

Cleveland Clinic Wellness and Preventive Medicine
Culinary Medicine Toolkit

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Cooking Methods

Blanching

To blanch means simply to cook it quickly in water. Traditional methods also teach to “shock” the vegetables that are blanched in cold water to stop the cooking process. This may be fine for solid vegetables like carrots or rutabagas, but for water-absorbing vegetables like broccoli, we believe that stopping the process with cool air (whether that’s on your counter or in the refrigerator) is better. Stopping the cooking process by shocking broccoli in cold water causes the broccoli floret to absorb water. Instead, cooling in air is drier and allows the broccoli to absorb flavors when tossing it with other added ingredients such as garlic or lemon.

Here’s how to do it:

Fill a 4-quart pot with water, cover and bring it to a boil, which should take about 8 minutes. Use a standard size bunch of broccoli or whatever vegetable you desire. Cut the florets into relatively uniform sized small pieces, so they all cook at the same rate. Consistency in size will allow for consistency in cooking. Both the florets and stems are delicious. Peel from the top of the stem (the part where the florets branch out from) to the bottom. Then cut the floret off the top and cut the bottom of the stem where it looks a little bulbous and tough. If where you cut on the bottom is hard to cut through, cut higher up. Dispose the tough parts of the stem. Next, cut the stem into quarters lengthwise, so you have four long sticks that are about the same thickness as the thickest floret stems. Then cut those sticks into whatever sized pieces you want. You can make short sticks (like a carrot stick) or you can cut them up into small, square pieces, or something in between.

Break up the florets. Cut them away from the base of the bunch where they come together into groupings of relatively equal size. When your water boils, drop all the broccoli gently into the water. It will stop boiling. Cook it until the water just about comes back to a boil again. Remove the broccoli and pour the contents of the pot into a strainer in the sink, or you can remove the broccoli with a spider into the strainer if you want to save the broccoli water. Shake out the strainer a bit to get rid of some of the excess water. Even push on the florets and stems to drain the water from them. The dryer the broccoli is, before you move onto the next step, the better. Refrigerate or set the broccoli on the counter immediately to cool.

You can eat it as is (blanched), which is excellent when dipped in Baba Ghanoush, Guacamole or Sweet Potato Hummus (see our recipes). You can also sauté with garlic, ginger, lemon or toasted walnuts for another amazing way to increase flavor.



Sautéing

In French, “sauté” means “to jump.” To sauté food is to cook it over high heat thoroughly and quickly retaining its shape and nutritional value. Sautéing requires high heat, little time, fast action, and an uncovered low-profile pan with enough fat to coat the bottom. Before sautéing, food is cut into small pieces – dices, strips, or slices – to increase its surface area, which speeds up the cooking process.

There are three key principles to sautéing well: 1) Use small pieces (they have larger surface to volume ratio than larger pieces); 2) Cook just a small amount at a time; and 3) Have enough heat. If you sauté only small amounts at a time, each piece can be heated and cooked very quickly, and the moisture does not escape from the food. If there is too much food in the pan, the temperature in the pan drops too low to brown the food, moisture escapes, and the food steams rather than sautés.

Additional things to consider:

Mist the pan with oil. A very small amount of fat will bring out the flavor in foods like garlic, onions and shallots. Cooking garlic together with oil results with a flavor that cannot be achieved without it and adds complexity to a dish. A little fat will be invaluable and go a long way to bring out the flavors that would otherwise not occur in the same way.

Frequently, it is suggested in popular press to sauté foods in liquid to save on calories derived from fat. You cannot sauté in a liquid! In liquid, you can steam, boil, poach and simmer but you can't sauté. So why do people call this sautéing? Because sauté sounds a lot more palatable than the words like boil or poach. Medicine is a scientific discipline based on evidence. And so is the basis of chemical and physical reactions that occur when foods react to heat, moisture, temperature and other foods in a time-dependent manner. Two examples are the savory taste named umami by Kikunae Ikeda in 1908 and the Maillard reaction, first described by Louis-Camille Maillard in 1912. These examples illustrate the mechanisms by which plant proteins and sugars interact and change when exposed to heat for a specific amount of time to yield highly

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flavorful results. If garlic is sautéed in water, the end result would not be the same if just the slightest amount of oil were used.

You can use extra-virgin olive oil for sautéing, but always remember that oil is a fat, and fat calories are still fat calories no matter what type of oil you use. So, you should use the least amount of fat to prepare foods while getting the greatest amount of taste and flavor. Because any fat is about 120 calories per tablespoon you want to get the most mileage from oils by using them to infuse flavors in rubs, vinaigrettes, cooking and caramelizing foods such as onions, or achieving the incredible umami flavor from shitake mushrooms. So the bottom line, when cooking with oil, is “less is more”. Use less oil to achieve greater health and flavor benefits. Buy oils in small quantities and keep in a cool, dark place. Air, light and heat oxidize fatty acids in oils leading to their faster deterioration, making them unstable and eventually unsafe to use.

Back to sautéing. Here’s how to add flavor using tomatoes, zucchini and walnuts as our example: In a small bowl, add a little olive oil, chopped garlic, cumin, smoked paprika, salt, and pepper. Add the halved grape or cherry tomatoes and mix well. Heat a 12-inch sauté pan, add the coated tomatoes, medium diced or bias cut zucchini and sauté over medium-high heat. Sauté stirring frequently until the zucchini begins to brown and tomatoes soften, about 3 minutes. Mix in the walnuts and continue to sauté another 3 minutes, until zucchini is just tender, or until desired degree of doneness. (See our recipe for Zucchini with Tomatoes and Walnuts for exact directions.)

You can practice jumping the broccoli in the pan just like professional chefs by putting a can lid or piece of dry toast in a small omelet pan and try flipping it over. Once you are good at the mechanics of this, and handling a larger pan, with practice, you’ll be able to sauté and jump foods in a pan just like the pros.

Some veggies don’t need to be blanched before they’re sautéed. For example, cauliflower can just be sautéed to develop a nice brown color as a result (this is the Maillard reaction). Brussels sprouts are great sautéed (or roasted). You can also sauté leafy greens, like spinach, which cook quickly and are great when cooked briefly and just wilted.



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Steaming

Steaming is often (but not always) a technique used for food that cooks quickly. The food is cooked by hot steam that rises from the boiling water, teas or broths seasoned with aromatics below, and the food never touches the water. Steaming is a particularly healthy and low-calorie way to cook, as no extra fats are used. Also, the water-soluble vitamins, that would be lost if you boiled certain foods, such as vegetables, are retained more when you steam them, because they are cooked in a vapor bath and not touching the liquid. To prevent moisture loss from delicate fish, it can be wrapped in leafy greens or even in parchment paper, like the old classic Pompano en-Papillote, which will then capture juices and any added herbs, spices and aromatics for intense flavors. Small uniform size pieces are best so when the colors turn bright, they're usually ready.

Poaching and Simmering

Poaching is similar to steaming in its methodology, but involves placing the food in, not above, gently simmering water, kept at a consistent temperature, around 185° Fahrenheit. Simmering is when air bubbles are breaking around 200° and below boiling at 212°. For extra flavor, poach your food in wine or low-sodium broth and experiment with adding different herbs, such as thyme or bay leaves. You can control the temperature by the heat source and by covering, partially covering, or completely uncovering the pot.

Roasting

Roasting cooks foods by surrounding them in hot, dry air. The oldest and original form of roasting is spit roasting, which is still done today, when people cook over a campfire. Most roasting, however, is done in an oven. Roasting vegetables in the oven can help you achieve great texture and flavor. For some vegetables like a rutabaga, a quick blanch beforehand is recommended. Roasting slowly brings out flavor and sweetness in foods like tomatoes, carrots and beets by caramelizing their naturally occurring sugars.

Tips for roasting:

Preheat the oven to 350°. Cut veggies in even, similar size pieces. In a mixing bowl, add a small amount of olive oil (a little will go a long way), salt, pepper, chopped garlic and your choice of herbs and spices. Mix thoroughly, to infuse the oil with all the goodness that you added. Add vegetables, toss until well coated, and then spread them out on a parchment covered baking sheet pan or a non-stick baking sheet pan so they're evenly dispersed throughout the pan. The less crowded they are, the more evenly they will cook. Place the pan in the oven and roast for about 15 to 20 minutes, remove, check for degree of doneness, if they are getting brown and if so, then toss or turn them over. Continue cooking until they are at the degree of doneness you like, somewhere between 30 and 50 minutes is usually sufficient, depending on how you cut

them (the size) and your oven. Add some fresh parsley to garnish at the end, place in a serving dish and enjoy!



Baking

Baking is a dry heat cooking method in which foods are surrounded by hot, dry air in a closed environment – an oven. Very similar to roasting, baking typically refers to cooking a batter or dough into something more solid, such as bread. A recommendation is to invest in aluminum half-sheet pans. These pans sometimes come with ceramic or other nonstick coatings that require less oil and provide easier cleanup. Use the center of the oven for even cooking. Baking requires following steps precisely, whether it is measuring ingredients accurately or executing a technique properly, to obtain the desired outcome.



Braising

Braising involves slow cooking in a combination of dry heat and little liquid. Most times, braising is intended for less tender cuts of meat, which we do not recommend consuming. You can braise fish and vegetables with less liquid than in stewing. Most vegetables, however, are likely to be over-cooked and some nutrients destroyed or diminished). Braising is a good method for some vegetables such as leeks, onions, fennel, and celery that develop deepen flavors during slow cooking.

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Broiling

Broiling uses high temperatures and radiant heat from an overhead source. Food is placed on a grate or platter under a broiler. It is a dry heat cooking method used for browning, melting, and cooking.

Grilling

Grilling uses a heat source located below the cooking surface and can give a great flavor to food if practiced safely. Heat is transferred to the food through a heated surface and conduction between the food and the grill rack itself. There are different ways of grilling. Grilling can occur in a skillet with ridged surfaces used to pan-grill or griddling, similar to grilling in which foods are cooked on the heated surface of a flat solid griddle with different temperature zones.

Outdoor Grilling and Barbequing

There are health risks associated with eating heavily seared and charred foods.

First, the American Institute of Cancer Research, American Cancer Society and National Cancer Institute warn that grilling may increase the risk of various cancers. There is evidence that charring foods can damage our genes and may lead to cancer development or progression. Any food that is charred is a source of carcinogens (cancer-causing chemicals), whether it is popcorn, leeks, meat or bread products, like the outdoor grilled bread for bruschetta. Cancer-causing compounds called heterocyclic amines (HCAs) are produced when animal protein is cooked at the high temperatures used in grilling and broiling. Other cancer-causing compounds called polycyclic aromatic hydrocarbons (PAHs) are formed when the fat in meat drips onto hot coals. As food cooks on the grill, flames and smoke help deposit the PAHs onto the food. Second, there is also the concern regarding sodium nitrite, a simple salt used in bacon, ham, hot dogs, cold cuts and other cured foods that are frequently grilled. Ingestion of such foods can form nitrosamines which are known to be powerful carcinogens in animals and humans.

Marinades May Help: Some studies have suggested that marinating meat prior to grilling can actually reduce the formation of HCAs.

Studies show a significant decrease of HCAs formation when foods are marinated with herbs like rosemary, basil, thyme, oregano, sage, marjoram, and mint, prior to grilling. In addition to lowering cancer-causing compounds in your food, marinades can keep food moist during grilling and boost the flavor. A note of caution. Don't reuse marinades. The Food Safety and Inspection Service of the United States Department of Agriculture warns against this practice, unless you boil the marinade first to destroy bacteria. In summary, using a fresh marinade for basting is easy, makes grilled foods safer, and better tasting.

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Think Small, Lean and Thin: If foods to be grilled or barbecued (see our Grilled Salmon recipe) are small and thin they will need less time on the barbecue grill. The salmon in our recipe is only on the grill for two minutes, because it is cut into 1½ ounce slices on a bias. This allows the salmon to capture the grilled flavor while decreasing the risk associated with grilling due to greatly reduced exposure time. Ensure products are lean and well-trimmed of fat to reduce the possibility of flames, which cause burning and charring, and leading to the formation of carcinogens.



Safe Grilling Tips:

- Think small, lean and thin.
- Marinate foods prior to grilling with herbs.
- Drain off excess marinade well, to avoid flames.
- Place products on cold racks, at beginning of cooking, to prevent char marks on the food.
- Use a cooker or barbecue grill where you can raise or lower the rack.
- Use a cooker with a cover and base vent to control of the amount of oxygen that gets inside, therefore controlling the flame or eliminate it.
- Turn foods frequently to prevent charring.
- Eliminate any use of salt-cured, smoked, and nitrite-cured foods.
- Have an off-set fire to moderate the heat by having a cooler area on the grill.
- Avoid charcoal briquettes that contain chemicals.
- Ignite fire with an electric starter or chimney starter with newspaper, not lighter fluid.

When barbecuing outdoors on non-gas grills, arrange coals, preferably wood lump coals, in a pyramid shape over an electric charcoal lighter inside a cooker. The cooker needs to be equipped with a cover and vents that open and close on the sides or top of the cooker. This creates a pyramid effect for the most efficient retention of heat. Plug in the electric lighter. Once a flame is noticed in the coals, remove the electric lighter and restack the coals into a pyramid shape.

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Once the coals turn white-hot, flatten and scatter them. To prevent burning and charring, move cooked pieces of food off to the side and give the remaining uncooked foods the attention of the hottest part of the grill.

In summary: Keep foods small, lean, and thin. Marinate with herbs, drain marinade from foods, turn frequently, and avoid any burning or charring. Follow these steps and your grilled foods will not only be tasty, but healthier too!

Microwave Cooking

Microwave cooking is great when you need to prepare meals in a simple, fast and easy way. You can use it to steam veggies, melt chocolate, and cook potatoes. Make sure you pierce items like potatoes first, to allow steam to escape, so they don't burst. The moisture in vegetables is often sufficient to cook them well, like in an ear of corn on the cob. Some vegetables, like collard greens and kale, need to be microwaved with water. Whatever foods you microwave, do not use plastic, resin, or metal containers. Glass is the best and safest.

Cooking and Texture – Judging Doneness

The single most important ingredient in any recipe is the skill by which it is executed. It is very possible that three different people can make the same recipe and get three different outcomes. A four ounce piece of salmon that is small, but thick, will not cook the same as a piece that is thin and wide. Both are identical in weight, but by virtue of their shape and size, they will cook differently. How do you know when it's time to flip and turn, gauge time, temperature and degree of doneness? When toasting nuts, a toaster oven will cook differently than a standard gas oven. Are the nuts whole, halves, pieces or a combination of sizes? Is the pan stainless steel, aluminum, coated or ceramic? There are many variables in kitchens that can change recipe outcomes. This is why judging doneness during the cooking process is so important. The texture of food is a function of its physical nature, requiring careful consideration, to determine the method of preparing, and how it feels and tastes when we chew.

Even before the cooking begins, it's very important to practice cutting foods into same or similar size pieces. Consistency in size equates to consistency in doneness. For

example, cutting the ingredients into smaller pieces makes the texture more pleasing, easier to chew, and creates a better chance to get more ingredients into every bite.



Judging doneness takes practice. The more you cook, the better you'll be able to determine when the salmon is cooked, but not overdone, or when the broccoli is just al dente. The best way to determine if something is cooked properly, or not, is to taste it. When cooking farro, dip a fork into the pot and taste a little to see if it's done. There are small food thermometers, to pierce foods like salmon, to get a temperature reading. There are certain aspects to consider when doing this. For example, it's important that when inserting the thermometer probe, it is placed to the correct depth, and in a place that's not too close to a heat source, to get an accurate temperature reading. Fresh fish is transparent when raw and begins to change its appearance when heat is applied. You can lift a piece of salmon and gently bend it until it just begins to break, exposing the inside. Determine if it's done or not by considering some other factors, such as: Its color, how glossy or transparent it is, if it's opaque and if it's done to your liking. Because fish is delicate and fragile, it is easy to overcook and will be dry and tough due to the loss of moisture. Once you become more experienced, you'll be able to touch the salmon and determine its doneness by its firmness, color and appearance.

Whether it's mushrooms or vegetables, the preparation of cutting, method of cooking, time, temperature and degree of doneness are critical to the outcome. The best way to achieve mastery is to be mindfully aware of every step in the process, make notes if necessary, and adjust accordingly. Don't despair! With practice it will get easier and easier, and you will be amazed at how well you cook.

Blending

Merriam Webster defines blending as "to produce a harmonious effect" and "to combine into an integrated whole". The blending of diverse types of foods is of particular importance when we are trying to reduce or replace added sugars, sodium and fat and that can be tricky. Making a textbook vinaigrette that consists of 3 parts oil to one-part acid is easy, but it becomes challenging when doing so with a one to one ratio or with

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no oil at all. We have different taste preferences, dietary restrictions, and food budgets. Therefore, both the selection of ingredients and the mechanics of blending, become really important when trying to prepare healthier meals that taste great to YOU. That's the key!

Trying to blend an oil and vinegar with a one to one ratio of oil to acid can be difficult to emulsify together. A technique to thicken while adding nutrients is to use cooked legumes. Add and mash-in cooked legumes you find complimentary or neutral in taste, such as a white bean like, great northern, navy or cannellini. This blending adds viscosity and denseness to the vinaigrette along with great flavors, protein and fiber. That makes it taste not only great but it is also healthier! You can also add mashed fruits or cooked vegetables that are pleasing to YOU to thicken a vinaigrette. You get the idea!

The timing of blending is also important. Blending a lemon juice vinaigrette too soon with broccoli will cause the acidic lemon juice to turn the broccoli yellow after 20 minutes. Mashing avocado too soon, without an acid like lime juice, will cause the avocado to brown. Blending in fresh herbs, like parsley, is better to do in the later stages of cooking, while adding dried spices, salt and pepper benefit the early stages of cooking.

Consider this: What can you blend with foods for meal preparations you enjoy, that can reduce the amount of added sugars and still provide sweetness and nutritional benefits? An example in this toolkit is our recipe for raisin reduction. What can you add to make foods moist while reducing added oil? Review and try the Rutabaga, Carrot and Sweet Potato Mash recipe. And, to reduce the amount of sodium, use vinegar, citrus, spices and herbs, try our Blueberry, Fig and Prune Dressing recipe.



Food Safety and Sanitation

- Wash your hands with warm water and soap for 20 seconds before / after handling food
- Keep your cutting board free of clutter
- Wash cutting boards, knives, utensils, etc. with hot soapy water after preparing each food item – especially after cutting raw meats, poultry or seafood
- Store cutting boards upright or in a rack to air dry after cleaning and sanitizing to prevent bacteria
- Disinfection: Make a bleach solution combining 1 tablespoon of unscented, liquid chlorine bleach per gallon of water.
- Rinse fresh fruits and vegetables under running tap water
- Typically, people do not wash their onions, garlic, and shallots. Before picking these items up from the store they were probably handled heavily by store workers. To prevent cross contamination when cutting the peels off, cut them on paper towels on your cutting board. This also makes cleanup easier. Wash your hands and knife before chopping.
- Rub or scrub firm-skin fruits and vegetables under running tap water
- Keep your fridge at 38 degrees F or below
- Store raw foods below cooked foods in your refrigerator
- Bacteria spreads fastest at temperatures between 40 - 140 degrees F
- Do not keep foods between 40 - 140 degrees F longer than 2 hours
- Avoid cross-contamination by keeping raw meats, poultry, and seafood away from ready to eat foods
- Chill hot foods to 40 degrees F within 4 hours by using an ice bath and /or dividing into small batches



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Kitchen Equipment



Chef's Knife, (6, 8, 10, or 12 inches)

Chef's knives come in sizes between 6, 8, 10, and 12 inches. A smaller knife like a 6-inch, may be more comfortable for someone with smaller hands.



Paring Knife

Having the right knife for the right job is important. Paring knives are good for small jobs like cutting strawberries. A serrated knife with an offset handle may be more comfortable for someone slicing bread or a tomato.



Serrated Knife



Can-opener

Can openers have a wide variety of designs including electric ones that make opening canned goods



Hand masher and Peeler

A hand masher is good to have for recipes like guacamole. Peelers come in many shapes and sizes. Thick handles can help to hold it while peeling.



Tongs

Tongs come in all sizes and it's good to have a pair with coated tips to not scratch a non-stick coated pans and baking sheets.



Food thermometer

Food thermometers (digital or probe) are important to check doneness of food, especially proteins like fish and chicken.



Salad spinner

Salad spinners allow you to wash and dry lettuce, leafy greens and herbs.



Mallet

Mallets are good to flatten and tenderize meat to help ensure consistent size and doneness during cooking.



Measuring cups (liquid and dry) and measuring spoons

Measuring cups and spoons are essential for cooking to get proper ingredient measurements. Liquid measures come in plastic and glass like "pyrex", and measuring spoons and dry measuring cups are found in plastic and metal types.



Collander and strainer

Colanders and strainers come in many types and sizes. They are necessary for rinsing and draining fruits, vegetables, mushrooms, cooked grains, and more.



Whisk

A whisk is used to blend liquids together like a vinaigrette, or can be used for mixing dry ingredients well in baking.



Reamer and Citrus Juicers

There are many types of citrus juicers including press juicers that catch the seeds, ones that have measuring cups attached, and plain old wooden reamers. These are helpful for fresh squeezed juices.



Wooden Spoons and Spatulas (Heat Resistant)

Wooden spoons and spatulas can be interchangeable if needed, but a wooden spoon may be better for stirring soup where as a heat resistant spatula is good to scrape the sides of a bowl or pot well, and folding or blending ingredients.



Box Grater and Microplane

A microplane grater comes with fine blades, which allows it to shave much more finely and consistently as compared to a traditional box grater, but a box grater has larger holes good for shredding vegetables like carrots, zucchini, or potatoes.

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Food processor(s)

Food processors come in all different sizes. A food processor is used in many recipes and is especially great for making hummus or pesto. A small mini processor is good for mincing garlic, fine chopping nuts, and blending small amounts.



Blender and Immersion Blender

Blender's are different than food processors and need more liquid and volume in order to blend. A high-speed blender are very helpful to liquefy foods like nuts, vegetables, and fruits in smoothies or dressings.



Kitchen Scale

A kitchen scale is great for accurate measuring especially when recipes have ounce-weight. These are fairly affordable in both digital and classic scales.



**Sauté pans or skillets (8-14 inches)
(stainless and/or Non-stick PFOE free)**

Sauté pans or skillets come in all types and sizes. Nonstick pans are helpful for cooking with less fat and is easier for cleanup.



Stockpots and saucepans (stainless steel variety of sizes)

Pots with fitted lids are needed to cook soups, sauces, grains, and one-pot meals. Stainless pots have great longevity and a variety of sizes are good to have. Some brands can include perforated and/or solid inserts for steaming, and for tempering items like chocolate.



Mixing bowls (all sizes)

Having mixing bowls in all sizes is good for mixing ingredients, and for good mis en place. Bowls come in metal, glass, silicone, and more



Cutting boards

Cutting boards ensure safe cutting, chopping and protect your knives. Two sizes of cutting boards are helpful. Clean them well after each use, allow to thoroughly dry, and store upright to prevent bacteria growth.



Baking pans and sheets of all types

Aluminum and nonstick (PFOE free) baking sheets and muffin pans can make baking and the cleanup much easier. Having racks to fit in sheet pans allow air to go under the food when roasting foods like fish. Glass baking pans and loaf pans are good for baking and for no bake recipes too that just get put in the refrigerator.

Culinary Medicine

Knife Skills

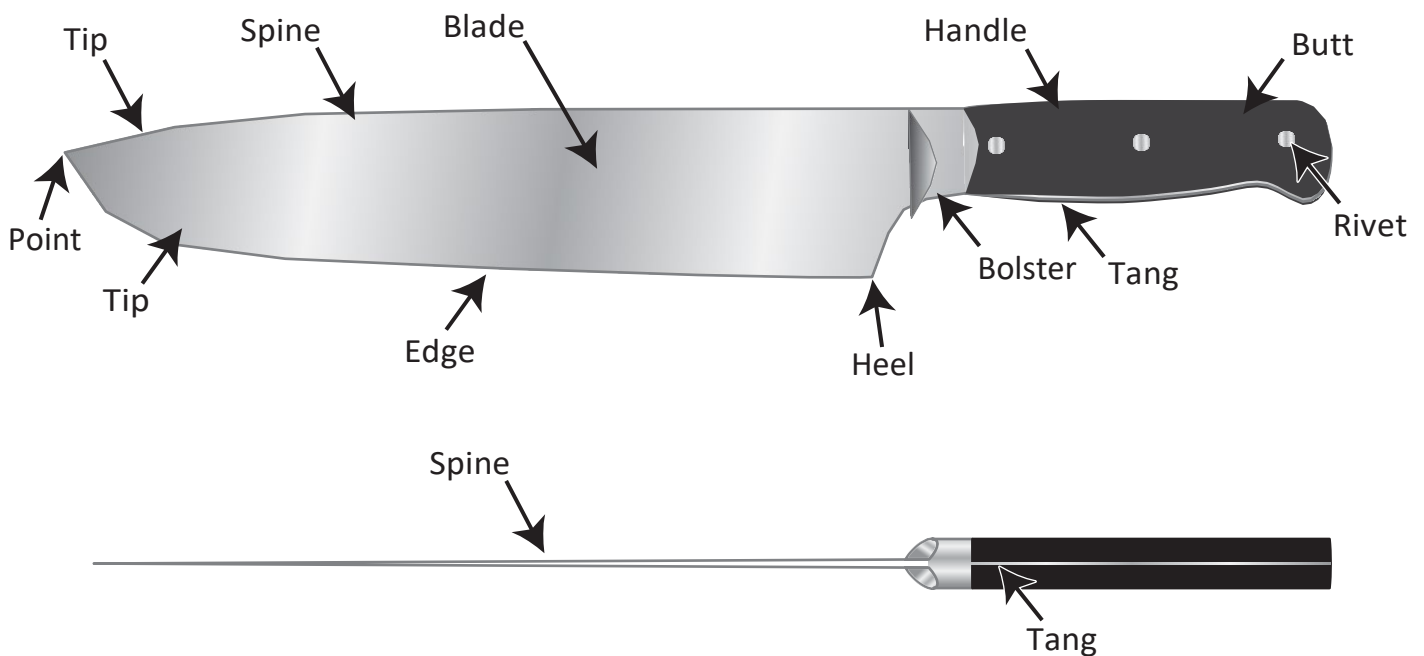


8-inch Chef's Knife



Knife skills are essential to helping people getting into the kitchen to cook. An 8-inch half bolster chef's knife is the essential kitchen knife we recommend everyone should have. The main parts are the blade and handle. A good knife also has a full tang, which is an extension of the blade, extending through the handle. This along with a half bolster (indicated in the illustration below) add to the strength and durability of the knife which is important when force is applied.

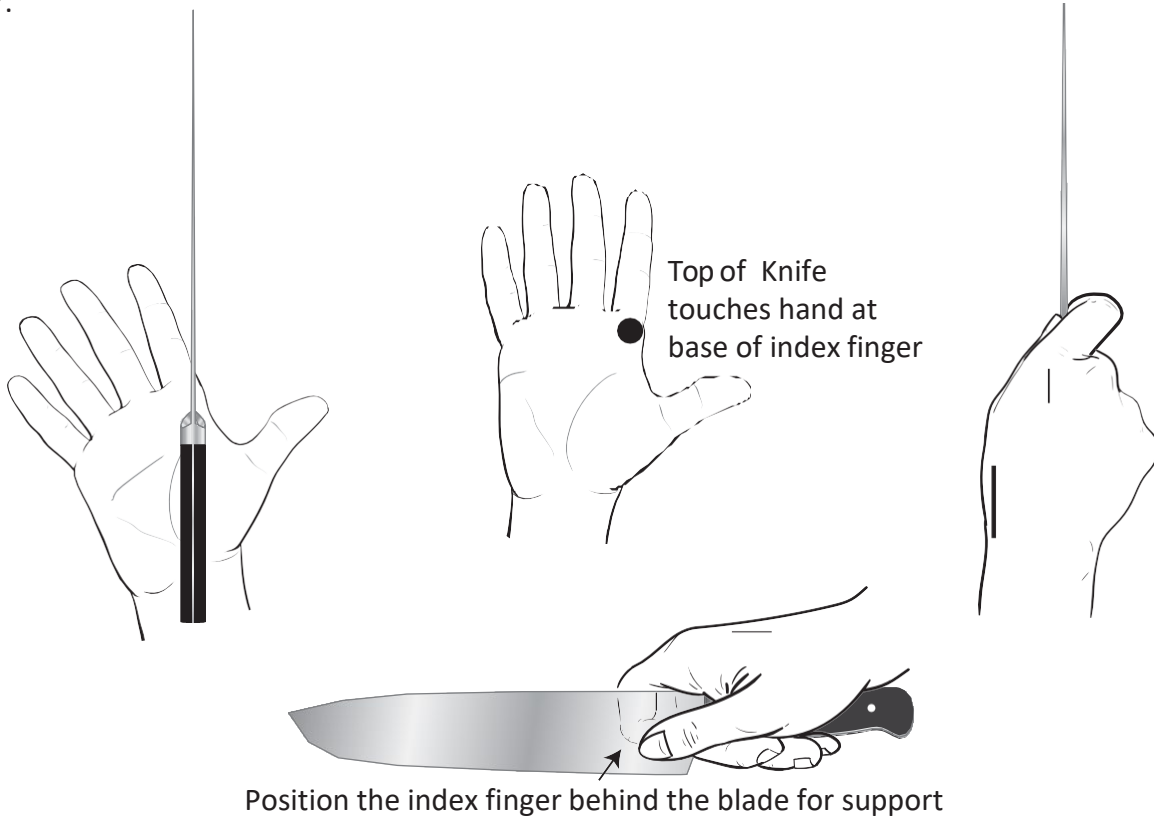
Parts of a Chef's Knife



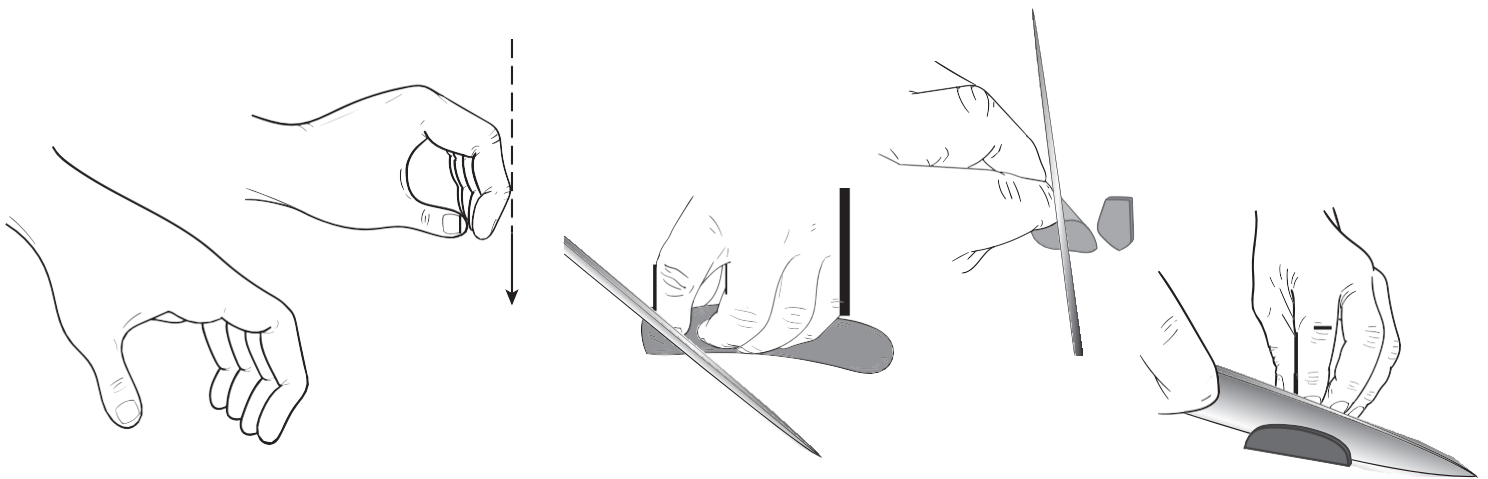
The main parts of a chef's knife are the tip, point, spine, cutting edge, heel, bolster and handle. Some handles will have rivets that attach the handle to the spine, others are encased around a full tang or a partial tang. The bolster is the junction where the blade meets the handle. Some knives have full bolsters from the spine to the blade. This adds strength and durability, but can be difficult to sharpen once the cutting edge near the bolster becomes worn. Since the bolster is much thicker than the cutting edge of the blade, it will need to be ground down even with the edge. It also makes the sharpening and honing the knife more difficult because it prevents the blade from moving evenly through a sharpener. The benefit of a half or tapered bolster knife is to give durability and make sharpen easy from the heel to the point of the knife.

Holding the Knife

Thumb and index finger on blade, three fingers on handle. This Provides increased dexterity, control, and less wrist fatigue. The junction at the top of the blade that meets the bolster should touch the base of your index finger.



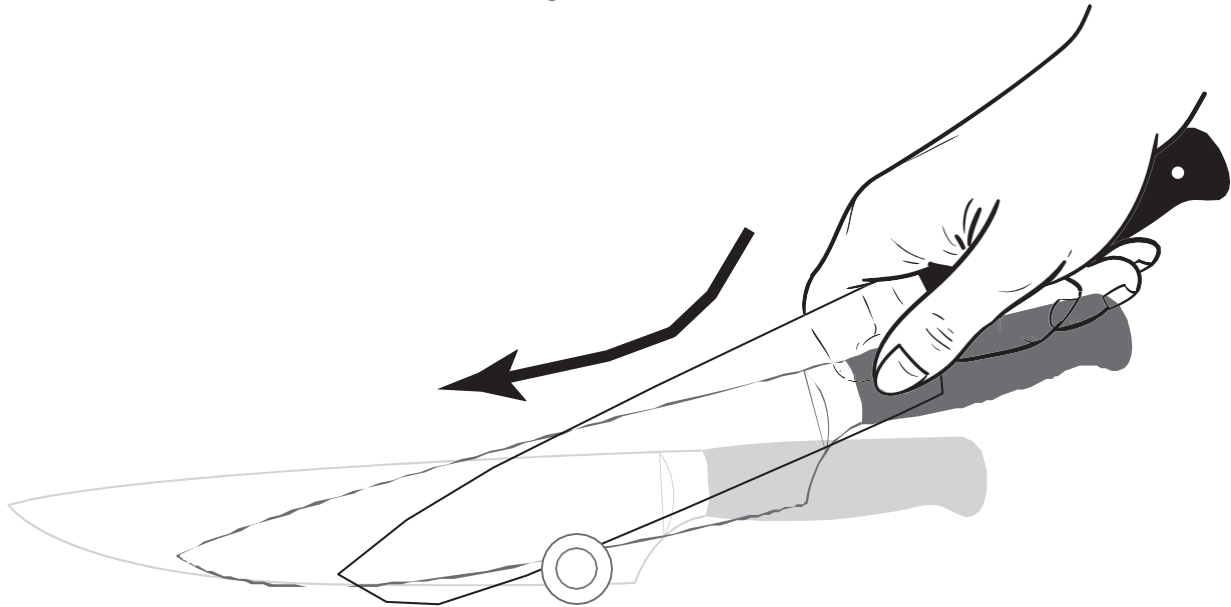
Holding the food Position of the guiding hand while cutting



The ideal position for the guiding hand or the hand holding the food is when the fingers are slightly curled under the first knuckle joint to protect the fingertips while pressing down on the food ingredient to keep it from moving. The blade should be touching the first knuckle leaving a gap between the blade and your fingertips. The thumb and little finger behind the other fingers.

Ideally, while the hand that is holding the knife moves forward and back to cut, the guiding hand moves across the food accordingly and in sync with the speed of the cutting. This takes practice to master, but it is a skill that will serve you with every meal you prepare for the rest of your life!

Cutting with the Knife



- Cuts are made downward with a rocking motion from the tip to the end of the blade. The knife is not sawed back and forth through foods.
- Pivot technique; knife point keeps contact with cutting surface.
- Free pass technique; entire knife is lifted from cutting surface in up/down or back/forth motions.
- Chopping; fast pace up/down motion

Cutting Surface Sanitation

- Clean as you go.
- Wash cutting board with soap/hot water and rinse well.
- Can sanitize with one tablespoon chlorine bleach to one gallon water on clean surface, then rinse and dry.

Mise en Place

Making a meal involves gathering ingredients, equipment as well as all the cutting and chopping of food. This is the mise en place stage of making a meal. Mise en place is a French term that means “Put in place or everything in its place”. This means having all required equipment readily available to prepare your meal easily. This would include pans, measuring cups and spoons, wire whisks, mixing bowls and little containers for small measures of chopped garlic, spices and herbs. It is also helpful to have staple ingredients like flour, black pepper and olive oil also within a reasonable reach. The reason for this is that you want to concentrate on the task at hand and not having to stop and get something that should have been a part of your mise en place to prepare a recipe or meal. This allows you to mindfully focus on critical elements of meal preparation such as time, temperature and degree of doneness.

A serious and constant companion of mise en place is another “Culinary Code of Conduct” termed “Clean as you go”. The entire time you are preparing mise en place you clean as you go to avoid a pile of dirty utensils and bowls, a step critical to prevent of any cross contamination of ingredients. Even when cutting the same ingredient like a lot of mushrooms, you want to cut some, put them in a bowl, and repeat the process until all are sliced. That way you don’t have a mound of mushrooms on your cutting board while trying to find room to slice the remaining mushrooms. Cutting on a clean uncluttered board makes cutting safer and more fun.

Just like we have to make time to be physically active do yoga or other self-care practices, we have to create time to cook! The problem is that we may not allocate enough time for the mise en place because we underestimate the time it takes to do it. This is why efficiencies in cutting, chopping and cooking are so important. They quicken completion of meal preparation, build confidence and are likely to result with a great tasting and satisfying meal.

The new reality is that mise en place in 2023 has changed. And in many ways for the better. We have digital information at our fingertips to access recipes, learn about culinary techniques and may acquire an amazing array of new culinary gadgets that speed that process. Immersion blenders, spiralizers and professional grade cutlery are now easily available and affordable at many stores. So it is perfectly fine to multitask when preparing your mise en place. That means that you can have a grain cooking in a rice cooker while you are peeling and chopping garlic or oven roasting vegetables or cleaning, spin-drying and cooking the chard. Mastering culinary skills empowers you with the confidence and increased desire to prepare healthy meals efficiently. And, the more often you eat great-tasting freshly prepared whole foods, your taste buds will begin to change and increase the desire for preparing healthy meals. And it begins with mastering mise en place!

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Master Grocery List and Staples for your Pantry/Refrigerator

DRY STORAGE:

- Boxed Milks – Unsweetened* Almond, Soy, Hemp, Oat, etc.
- Unsweetened dried fruits: raisins, Turkish apricots, prunes, figs,
- Corn starch
- Dried chilies: Ancho, New Mexico, etc.
- Legumes: Dried beans, split peas and Lentils – variety of your choice.
- Wild rice
- Nuts: Walnuts, pistachios, pecans, raw-cashews, and almonds (can be toasted if desired and put in an airtight container in the freezer for extended shelf life.)
- Seeds: Sunflower, Pepitas/pumpkin seeds, Chia, Flax seed – (grind flax seed as needed and store in freezer or refrigerator for longer shelf life)
- Tea bags – black, green, herb, etc.
- 70% Dark chocolate
- Active dry yeast
- Baking Powder
- Baking Soda
- Cocoa Powder
- Cornstarch
- Espresso Powder
- 70% Dark Chocolate

GRAINS – WHOLE WHEAT

- 100% Whole grain wheat flour
- 100% Whole grain barley
- 100% Whole grain wheat berries
- 100% Whole Grain Brown Rice – short grain, whole long grain Basmati, etc.
- Farro
- Bulgur (cracked wheat)
- Spelt
- 100% Whole Rye
- Pastas – 100% whole grain wheat, Suggest different shapes and sizes for different meals.

GRAINS – GLUTEN FREE

- Pastas - Whole grain brown rice, lentil, edamame, and chickpea pasta
- 100% Whole grain brown rice cakes
- Quinoa
- Oats
- Cornmeal
- Popcorn (without butter)
- Millet
- Buckwheat

CAN/BOTTLED/JAR GOODS:

- Apple Cider Vinegar
- Artichokes
- Balsamic Vinegar
- Beans – black, great northern, cannellini, pinto, garbanzo, etc. (look for reduced, or low sodium)
- Beets
- Capers
- Catsup ($\leq 2g$ sugar per serving)
- Dairy-free mayonnaise
- Dijon Mustard
- Distilled White vinegar
- Extra Virgin Olive Oil
- Hot sauce
- Jackfruit
- Nut Butters: Peanut, Almond, Cashew, Sunflower, Seed, etc. (Plain ground nut butter without added sugar or fat)
- Olives
- Pineapple Juice
- Pureed pumpkin
- Red wine vinegar
- Rice vinegar
- Roasted Red Peppers
- Sambol-Oelek (chili paste)
- Sherry vinegar
- Sweet chili sauce
- Tahini (ground sesame seed)
- Tamari/Soy sauce, Low sodium
- Tomatoes – diced, crushed, paste, tomato/pasta sauces (no sugar added)
- Vanilla extract
- Vegetable broth (cartons and/or Vegetable Base concentrates like Minor's)

HERBS AND SPICES

- Allspice
- Basil
- Black Pepper
- Caraway
- Cayenne
- Chile Powder
- Coriander
- Cinnamon
- Cloves, ground & whole
- Cumin
- Dill
- Dried Basil
- Dried Mustard
- Dried Parsley
- Fennel seeds
- Garam Masala
- Garlic
- Ginger, ground
- Kosher Salt
- Mustard, dry
- Nutmeg
- Oregano
- Paprika
- Parsley
- Red Pepper Flakes
- Rosemary
- Smoked Paprika
- Thyme
- Turmeric

REFRIGERATED

- Asparagus
- Beets
- Berries
- Bok Choy/Leeks
- Broccoli
- Brussels Sprouts
- Cauliflower
- Celery
- Citrus – lemons, limes, oranges, grapefruit
- Eggplant
- Flax seed
- Fresh herbs like basil and rosemary
- Leafy Greens – spinach/kale/arugula/swiss chard
- Grapes
- Mushrooms
- Tempeh, plain
- Tofu – plain, silken and extra firm
- 100% Pure Maple Syrup
- Zucchini/Summer squash

FROZEN

- Bread/ pita/ wraps – until ready to use, then stored at room temperature in a plastic bag. (100% whole wheat or gluten free)
- Flour – 100% whole wheat, 100% whole wheat pastry, gluten free (almond, chickpea)
- Raisin reduction
- Frozen fruit – peeled ripe bananas, grapes, berries, mixed fruit etc.
- Frozen vegetables – assorted
- Frozen toasted nuts

COUNTERTOP FRUITS AND VEGETABLES

- Apricots
- Avocado
- Bananas
- Kiwi
- Mango
- Peaches/nectarines
- Tomatoes
- Pears

COOL AND DRY PLACE FRUITS AND VEGETABLES

- Butternut and Acorn Squashes
- Onions
- Garlic
- Potatoes, all varieties
- Rutabaga
- Shallots

ANIMAL PRODUCTS

- Eggs
- Fish, fresh, frozen, pickled and canned, Herring, sardines, salmon, trout
- Chicken and turkey,
white meat only

MOST PEOPLE INQUIRE ABOUT GETTING ADEQUATE AMOUNTS OF THE FOLLOWING NUTRIENTS WHEN CHOOSING TO CONSUME PLANT-BASED MEALS

PLANT-BASED PROTEIN SOURCES

Food	Amount	Protein (g)
Tempeh	½ cup	15 g
Peanuts	¼ cup	10.5 g
Tofu	½ cup	10 g
Hempseed	2 Tablespoons	10 g
Lentils, cooked	½ cup	9 g
Nutritional Yeast	2 Tablespoons	9 g
Almonds	¼ cup	8.5 g
Edamame, cooked	½ cup	8.5 g
Peanut Butter	2 Tablespoons	8 g
Beans (variety)	½ cup	7 g
Spinach, cooked	½ cup	3 g
Oats, cooked	½ cup	6 g
Pumpkin seeds	2 Tablespoons	5 g
Chia seed	2 Tablespoons	4 g
Green peas, cooked	½ cup	4 g
Quinoa, cooked	½ cup	4 g
Brown rice, cooked	½ cup	2 g
Potato, white, cooked	½ medium	2 g
Broccoli, cooked	½ cup	2 g
Brussels Sprouts, cooked	½ cup	2 g
Spinach, raw	2 cups	1.8 g
Asparagus, cooked	½ cup	1.5 g
Jackfruit	½ cup	1.5 g
Mustard Greens, cooked	½ cup	1.5 g
Squash (yellow), cooked	½ cup	1.5 g
Avocado	1/3 medium	1.3 g
Banana	1 medium	1.3 g
Cauliflower, cooked	½ cup	1 g
Kiwi	½ cup	1 g

PLANT-BASED CALCIUM SOURCES

Food	Amount	Calcium (mg)
Fortified Milk, (almond, soy, rice)	1 cup	350 mg
Tofu, prepared with calcium	½ cup	205 mg
Kale, raw	2 cups	180 mg
Kidney beans, cooked	½ cup	180 mg
Spinach, cooked	½ cup	135 mg
Collard greens, cooked	½ cup	135 mg
Almond butter	2 Tablespoons	111 mg
Bok Choy, cooked	½ cup	100 mg
White beans, cooked	½ cup	95 mg
Okra, cooked	½ cup	90 mg
Soybeans, cooked	½ cup	88 mg
Almonds	¼ cup	62 mg
Spinach, raw	2 cups	60 mg
Walnuts	½ cup	60 mg
Oranges	1 medium	55 mg
Swiss Chard, cooked	½ cup	51 mg
Mustard greens, cooked	½ cup	50 mg
Broccoli Rabe, cooked	½ cup	50 mg
Butternut squash, cooked	½ cup	42 mg
Broccoli, cooked	½ cup	30 mg
Brussels Sprouts, cooked	½ cup	30 mg
Tangerine	1 medium	30 mg
Green beans, cooked	½ cup	28 mg
Kiwi	1 medium	25 mg
Parsley	¼ cup	21 mg
Broccoli, raw	½ cup	20 mg
Sweet potato, cooked	1/3 medium	18.3 mg
Tahini	2 Tablespoons	16 mg
Apricots	½ cup	10.5 mg

VITAMIN B12 SOURCES – NOTE: IF YOU ARE VEGAN, MAKE SURE TO TAKE VITAMIN B12 SUPPLEMENT

Food	Amount	B12 (mcg)
Plant-Based:		
Nutritional Yeast	2 Tablespoons	10 mcg
Fortified Cereal	1 cup	6 mcg
Fortified Nondairy Milk	1 cup	2.1 mcg
(Recommend to take a Vitamin B12 supplement when on a plant-based diet)		
Animal Products:		
Sardines	3 ounces	8.1 mcg
Trout	3 ounces	5.4 mcg
Salmon	3 ounces	4.9 mcg
Tuna, canned	3 ounces	2.5 mcg

PLANT-BASED IRON SOURCES

Food	Amount	Iron (mg)
Spinach, raw	2 cups	6 mg
Soybeans, cooked	½ cup	4.4 mg
Pumpkin seeds	2 Tablespoons	4.2 mg
Dried apricots	½ cup	4 mg
White beans, cooked	½ cup	3.9 mg
Lentils, cooked	½ cup	3.5 mg
Dark chocolate	1 ounce	3.3 mg
Spinach, cooked	½ cup	3 mg
Black eyed peas, cooked	½ cup	2.5 mg
Hearts of Palm	½ cup	2.3 mg
Olives, black	½ cup	2.2 mg
Tomato paste	¼ cup	2 mg
Swiss chard, cooked	½ cup	2 mg
Potato, white, cooked	½ medium	1.6 mg
Turnip greens, cooked	½ cup	1.6 mg
Asparagus, cooked	½ cup	1.5 mg
Podded peas, raw	½ cup	1.5 mg
Mushrooms, cooked	½ cup	1.5 mg
Prune juice	4 oz.	1.5 mg
Beets, canned, drained	½ cup	1.5 mg
Quinoa, cooked	½ cup	1.4 mg

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Leeks, raw	½ cup	1 mg
Oats, cooked	½ cup	1 mg
Brussels sprouts, cooked	½ cup	1 mg
Kale, cooked	½ cup	0.8 mg
Broccoli, cooked	½ cup	0.6 mg
Sweet potato, baked w/ skin	1/3 medium	0.4 mg
Apple	1 medium	0.3 mg
Watermelon	½ cup	0.2 mg

DIETARY FIBER SOURCES – NOTE: FOODS OF ANIMAL ORIGIN DO NOT CONTAIN DIETARY FIBER

Food	Amount	Fiber (g)
Dried Figs	½ cup	11 g
Chia seed	2 Tablespoons	10 g
Dried Apricots	½ cup	9 g
Lentils, cooked	½ cup	8 g
Artichoke hearts	½ cup	7 g
Beans (variety)	½ cup	6 g
Pear (with skin)	1 medium	6 g
Dried Prunes	½ cup	6 g
Barley	½ cup	5 g
Mango	½ cup	5 g
Quinoa, cooked	½ cup	5 g
Green peas, cooked	½ cup	4.5 g
Avocado	1/3 medium	4.3 g
Oats, cooked	½ cup	4 g
Whole wheat pasta	½ cup	4 g
Berries (blackberries, raspberries, etc.)	½ cup	4 g
Nutritional Yeast	2 Tablespoons	4 g
Butternut squash, cooked	½ cup	3.5 g
Parsnips, cooked	½ cup	3.5 g
Broccoli, cooked	½ cup	3 g
Raisins	½ cup	3 g
Collard greens, cooked	½ cup	3 g
Apple (with skin)	1 medium	3 g
Banana	1 medium	3 g
Orange	1 medium	3 g
Jicama, raw	½ cup	3 g
Tahini	2 Tablespoons	2.6 g
Brussels sprouts, cooked	½ cup	2.5 g

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Wellness

Pecans	¼ cup	2.5 g
Spinach, cooked	½ cup	2 g
Asparagus, cooked	½ cup	2 g
Green beans, cooked	½ cup	2 g
Walnuts	¼ cup	1.75 g
Carrots, raw	½ cup	1.6 g
Beets, canned	½ cup	1.5 g
White mushrooms, cooked	½ cup	1.5 g
Rutabaga, cooked	½ cup	1.5 g
Kale, cooked	½ cup	1.3 g
Sweet potatoes, cooked	1/3 medium	1.3 g

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