering until tender, then drained of their excess liquid. This process will take significantly less time than the absorption method.

A whole grain cooking chart that specifies the amount of cooking liquid and cooking time needed for various grains can be found at <https://wholegrainscouncil.org/recipes/cooking-whole-grains>

Vegetables

Eating a diet rich in vegetables as part of an overall healthy diet may reduce the risk for heart disease, protect against certain types of cancer, and help increase intake of fiber and potassium.^{10,11} Raw vegetables are great to store in the refrigerator; precut, wash, dry well, and store for up to 5 days in the fridge or they can be frozen while still fresh for longer storage times.

Tips for Cooking Vegetables. When planning which vegetables to cook, keep it seasonal and local to gain the most nutritional value.

While there are many different ways to cook vegetables, here are few that work well with batch cooking. If you're planning to use the vegetables again in another recipe undercook them the first time so they don't get too mushy.

Roasting. Place vegetables on a rimmed baking sheet, you'll want to toss them with a little healthy fat (such as olive oil or cold-pressed canola oil, both of which can withstand high heat) olive oil, salt, and pepper before roasting at 425°F. The oil allows for the caramelization from roasting that is so delicious without adding a lot of flavor to overpower the taste. Stir once about halfway through roasting time. You'll know when your vegetables are done when they start with caramelize, and are tender when pierced with a fork. You can season with salt and pepper or leave plain. If avoiding oil, nonstarchy vegetables can be roasted directly on a sheet pan with seasoning. Starchy vegetables such as potatoes and carrots can be lightly steamed, then roasted without oil. Roasted vegetables are so versatile you can add them to pastas, sandwiches, salads, grain bowls, and tacos. You can add them to omelets for breakfasts as well.

Steaming. Suspend prepped vegetables over boiling water to gently steam them. You can also steam in a microwave. Avoid boiling vegetables as it reduces their nutritive value. Add herbs and spices to eat right away or use them as ingredients in other dishes.

Blanching. Quickly cook vegetables in boiling, salted water for a few minutes, then remove and submerge in ice water to halt the cooking. This will preserve the color and texture of your vegetables if you plan to use them in a salad or cook them more later in another dish.

Making Cooking Easier

One key to saving time with home cooking is batch cooking. Batch cooking means preparing food ahead of time in large batches to be eaten later as meals or to be used as ingredients for multiple meals or snacks. Batch cooking allows you to maximize the time spent in the kitchen by preparing multiple meals in about the same amount of time it would take to cook just one meal and it provides versatility by producing meal components can be multipurposed into many dishes.

Here are several tips to help make the most of batch cooking:

1. *Make a plan.* Set aside some time during your week to plan what you want to eat for meals and snacks, select some recipes or meal ideas and create some menus. You don't have to plan the entire week, start with a few days' worth of meals you know you will enjoy and that are easy to prepare and keep it simple to start. There are a number of online resources for healthy recipe ideas, when choosing a recipe, be sure to use whole food (*not* processed) ingredients that are mainly plant based such as the recipe at the end of this column.
2. *Pick a method.* There are a few ways to approach batch cooking. You can either double or triple the recipes you select or you can make batches of ingredients that you will assemble later. Most foods will last in the refrigerator for 3 to 4 days or you can freeze them for longer storage times. As far as cooking meal components, as long as you cook the ingredients with no sauces and little seasoning, you will be able to repurpose them many times over.

3. *Think about repurposing.* The same ingredient can be used for multiple meals. For example, quinoa can be made in advance, later you can add it to hot cereal for breakfast, add to a salad for lunch, and serve as a side dish for dinner. When you begin your meal prep, decide if you are cooking meals, meal components or some of both to extend the options.
4. *Prep wisely.* Read over the recipes before you begin to cook, look for common ingredients. If you have 2 recipes that call for the same ingredient, such as chopped onions, prep them at the same time. This will make your cooking time more efficient. You can even prep ingredients you know you'll use often, such as minced garlic or fresh squeezed lemon juice and store them for later use. Taking a little effort upfront really pays big dividends later when you are pressed for time and find you have the ingredients you need already prepared.

Just as important as what you cook is how you store your batched cooked meals. Here are some tips for convenient and safe storage.

Tips on Storing Your Batch-Cooked Foods

Smart Storage. For ease of use, you'll want to store your meals how you plan to eat them. It's helpful to prepackage your meals or snacks into serving sized containers, this way you can grab and go, and it also helps with portion control. Have your storage containers, masking tape, and a marker on hand so you can label your meals with the item, date, and quantity.

Foods that you plan to eat within 3 to 4 days can be refrigerated. Everything else can be frozen with the exception of foods with high water contents such as celery, delicate lettuces, cucumbers, radishes, artichokes, eggplant, and potatoes.

It's best to freeze foods immediately and keep at least at 0°F to retain their vitamin content, color, flavor, and texture.

Safe Storage. Storing your food in glass containers is preferable to plastic. Glass is clear, environmentally friendly, holds heat well, goes from freezer to table, doesn't absorb smells, and is very durable. If you use plastic containers, try to limit to cold storage and transporting food, not reheating.

To understand how long specific foods can be frozen, a freezer storage chart (0°F) can be found through the US Department of Health and Human Services at <https://www.foodsafety.gov/food-safety-charts/cold-food-storage-charts>

Note. Freezer storage is for quality only. Frozen foods remain safe indefinitely.

In summary, healthy batch cooking can make your life easier by saving you time, reducing stress and giving you more healthy options to choose from when you want them.

With all the health benefits of home cooking, batch cooking and advance meal preparation is an excellent skill to teach our patients to make healthy eating accessible throughout the week.

Featured Recipe

One Pot Red Lentil Stew

This plant-based red lentil stew is packed with flavor. Red lentils are a great source of plant-based protein and fiber and are so easy to use; they don't require any presoaking, they cook quickly, and they add a lovely texture to this dish. This stew lends itself well to batch cooking, simply double or triple the recipe, the stew will keep in the fridge for 3 to 4 days or in the freezer for up to 3 months. Store in labeled individual serving-sized containers.

Ingredients

- 2 tbsp olive oil
- 1 medium yellow onion—diced
- 3 oz tomato paste
- 1 tbsp cumin
- 1 tbsp turmeric
- 1 tsp smoked paprika
- 1/8 tsp cayenne pepper
- 1/2 tsp salt

- 1/2 lb carrots—scrubbed and chopped in 1/2 inch cubes
- 3 cups cauliflower florets
- 1 cup dry red lentils—rinsed
- 6 cups water
- 2 cups chopped spinach
- 1 tbsp red wine vinegar

Instructions

1. Heat oil in Dutch oven or large pot over medium heat, add onion, and cook until transparent (about 5 minutes).
2. Add tomato paste, cumin, turmeric, smoked paprika, cayenne pepper, and salt. Stir to combine into a paste and cook until spices turn aromatic (about 3 minutes) and the mixture turns darker (caramelized).
3. Add carrots, cauliflower, lentils and water to the pot.
4. Bring to a boil, lower heat, cover, and simmer for about 30 minutes or until the vegetables are fork tender.
5. Add spinach, simmer until spinach wilts, about 2 minutes.
6. Add red wine vinegar, stir, and season to taste, serve hot.

Substitutions

- If you don't have lentils, you can substitute other legumes that you have in your pantry such as canned chickpeas or canned black beans.
- You can swap out the vegetables in the stew, for example, use potatoes instead of carrots, broccoli instead of the cauliflower, and kale instead of spinach.

Challenges

- Experiment with texture by adding some whole grains to the stew while it cooks, such as farro or brown rice, this will also make the stew a well-balanced one-pot meal.

- Try brightening the flavor even more by adding another acidic component as a finishing touch, such as fresh squeezed lemon juice. Season to taste.

Cultural Adaptation

- Replace the water with coconut milk and the spices in this version with ginger, curry, and cumin for an Indian flavor.

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