

SALTFAT ACIDHEAT

MASTERING THE ELEMENTS *of* GOOD COOKING

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*For Alice Waters, who gave me the kitchen,
and for Maman, who gave me the world*

Anyone who loves to eat, can soon learn to cook well.

—Jane Grigson

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PART ONE

THE FOUR ELEMENTS of GOOD COOKING



SALT



Growing up, I thought salt belonged in a shaker at the table, and nowhere else. I never added it to food, or saw Maman add it to food. When my aunt Ziba, who had a well-documented taste for salt, sprinkled it onto her saffron rice at the table each night, my brothers and I giggled. We thought it was the strangest, funniest thing in the world. “What on earth,” I wondered, “can salt do for food?”

I associated salt with the beach, where I spent my childhood seasoned with it. There were the endless hours in the Pacific, swallowing mouthful after mouthful of ocean water when I misjudged the waves. Tidepooling at twilight, my friends and I often fell victim to the saltwater spray while we poked at anemones. And my brothers, chasing me on the sand with giant kelp, would tickle and taunt me with its salty, otherworldly tassels whenever they caught up to me.

Maman always kept our swimsuits in the back of our blue Volvo station wagon, because the beach was always where we wanted to be. She was deft with the umbrella and blankets, setting them up while she shooed the three of us into the sea.

We’d stay in the water until we were starving, scanning the beach for the sun-faded coral and white umbrella, the only landmark that would lead us back to Maman. Wiping salt water from our eyes, we beelined to her.

Somehow, Maman always knew exactly what would taste best when we emerged: Persian cucumbers topped with sheep’s milk feta cheese rolled together in lavash bread. We chased the sandwiches with handfuls of ice-cold grapes or wedges of watermelon to quench our thirst.

That snack, eaten while my curls dripped with seawater and salt crust formed on my skin, always tasted *so good*. Without a doubt, the pleasures of the beach added to the magic of the experience, but it wasn’t until many years later, working at Chez Panisse, that I understood why those bites had been so perfect from a culinary point of view.

While bussing tables during the first year I worked at Chez Panisse, the closest I usually got to the food was at tasters, when the cooks made each dish for the chef to critique before service. With a menu that changed daily, the chef needed tasters to ensure that his or her vision was realized. Everything had to be just right. The cooks would tinker and adjust until satisfied; then they’d hand over the dishes to the floor staff to taste. On the tiny back porch, a dozen of us would hover over the plates, passing them around until we’d all had a bite of everything. It was there that I first

tasted crisp deep-fried quail, tender salmon grilled in a fig leaf, and buttermilk *panna cotta* with fragrant wild strawberries. Often, the powerful flavors would haunt me throughout my shift.

Once I developed culinary aspirations, Chris Lee, the chef who'd eventually take me under his wing, suggested that I pay less attention to what was happening on the porch during tasters, and more to what was happening in the kitchen. The language the chefs used, how they knew when something was right—these were clues about how to become a better cook. Most often, when a dish fell flat, the answer lay in adjusting the salt. Sometimes it was in the form of salt crystals, but other times it meant a grating of cheese, some pounded anchovies, a few olives, or a sprinkling of capers. I began to see that there is no better guide in the kitchen than thoughtful tasting, and that nothing is more important to taste thoughtfully for than salt.

One day the following year, as a young cook in the prep kitchen, I was tasked with cooking polenta. I'd tasted polenta only once before coming to Chez Panisse, and I wasn't a fan. Precooked and wrapped in plastic like a roll of cookie dough, it was flavorless. But I'd promised myself that I would try everything at the restaurant at least once, and when I tasted polenta for the second time, I couldn't believe that something so creamy and complex could share a name with that flavorless tube of astronaut food. Milled from an heirloom variety of corn, each bite of the polenta at Chez Panisse tasted of sweetness and earth. I couldn't wait to cook some myself.

Once the chef, Cal Peternell, talked me through the steps of making the polenta, I began cooking. Consumed by the fear of scorching and ruining the entire humongous pot—a mistake I had seen other cooks make—I stirred maniacally.

After an hour and a half, I'd added in butter and Parmesan, just as Cal had instructed me. I brought him a spoonful of the creamy porridge to taste. At six foot four, Cal is a gentle giant with sandy-blond hair and the driest of wits. I looked expectantly up at him with equal parts respect and terror. He said, in his signature deadpan, "It needs more salt." Dutifully, I returned to the pot and sprinkled in a few grains of salt, treating them with the preciousness I might afford, say, gold leaf. I thought it tasted pretty good, so I returned to Cal with a spoonful of my newly adjusted polenta.

Again, a moment's consideration was all he needed to know the seasoning was off. But now—to save himself the trouble and time, I imagine—he marched me back to the pot and added not one but three enormous palmfuls of kosher salt.

The perfectionist in me was horrified. I had wanted so badly to do that polenta justice! The degree to which I'd been off was exponential. Three *palmfuls!*

Cal grabbed spoons and together we tasted. Some indescribable transformation had occurred. The corn was somehow sweeter, the butter richer. All of the flavors were more pronounced. I'd been certain Cal had ruined the pot and turned my polenta into a salt lick, but no matter how I tried, the word *salty* did not apply to what I tasted. All I felt was a satisfying *zing!* with each mouthful.

It was as if I'd been struck by lightning. It'd never occurred to me that salt was anything more than pepper's sidekick. But now, having experienced the transformative power of salt for myself, I wanted to learn how to get that *zing!* every time I cooked. I thought about all of the foods I'd loved to eat growing up—and that bite of beachside cucumber and feta, in particular. I realized then why it had tasted so good. It was properly seasoned, with salt.



WHAT IS SALT?

The secret behind that *zing!* can be explained by some basic chemistry. Salt is a mineral: sodium chloride. It's one of a few dozen essential nutrients without which we cannot survive. The human body can't store much salt, so we need to consume it regularly in order to be able to carry out basic biological processes, such as delivering nutrients to and from cells, and the nerve transmissions that allow our muscles to move. In fact, we're hardwired to crave salt to ensure we get enough of it. The lucky consequence of this is that salt makes almost everything taste better to us, so it's a hardly a chore to add it to our food. In fact, by enhancing flavor, salt increases the pleasure we experience as we eat.

All salt comes from the ocean, be it the Atlantic or a long-forgotten sea like the giant prehistoric Lake Minchin of Bolivia, home of the earth's largest salt flat. Salt that is left behind when seawater evaporates is *sea salt*, whereas *rock salt* is mined from ancient lakes and seas, some of which now lie far underground.

The primary role that salt plays in cooking is to amplify flavor. Though salt also affects texture, nearly every decision you'll make about salt will involve enhancing and deepening flavor.

Does this mean you should simply use *more* salt? No. It means, use salt *better*. Add it in the right amount, at the right time, in the right form. A smaller amount of salt applied while cooking will often do more to improve flavor than a larger amount added at the table. And unless you have been specifically told by your doctor to limit your salt consumption, you can relax about your sodium intake. When students balk at the palmfuls of salt I add to pots of water for boiling vegetables, I gently point out that most of the salt will end up going down the drain with the cooking water. In almost every case, anything you cook for yourself at home is more nutritious, and lower in sodium, than processed, prepared, or restaurant food.

SALT AND FLAVOR

James Beard, the father of modern American cookery, once asked, "Where would we be without salt?" I know the answer: adrift in a sea of blandness. If only one lesson from this book stays with you, let it be this: *Salt has a greater impact on flavor than any other ingredient.* Learn to use it well, and your food will taste good.

Salt's relationship to flavor is multidimensional: it has its own particular flavor, and it enhances the flavor of *other* ingredients. Used properly, salt minimizes bitterness, balances out sweetness, and enhances aromas, heightening our experience of eating. Imagine taking a bite of a rich espresso brownie sprinkled with flaky sea salt. Besides providing the delightful experience of its delicate flakes crunching on the tongue, the salt minimizes the espresso's bitterness, intensifies the flavor of the chocolate, and offers a welcome savory contrast to the sugar's sweetness.

The Flavor of Salt

Salt should taste clean, free of any unpleasant flavors. Start by tasting it all on its own. Dip your finger into your salt cellar and let a few grains dissolve on your tongue. What do they taste like? Hopefully like the summer sea.

Types of Salt

Chefs all have their saline allegiances and will offer lengthy, impassioned arguments about why one variety of salt is superior to another. But honestly, what matters most is that you're familiar with whatever salt *you* use. Is it coarse or fine? How long does it take to dissolve in a pot of boiling water? How much does it take to make a roast chicken taste just right? If you add your salt to a batch of cookie dough, will it melt away or make itself known, announcing its presence with a pleasant crunch?

Though all salt crystals are produced by evaporating water from saltwater brine, the pace of evaporation will determine the shape those crystals take. Rock salts are mined by flooding salt deposits with water and then rapidly evaporating that water from the resulting brine. Refined sea salt is similarly produced, through the rapid evaporation of seawater. When formed as a result of rapid evaporation, salt crystals become small, dense cubes—granular salt. On the other hand, salt produced slowly at the surface of an open container will form into light, hollow flakes. If water splashes into the hollow of the flake before it's scooped off the surface, it will sink into the brine and transform into a large, dense crystal. This is unrefined sea salt.

These varying shapes and sizes can make a big difference in your cooking. A tablespoon of fine salt will pack more tightly, and can be two or three times “saltier” than a tablespoon of coarser salt. This is why it makes sense to measure salts by weight rather than by volume. Better yet, learn to salt to taste (page 000).

Table Salt

Common table salt, or granular salt, is found in salt shakers everywhere. Shake some out into your palm and its distinct cubic shape—the result of crystallizing in a closed vacuum chamber—will be apparent. Table salt is small and dense, making it very salty. Unless otherwise noted, iodine has been added to it.

I don't recommend using iodized salt as it makes everything taste slightly metallic. In 1924, when iodine deficiency was a common health problem, Morton Salt began iodizing salt to help prevent goiters, leading to great strides in public health. These days, our diets are far more diverse, and we get plenty of iodine naturally, so there's no need to suffer through metallic-tasting food.

Table salt also often contains anticaking agents to prevent clumps from forming, or dextrose, a form of sugar, to stabilize the iodine. Though neither of these additives is harmful, there's no reason to add them to your food. The only thing you should be adding to your food when you're salting it is salt! This is one of the few times I'll insist on anything in this book: if you've got table salt at home, throw it out and get yourself some kosher or sea salt right away.

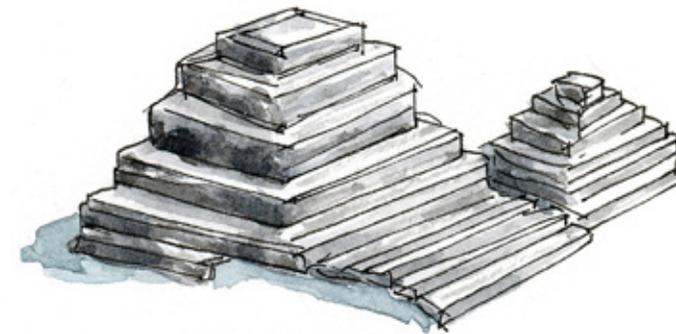
Several Salt Structures



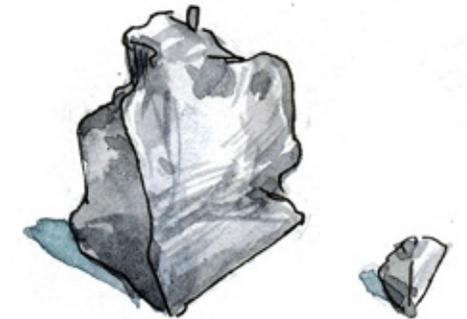
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SEA
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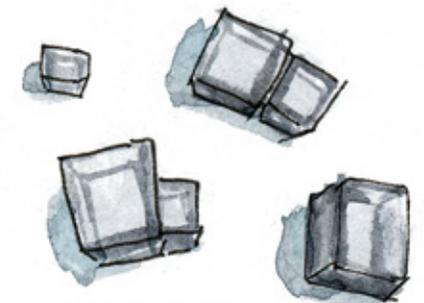
MALDON



SEL GRIS



KOSHER



TABLE

Kosher Salt

Kosher salt is traditionally used in koshering, the traditional Jewish process by which blood is removed from meat. Since kosher salt contains no additives, it tastes very pure. There are two major producers of kosher salt: Diamond Crystal, which crystallizes in an open container of brine, yielding light and hollow flakes; and Morton's, which is made by rolling cubic crystals of vacuum-evaporated salt into thin, dense flakes. The difference in production methods yields two vastly different salts. While Diamond Crystal readily adheres to foods and crumbles easily, Morton's is much denser, and almost twice as salty by volume. When following recipes requiring kosher salt, make sure to use the specified brand because these two salts are not interchangeable! For this book, I tested all of the recipes with Diamond Crystal, which comes in a red box.

Diamond Crystal dissolves about twice as quickly as denser granulated salt, making it ideal for use in food that is cooked quickly. The more quickly salt dissolves, the less likely you are to overseason a dish, thinking it needs more salt when actually the salt just needs more time to dissolve. Because of its increased surface area, Diamond Crystal also sticks to foods better, rather than rebounding or falling off.



Inexpensive and rather forgiving, kosher salt is fantastic for everyday cooking. I prefer Diamond Crystal—even when I've accidentally salted dishes twice with this salt while enjoying a little too much my conversation, the company, or a glass of wine, the food has emerged unscathed.

Sea Salt

Sea salt is left behind when seawater evaporates. Solar sea salts such as *fleur de sel*, *sel gris*, and Maldon result from gradual, monitored evaporation that can take up to five years. Taking the shape of delicate flakes, *fleur de sel*—literally, “flower of salt”—is harvested from the surface of special sea salt beds in western France. When it falls below the surface of the water and attracts various sea minerals, including magnesium chloride and calcium sulfate, pure white *fleur de sel* takes on a grayish hue and becomes *sel gris*, or gray salt. Maldon salt crystals, formed much like *fleur de sel*, take on a hollow pyramid shape, and are often referred to as *flaky salt*.

Because solar salts are harvested using low-yield, labor-intensive methods, they tend to be more expensive than refined sea salts. Most of what you're paying for when you buy these salts is their delightful texture, so use them in ways that allow them to stand out. It's a waste to season pasta water with *fleur de sel* or make tomato sauce with Maldon salt. Instead, sprinkle these salts atop delicate garden lettuces, rich caramel sauces, and chocolate chip cookies as they go into the oven so you can enjoy the way they crunch in your mouth.

The refined granular sea salt you might find in a bulk bin at the grocery store is a bit different: it was produced by rapidly boiling down ocean water in a closed vacuum. Fine or medium-size crystals of this type are ideal for everyday cooking. Use this type of sea salt to season foods from within—in water for boiling vegetables or pasta, on roasts and stew meats, tossed with vegetables, and in doughs or batters.

Keep two kinds of salt on hand: an inexpensive one such as bulk bin sea salt or kosher salt for everyday cooking, and a special salt with a pleasant texture, such as Maldon salt or *fleur de sel*, for garnishing food at the last moment. Whichever salts you use, become familiar with them—with how salty they are, and how they taste, feel, and affect the flavor of the foods to which you add them.

Salt's Effect on Flavor

To understand how salt affects flavor, we must first understand what flavor is. Our taste buds can perceive five **tastes**: saltiness, sourness, bitterness, sweetness and umami, or savoriness. On the other hand, **aroma** involves our noses sensing any of hundreds of various chemical compounds. The descriptive words often used to characterize the way a wine smells, such as *earthy*, *fruity*, and *floral*, refer to aroma compounds.

Flavor lies at the intersection of taste, aroma, and sensory elements including texture, sound, appearance, and temperature. Since aroma is a crucial element of flavor, the more aromas you perceive, the more vibrant your eating experience will be. This is why you take less pleasure in eating while you're congested or have a cold.

Remarkably, salt affects both taste *and* flavor. Our taste buds can discern whether or not salt is present, and in what amount. But salt also unlocks many aromatic compounds in foods, making them more readily available as we eat. The simplest way to experience this is to taste an unsalted soup or broth. Try it next time you make Chicken Stock (page 000). The unseasoned broth will taste flat, but as you add salt, you'll detect new aromas that were previously unavailable. Keep salting, and tasting, and you'll start to sense the salt as well as more complex and delightful flavors: the savoriness of the chicken, the richness of the chicken fat, the earthiness of the celery and the thyme. Keep adding salt, and tasting, until you get that *zing!* This is how you'll learn to salt "to taste." When a recipe says "season to taste," add enough salt until it tastes right to you.

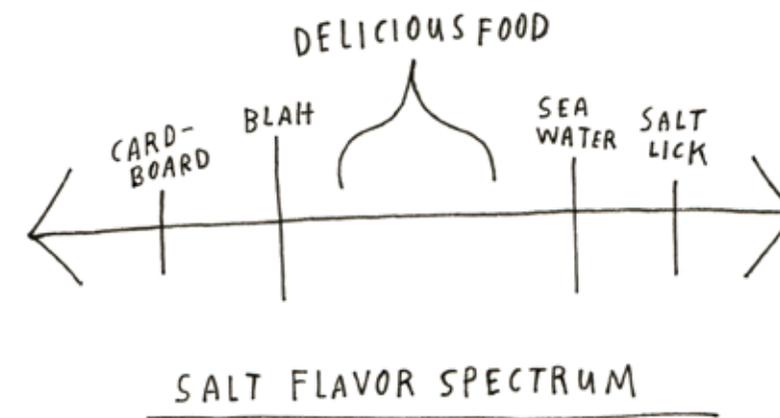
Salt also has another way of enhancing flavor: concentration. By drawing out the water from moist foods, salt concentrates their innate flavors. This is one reason why professional cooks like to season sliced tomatoes a few minutes before serving them—so that, as some of the water is expelled, each bite will taste more intensely of tomato.

Salt also reduces our perception of bitterness, with the secondary effect of emphasizing other flavors present in bitter dishes. Salt enhances sweetness while reducing bitterness in foods that are both bitter *and* sweet, such as bittersweet chocolate, coffee ice cream, or burnt caramels.

Though we typically turn to sugar to balance out bitter flavors in a sauce or soup, it turns out that salt masks bitterness much more effectively than sugar. See for yourself with a little tonic water, Campari, or grapefruit juice, all of which are both bitter *and* sweet. Taste a spoonful, then add a pinch of salt and taste again. You'll be surprised by how much bitterness subsides.

Seasoning

Anything that heightens flavor is a **seasoning**, but the term generally refers to salt since it's the most powerful flavor enhancer. If food isn't salted properly, no amount of fancy cooking techniques or garnishes will make up for it. Without salt, unpleasant tastes are more perceptible and pleasant ones less so. Though in general the absence of salt in food is deeply regrettable, its overt presence is equally unwelcome: food shouldn't be *salty*, it should be *salted*.



Salting isn't something to do once and then check off your list; be constantly aware of how a dish tastes *as it cooks*, and how you want it to taste at the table. At San Francisco's legendary Zuni Café, chef Judy Rodgers often told her cooks that a dish might need "seven more grains of salt." Sometimes it really is that subtle; just seven grains can mean the difference between satisfactory and sublime. Other times, your polenta might require a handful. The only way to know is to taste and adjust.

Tasting and adjusting—over and over again as you add ingredients and they transform throughout the cooking process—will yield the most flavorful food. Getting the seasoning right is about getting it right at every level—bite, component, dish, and meal. This is **seasoning food from within**.

On the global spectrum of salt use, there's a range, rather than a single point, of proper seasoning. Some cultures use less salt; others use more. Tuscans don't add salt to their bread but more than make up for it with the copious handfuls they add to everything else. The French salt baguettes and *pain au levain* perfectly, in turn seasoning everything else a little more conservatively.

In Japan, steamed rice is left unseasoned to act as the foil for the flavorful fishes, meats, curries, and pickles served alongside it. In India, *biryani*, a flavorful rice dish layered with vegetables, meat, spices, and eggs, is never left unsalted. There is no universal rule other than that salt use must be carefully considered at every point in the cooking process. This is seasoning to taste.

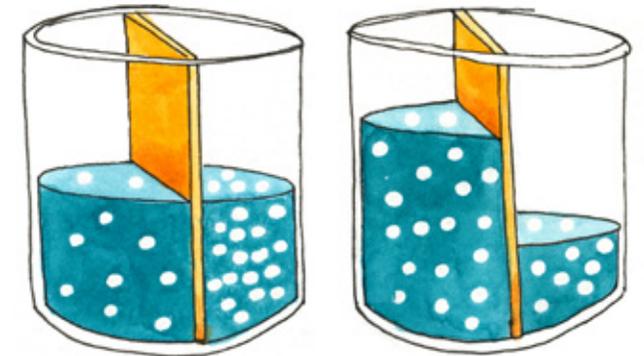
When food tastes flat, the most common culprit is underseasoning. If you're not sure salt will fix the problem, take a spoonful or small bite and sprinkle it with a little salt, then taste again. If something shifts and you sense the *zing!*, then go ahead and add salt to the entire batch. Your palate will become more discerning with this sort of thoughtful cooking and tasting. Like a jazz musician's ear, with use it will grow more sensitive, more refined, and more skilled at improvisation.

THE SCIENCE OF SALT

Cooking is part artistry, part chemistry. Understanding the science of salt will allow you to make better decisions about *how* and *when* to use it to improve texture and season food from within. Some ingredients and cooking methods require giving salt enough time to penetrate food and distribute itself within it. In other cases, the key is to create a cooking environment salty enough to allow food to absorb the right amount of salt as it cooks.

The distribution of salt throughout food can be explained by **osmosis** and **diffusion**, two chemical processes powered by nature's tendency to seek equilibrium, or the balanced concentration of solutes such as minerals and sugars on either side of a cell wall. The movement of water in and out of a cell wall is called **osmosis**.

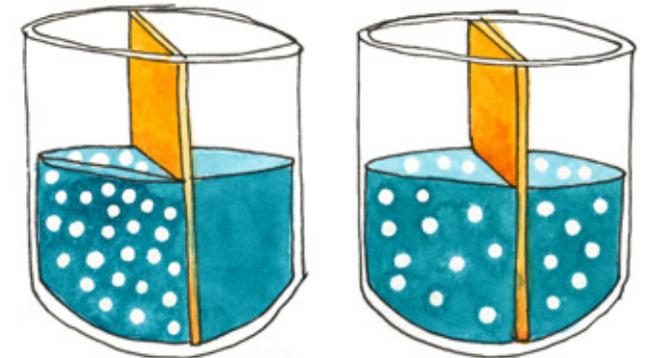
Diffusion, on the other hand, is the slow process of salt moving from a saltier environment to a less salty one until it's evenly distributed throughout. Sprinkle salt on the surface of a piece of chicken and come back twenty minutes later.



OSMOSIS

THE MOVEMENT OF WATER
IN AND OUT OF A CELL WALL

■ = SEMIPERMEABLE
MEMBRANE



DIFFUSION

THE MOVEMENT OF SALT
THROUGH A CELL WALL UNTIL
IT'S EVENLY DISTRIBUTED

The distinct grains will no longer be visible: they will have started to dissolve, and the salt will have begun to move inward in an effort to create a chemical balance throughout the piece of meat. We can taste the consequence of this diffusion—though we sprinkle salt on the surface of the meat, with the distribution that occurs over time, eventually the meat will taste evenly seasoned, rather than being salty on the surface and bland within.

Water will also be visible on the surface of the chicken, the result of osmosis. While the salt moves *in*, the water will move *out* with the same goal: achieving chemical balance throughout the entire piece of meat.

Given the chance, salt will always distribute itself evenly to season food from within, but it affects the textures of different foods in different ways.

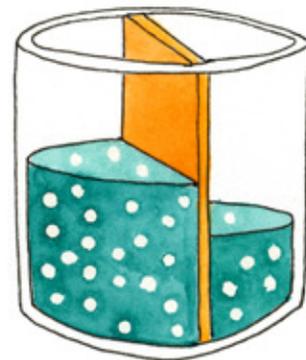
How Salt Affects...

Meat

By the time I arrived at Chez Panisse, the kitchen had already been running like a well-oiled machine for decades. Its success relied on each cook thinking ahead to the following day's menu and beyond. Every day, without fail, we butchered and seasoned meat for the following day. Since this task was a classic example of kitchen efficiency, it didn't occur to me that seasoning the meat in advance had anything to do with flavor. That was only because I didn't yet understand the important work salt was quietly doing overnight.

Since diffusion is a slow process, **seasoning in advance** gives salt plenty of time to diffuse evenly throughout meat. This is how to season meat from within. A small amount of salt applied in advance will make a much bigger difference than a larger amount applied just before serving. In other words, time, not amount, is the crucial variable.

Because salt also initiates osmosis, and visibly draws water out of any nearby ingredient it touches, many people believe that salt dries and toughens food. But osmosis is accompanied by the essential work of its fraternal twin, **reverse osmosis**, which pulls the expelled moisture back into the meat, and with it, salt and any other flavorings remaining on the surface.



REVERSE OSMOSIS

With time, salt also dissolves and disrupts protein strands, allowing them to absorb and retain water better as they cook. Water is moisture: its presence makes meat tender and juicy. Think of a protein strand as a loose coil with water molecules bound to its inside surface. When an unseasoned protein is heated, it **coagulates**: the coil tightens, squeezing water molecules out of the protein matrix, leaving the meat dry and tough. By disrupting a protein, salt prevents the coil from shrinking when heated, so the water molecules remain bound, and the piece of meat remains moist.

This same chemical reaction is the secret to brining, the process in which a piece of meat is submerged in a bath of water spiked with salt, sugar, and spices. The salt in this mixture, or **brine**, disables the proteins from shrinking, while the sugar and spices offer plenty of aromatic molecules for the meat to absorb. For this reason, brining can be a great strategy for lean meats and poultry, which tend to be dry and even bland. Make Spicy Brined Turkey Breast (page 000), and you'll see how a night spent in a salty, spicy bath will transform a cut of meat that's often devastatingly dry and flavorless.

I can't remember the first time I tasted—consciously, anyway—meat that had been salted in advance. But now I can tell every time I taste meat that hasn't. The best way to experience the marvels of preseasoned meat is with a little experiment: the next time you plan to roast a chicken, cut the bird in half, or ask your butcher to do so for you. Season one half with salt a day ahead. Season the other half just before cooking. The effects of early salting will be apparent long before the first bite hits your tongue. The chicken salted in advance will practically butcher itself, falling off the bone with little more than a look, while the other half, though moist, won't begin to compare in tenderness.

When salting meat, any time is better than none, and more is better than some. Aim to season meat the day before cooking when possible. Failing that, do it in the morning, or even in the afternoon. Or make it the first thing you do when collecting ingredients for dinner. I like to do it as soon as I get home from the grocery store, so I don't have to think about it again.

The larger, denser, or more sinewy the piece of meat, the earlier you should salt it. Oxtails, shanks, and short ribs can be seasoned a day or two in advance to allow salt time to do its work of tenderizing their sinew. A chicken for roasting can be salted the day before cooking, while Thanksgiving turkey should be seasoned two, or even three, days in advance. The colder the meat and surrounding environment are, the longer it will

take the salt to do its work, so when time is limited, leave meat on the counter once you season it (but for no longer than two hours), rather than returning it to the fridge.

Though salting early is a great boon to flavor and texture in meat, there is such a thing as salting *too* early. For thousands of years, salt has been used to preserve meat. In large enough quantities, for long enough periods of time, salt will dehydrate meat and cure it. If dinner plans change at the last minute, a salted chicken or a few pounds of short ribs will happily wait a day or two to be roasted or braised. But wait much longer than that, and they will dry out and develop a leathery texture and a cured, rather than fresh, flavor. If you've salted some meat but realize you won't be able to get to it for several days, freeze it until you're ready to cook it. Tightly wrapped, it'll keep for up to two months. Simply defrost and pick up cooking where you left off.

Seafood

Unlike meat, the delicate proteins of most fish and shellfish will degrade when salted early, yielding a tough, dry, or chewy result. In general, season seafood at the time of cooking to preserve textural integrity. Inch-thick steaks of meatier fishes, such as tuna and swordfish, can be salted up to thirty minutes ahead.

Fat

Salt requires water to dissolve, so it won't dissolve in pure fat. Luckily, most of the fats we use in the kitchen contain at least a little water—the small amounts of water in butter, lemon juice in a mayonnaise, or vinegar in a vinaigrette allow salt to slowly dissolve. Season these fats early and carefully, waiting for salt to dissolve and tasting before adding more. Or, dissolve salt in water, vinegar, or lemon juice before adding it to fat for even, immediate distribution. Lean meat has a higher water content—and thus, more capacity for absorption—than fat, so cuts with a big fat cap, such as pork loin or rib eye, will not absorb salt evenly. This is illustrated beautifully in a slice of prosciutto: the lean muscle (rosy pink part) has higher water content, and thus can absorb salt readily as it cures. The fat (pure white part), on the other hand, has much lower water content, and so it doesn't absorb salt at the same rate. Taste the two parts separately and you'll find the lean muscle unpleasantly salty. The strip of fat will seem almost bland. But taste them together and the synergy of fat and salt will be revealed. Don't let this absorption imbalance affect how you initially season a fatty cut. Simply taste both fat and lean meat before adding more salt at the table.

Eggs

Eggs absorb salt easily. It makes their proteins coagulate more quickly, which decreases cooking time. The more quickly the proteins set, the less of a chance they will have to expel water they contain. The more water the eggs retain as they cook, the more moist and tender their final texture will be. Add a pinch of salt to eggs destined for scrambling, omelettes, custards, or frittatas before cooking. Lightly season water for poaching eggs. Season eggs cooked in the shell or fried in a pan just before serving.

Vegetables, Fruits, and Fungi

Most vegetables and fruit cells contain a gel called **pectin**. Soften the pectin, and you will soften the fruit or vegetable, making it more tender, and often more delicious, to eat. Salt softens pectin expertly.

When in doubt, salt vegetables before you cook them. Toss vegetables with salt and olive oil for roasting. Salt blanching water generously before adding vegetables. Add salt into the pan along with the vegetables for sautéing. Season vegetables with large, watery cells—tomatoes, zucchini, and eggplant, for example—in advance of grilling or roasting to allow salt the time to do its work. During this time, osmosis will also cause some water loss, so pat the vegetables dry before cooking. Because salt will continue to draw water out of vegetables and fruits and eventually make them rubbery, be wary of salting them *too* early—usually 15 minutes before cooking is sufficient.

While mushrooms don't contain pectin, they are about 80 percent water, which they will begin to release when salted. In order to preserve the texture of mushrooms, wait to add salt until they've just begun to brown in the pan.

Legumes and Grains

Tough beans: a kitchen fiasco so common it's become an idiom. If there's one way to permanently turn people off of legumes, it's serving them undercooked, bland beans that are hard to eat. Contrary to popular belief, salt does not toughen dried beans. In fact, by softening the pectins contained in their cell walls, salt affects beans in the same way it affects vegetables: it reduces the cooking time. In order to flavor dried beans from within, add salt when you soak them or when you begin to cook them, whichever comes first.

Legumes and grains are seeds—the parts of a plant that ensure survival from one season to the next. As such, they've evolved tough exterior shells for protection, and

require long, gentle cooking in water to become tender. The most common reason for tough beans and grains, then, is undercooking. The solution: keep simmering! Since a long cooking time gives salt a chance to diffuse evenly throughout, the water for boiling grains such as rice, farro, or quinoa can be salted less aggressively than the water for blanching vegetables. In preparations where all of the cooking water will be absorbed, and hence all of the salt, be particularly careful not to overseason.

Doughs and Batters

The first paid job I had in the kitchen at Chez Panisse was called Pasta/Lettuce. I spent about a year washing lettuces and making every kind of pasta dough imaginable. I'd also start the pizza dough every morning, adding yeast, water, and flour into the bowl of the gigantic stand mixer and tending to it throughout the day. Once the water and flour brought the dormant yeast back to life, I'd add more flour and salt. Then, after kneading and proofing, I'd finish the dough by adding in some olive oil. One day, when it was time to add the flour and salt, I realized the salt bin was empty. I didn't have the time right then to go down to the storage shed to get another bag of salt, so I figured I'd just wait to add the salt at the end, along with the oil. As I kneaded the dough, I noticed that it came together much more quickly than usual, but I didn't really give it a second thought. When I returned a couple of hours later to finish the dough, something unbelievable happened. I turned on the machine and let it deflate and knead the dough, like I always did, and then I added the salt. As it dissolved into the dough, I could actually see the machine begin to strain. The salt was making the dough tougher—the difference was remarkable! I had no idea what was happening. I was worried that I'd done something terribly wrong.

It was no big deal. It turns out that the dough tightened immediately because salt aids in developing **gluten**, the protein that makes dough chewy and elastic. As soon as I allowed the dough to rest, the gluten relaxed, and the pizzas that night emerged from the oven as delicious as always.

Salt can take a while to dissolve, so add it to bread dough early. Leave it out of Italian pasta dough altogether, allowing the salted water to do the work of seasoning as it cooks. Add it early to ramen and udon doughs to strengthen its gluten, as this will result in the desired chewiness. Add salt later to batters and doughs for cakes, pancakes, and delicate pastries to keep them tender, but make sure to whisk these mixes thoroughly so that the salt is evenly distributed before cooking.

Cooking Foods in Salted Water

Properly seasoned cooking water encourages food to retain its nutrients. Imagine that you're cooking green beans in a pot of water. If the water is unseasoned or only lightly seasoned, then its concentration of salt—a mineral—will be lower than the innate mineral concentration in the green beans. In an attempt to establish equilibrium between the internal environment of the green beans and the outside environment of the cooking water, the beans will relinquish some of their minerals and natural sugars during the cooking process. This leads to bland, gray, less-nutritious green beans.

On the other hand, if the water is more highly seasoned—and more mineral rich—than the green beans, then the opposite will happen. In an attempt to reach equilibrium, the green beans will absorb some salt from the water as they cook, seasoning themselves from the inside out. They'll also remain more vibrantly colored because the salt balance will keep magnesium in the beans' chlorophyll molecules from leaching out. The osmosis that salt initiates will also soften the beans' cell walls, allowing them to cook more quickly. As an added bonus, there will be less of an opportunity for the green beans to lose nutrients because they'll spend less total time in the pot.



I can't prescribe precise amounts of salt for blanching water for a few reasons: I don't know what size your pot is, how much water you're using, how much food you're blanching, or what type of salt you're using. All of these variables will dictate how much salt to use, and even they may change each time you cook. Instead, season your cooking water until it's as salty as the sea (or more accurately, your *memory* of the sea. At 3.5 percent salinity, seawater is much, much saltier than anyone would ever want to use for cooking). You might flinch upon seeing just how much salt this takes, but remember, most of the salt ends up going down the drain. The goal is to create a salty enough environment to allow the salt to diffuse throughout the ingredient during the time it spends in the water.

It doesn't matter whether you add the salt to the water before or after you set it on the heat, though it'll dissolve, and hence diffuse, faster in hot water. Just make sure to give the salt a chance to dissolve, and taste the water to make sure it's highly seasoned before you add any food. Keep a pot boiling on the stove for too long, though, and water will evaporate. What's left behind will be far too salty for cooking. The cure here is simple: taste your water, and make sure it's right. If not, add some water or salt to balance it out.

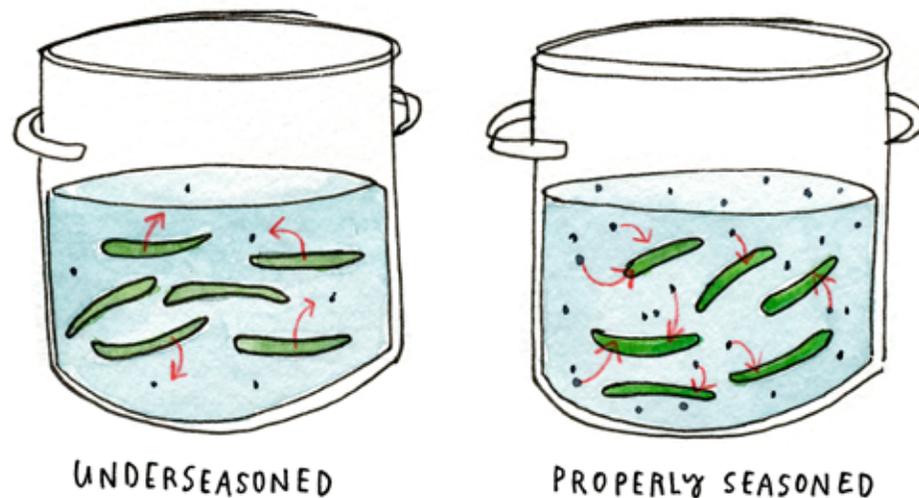
Cooking food in salted water is one of the simplest ways to season from within. Taste roasted potatoes that were seasoned with salt as they went into the oven, and you'll taste salt on the surface but not much farther in. But taste potatoes that were simmered

in salted water for a little while before being roasted, and you'll be shocked by the difference—salt will have made it all the way into the center, doing its powerful work of seasoning from within along the way.

Salt pasta water, potato cooking water, and pots of grains and legumes as early as possible to allow salt to dissolve and diffuse evenly into the food. Season the water for vegetables correctly and you won't have to add salt again before serving. Salads made with boiled vegetables—be it potatoes, asparagus, cauliflower, green beans, or anything else—are most delicious when the vegetables are seasoned properly while they're cooking. Salt sprinkled on top of one of these salads at the time of serving won't make as much of a difference in flavor as it will in texture, by adding a pleasant crunch.

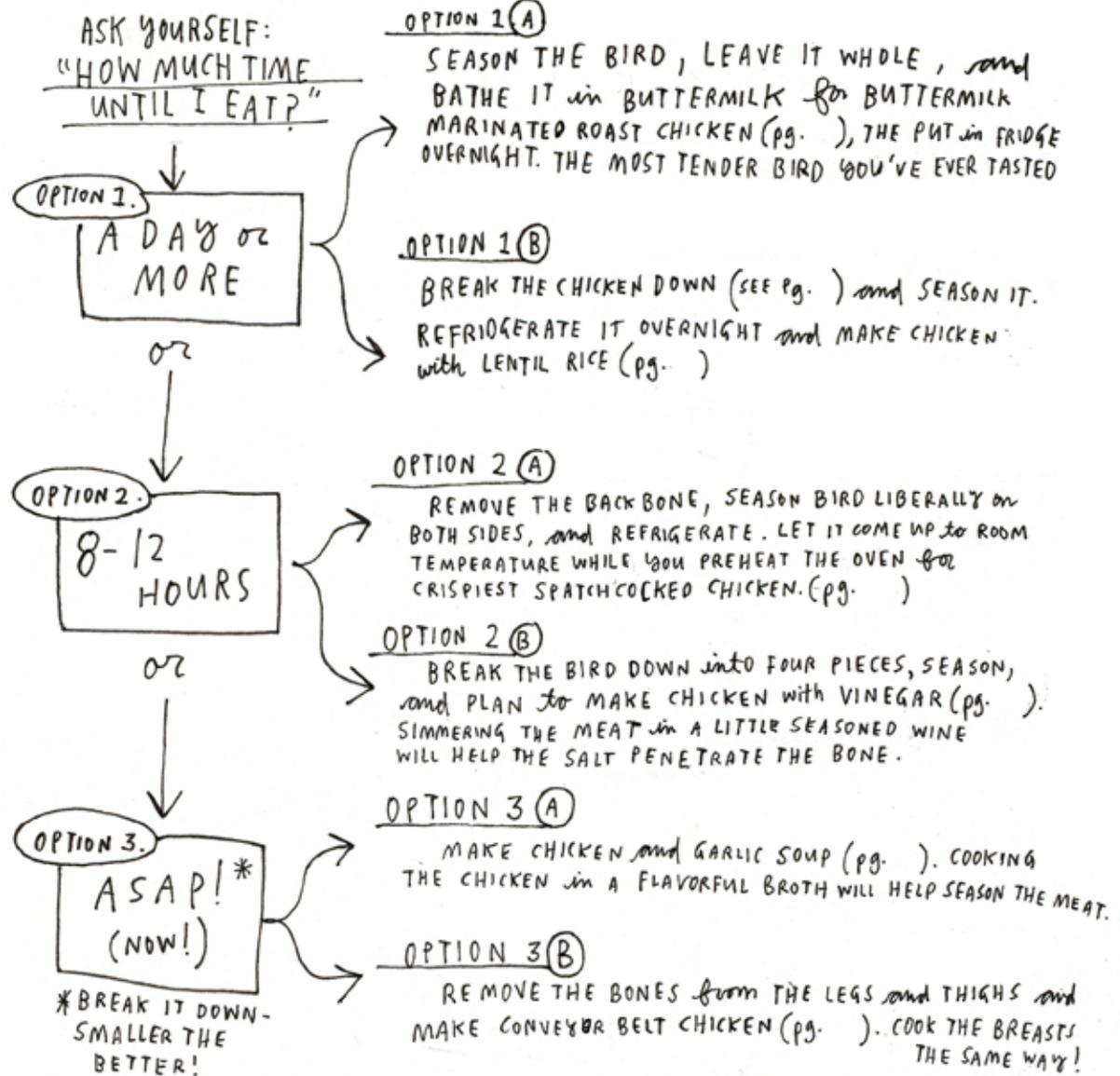
Salt meats to be cooked in water, like any meats, in advance, but season the cooking liquids for stews, braises, and poached meats conservatively. While some salt may leach from the seasoned meat into the less savory broth, it will have already done its important tenderizing work. Anticipate the flavor exchange that will happen between the seasoned meat and its cooking liquid, and taste and adjust the liquid, along with the meat, before serving.

Learn more about the nuances of **blanching**, **braising**, **simmering**, and **poaching**, in *Heat*, on page 000.



How Should I Season my Chicken?

A HANDY GUIDE to SALTING for MAXIMUM ENJOYMENT



DIFFUSION CALCULUS

The three most valuable tools to encourage salt diffusion are time, temperature, and water. Before setting out to cook—as you choose an ingredient, or a cooking method—ask yourself, “How can I season this from within?” Then, use these variables to plot out how far in advance—and how much—to salt your food or cooking water.

Time

Salt is very slow to diffuse. If you are cooking something big or dense and want to get salt into it, season the ingredient as early as possible to give salt the time to travel to the center.

Temperature

Heat stimulates salt diffusion. Salt will always diffuse more quickly at room temperature than in the fridge. Use this fact to your advantage when you’ve forgotten to salt the your chicken or steak in advance. Pull the meat out of the fridge when you get home, salt it, and let it sit out while the oven or grill preheats.

Water

Water promotes salt diffusion. Use watery cooking methods to help salt penetrate dense, dry, and tough ingredients, especially if you don’t have time to season them in advance.

SALTING CALENDAR

A FRIENDLY REMINDER of WHEN to SALT your FOOD

3 YEARS in ADVANCE	3 WEEKS in ADVANCE	2 DAYS in ADVANCE	TODAY	
	5-7 DAYS in ADVANCE	1 DAY in ADVANCE		
	3 DAYS in ADVANCE			
PRO-SCIUTTO & JERKY & RATIONS for THE APOCA- LYPSE	CORNER BEEF SALTED COD	THANKSGIVING TURKEY, CHRISTMAS GOOSE & ANY OTHER BIG BIRD for ANY BIG HOLIDAYS.		<u>HOURS BEFORE COOKING</u> ANYTHING YOU WERE SUPPOSED to SALT EARLIER BUT FORGOT. BECAUSE SOME TIME IS BETTER THAN NO TIME!
A WHOLE STEER	RIB ROAST LEG of LAMB	<u>15-20 MINUTES BEFORE COOKING</u> EGGPLANT & ZUCCHINI (THEN PAT DRY) CABBAGE for SLAW, THICK TUNA, SWORDFISH STEAKS		<u>JUST BEFORE COOKING</u> FLAKY FISH & DELICATE SHELLFISH VEGETABLES for ROASTING & GRILLING SEASON WATER for BOILING SCRAMBLED EGGS
WHOLE PIG for A BDAY LUAU! WHOLE LAMB OR GOAT for your TYPICAL CEREMONIAL ROAST.	CHICKEN! THICK STEAKS QUAIL DUCK SOAKING A POT of BEANS	<u>WHILE COOKING</u> MUSHROOMS, VEGETABLES you'RE COOKING ON THE STOVE, SIMMERING SAUCES		<u>A FEW MINUTES BEFORE SERVING</u> TOMATOES for SALAD
		<u>JUST BEFORE SERVING</u> SALAD	SERVE	
			EAT	
			HOPEFULLY you WON'T NEED to SALT WHILE EATING, BUT IF you MUST, OK!	

USING SALT

The British food writer Elizabeth David once said, “I do not even bother with a salt spoon. I am not able to see what is unmannerly or wrong with putting one’s fingers into the salt.” I agree. Get rid of the shaker, dump the salt in a bowl, and start using your fingers to season your food. You should be able to fit all five fingers into your salt bowl and easily grab a palmful of salt. This important—but often unsaid—rule of good cooking is so routine for professional cooks that when working in an unfamiliar kitchen, we instinctively hunt for containers to use as salt bowls. When pressed, I’ve even used coconut shells to hold salt. I once taught a class at the national cooking school in Cuba: the state-run kitchen was so barren that I ended up sawing plastic water bottles in half to use for holding salt and other garnishes. It got the job done.

Measuring Salt

Abandoning precise measurements when using salt requires an initial leap of faith. When I was first learning how to cook, I always wondered how I’d know when I’d added enough. I wondered how I’d avoid using way too much. It was discombobulating. And the only way to know how much salt to use was to add it incrementally and taste with each addition. I had to get to know my salt. With time, I learned that a huge pot of pasta water required three handfuls to start. I figured out that, when I seasoned chickens for the spit, it should look like a light snowstorm had fallen over the butchering table. It was only with repetition and practice that I found these landmarks. I also found a few exceptions: certain pastry, brine, and sausage recipes where all of the ingredients are precisely weighed out don’t need constant adjusting. But I still salt every other thing I cook to taste.

The next time you’re seasoning a pork loin for roasting, pay attention to how much you use, and then take a moment when you take your first bite to consider if you got the seasoning right. If so, commit to memory the way the salt looked on the surface of

the meat. If not, make a mental note to increase or decrease the amount of salt next time. You already possess the very best tool for evaluating how much salt to use—a tongue. Conditions in the kitchen are rarely, if ever, identical twice. Since we don't use the same pot every time, or the same amount of water, the same size chicken or number of carrots, measurements can be tricky. Instead, rely on your tongue, and taste at every point along the way. With time, you'll learn to use other senses to gauge how much salt to use—touch, sight, and common sense can be just as important as taste. The late, great Marcella Hazan, who authored the indispensable *Essentials of Classic Italian Cooking*, could tell when a dish needed more salt by simply smelling it!

My general ratios for measuring salt are simple: 1 percent salt by weight for meats, vegetables, and grains, and 2 percent salinity for water for blanching vegetables and pasta. To see what these numbers translate to by volume for various salts, take a look at the chart below. If using the amounts of salt I prescribe terrifies you, try a little experiment: set up two pots of water, and season one as you normally would. Season the other to 2 percent salinity, and note what it feels and looks like to use that much salt. Cook half of your green beans, broccoli, asparagus, or pasta in each pot of water, and compare the flavor when you eat them. I suspect the taste test will be enough to convince you to trust me.

Consider these ratios a starting point. Soon—maybe just after one or two pots of pasta—you'll be able to judge how much salt is enough by trusting the way the grains feel as they fall from your palm and whether or not, upon tasting, you're transported to the sea.

BASIC SALTING GUIDELINES*

TYPE of SALT	WEIGHT per TABLESPOON in GRAMS	AMOUNT per POUND of BONELESS MEAT	AMOUNT per POUND of MEAT ON THE BONE (AKA ROAST CHICKEN)	AMOUNT per POUND of VEGETABLES and GRAINS	AMOUNT per QUART of BLANCHING or PASTA WATER	AMOUNT per CUP of FLOUR for DOUGHS and BATTERS
ACROSS THE BOARD	—	1.25% by WEIGHT	1.5% by WEIGHT	1% by WEIGHT	2% SALINITY	2.5% by WEIGHT

WHICH TRANSLATES to :

FINE SEA	14.6	1 1/8 tsp.	1 1/3 tsp.	1 scant tsp.	1 Tbl + 1 scant tsp.	3/4 tsp.
MALDON	8.4	2 tsp.	2 1/2 tsp.	1 2/3 tsp.	2 Tbls + 3/4 tsp.	1 1/3 tsp.
SEL GRIS	13	1 1/4 tsp.	1 1/4 tsp.	1 tsp.	1 Tbl + 3/8 tsp.	1 scant tsp.
TABLE	18.6	2/3 tsp.	1 1/8 tsp.	3/4 tsp.	1 Tbl	2/3 tsp.
MORTON'S KOSHER	14.75	1 1/8 tsp.	1 1/3 tsp.	1 scant tsp.	1 Tbl + 1 scant tsp.	3/4 tsp.
DIAMOND CRYSTAL KOSHER	9.75	1 3/4 tsp.	2 1/8 tsp.	1 1/3 tsp.	2 scant Tbls	1 1/8 tsp.

* REMEMBER, YOUR PALATE IS THE ULTIMATE ARBITER. THESE ARE JUST SUGGESTIONS on WHERE to START.

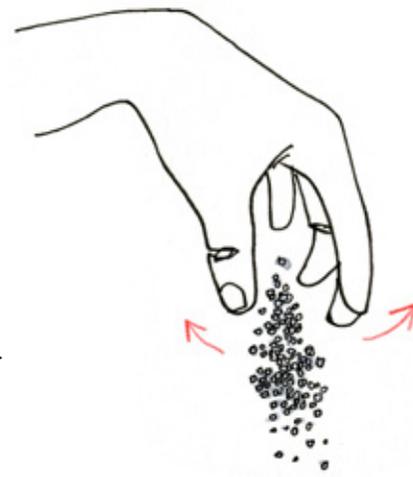
How to Salt

Once you realize how much salt it takes to season something properly, you might start to believe there's no such thing as too much. This happened to me. I remember when a chef I particularly admired walked in to the downstairs butchery room, where I'd been sent to season pork roasts for the following night's dinner. Having recently come to appreciate the power of salt, I decided that in order to cover the roasts evenly, I'd roll them in a huge bowl of salt to ensure that every surface was adequately coated. As she came down the stairs, her eyebrows shot up. I'd been using enough salt to cure the roasts for three years! They'd be completely inedible the next night. I spent the next twenty minutes rinsing the salt off the meat. Later, the chef showed me the proper hand grasp for distributing salt evenly on large surfaces.

I didn't understand the nuances of the act of salting until I began paying attention to the various ways cooks used salt in different situations. There was the way we salted pots of water for blanching vegetables or pasta with near abandon, adding palmful after palmful, only to await its dissolution, lightly skimming a finger across the rolling boil, tasting thoughtfully, and more often than not, adding even more.



The Wrist Wag



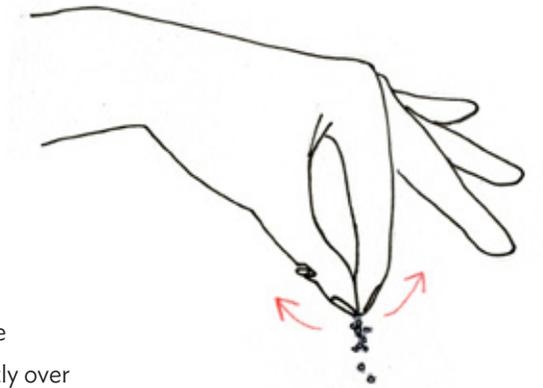
The Palmful

There was the way we seasoned trays of vegetables, lined up duck legs butchered for confit, even larger cuts of meat, and pans of focaccia ready for the oven. This was done by lightly grasping the salt in your upturned palm, letting it shower down with a wag of the wrist. This grasp—not the hovering pinch I was used to—was the way to distribute salt, flour, or anything else granular, evenly and efficiently over a large surface.

Practice the wrist wag in your own kitchen over a piece of parchment paper or on a cookie sheet. Get used to the way the salt falls from your hands; experience the illicit thrill of using so much of something that we've all been taught to fear.

First, dry your hands so the salt won't stick to your skin. Grab a palmful of salt and relax. Jerky or robotic hand motions make for uneven salting. See how the salt lands. If it lands unevenly, then it means you're seasoning your food unevenly. Pour the salt back into the bowl, and try again. The more your wrist flows, the more evenly the salt will land.

This isn't to say that you never want to use a pinch of salt, which can be used like a nail-polish-size bottle of touch-up car paint to fix a scratch on a fender. It might not have much potential to repair major damage, but applied precisely and judiciously, it will yield flawless results. Use a pinch when you want to make sure each bite is salted just so: slices of avocado atop a piece of grilled bread, halved hard-cooked eggs, or tiny, perfect caramels. But try to attack a chicken or a tray of butternut squash slices with the pinch, and your wrist will give out long before you're done.



The Pinch

Salt and Pepper

While it's true that where there's pepper there should almost always be salt, the inverse isn't necessarily so. Remember, salt is a mineral. When salted, food undergoes a number of chemical reactions that change the texture and flavor of meat from within.

Pepper, on the other hand, is a spice, and proper spice usage is primarily guided by geography and tradition. Consider whether pepper belongs in a dish before you add it. Though French and Italian cooks make abundant use of black pepper, not everyone does. In Morocco, shakers of cumin are commonly set on the table along with salt. In Turkey, it's usually some form of ground chili powder. In many Middle Eastern countries, including Lebanon and Syria, it's the blend of dried thyme, oregano, and sesame seeds known as *za'atar*. In Thailand, sugar can be found alongside chili paste, while in Laos, guests are often brought fresh chilies and limes. It doesn't make any more sense to automatically season everything with pepper than it would to add cumin or *za'atar* to every dish you cook. (To learn more about spices used around the world, look ahead to The World of Flavor on page 000.)

When you do use black pepper, look for Tellicherry peppercorns, which ripen on the vine longer than other varieties, and therefore develop more flavor. Grind them at the last moment onto a salad, a toast smeared with creamy *burrata* and drizzled with oil, sliced ripe tomatoes, *Pasta Cacie e Pepe* (page 000), or slices of perfectly cooked steak. Add a few whole peppercorns to a brine, braise, sauce, soup, stock, or pot of beans as you set it on the stove or slip it into the oven. In liquid, an early addition of spices initiates a flavor exchange: as the spices absorb liquid, they relinquish some of their volatile aromatic compounds, gently flavoring the liquid in a way that a little sprinkle at the end of cooking could never achieve.



← and NEVER

Spices, like coffee, always taste better when ground just before use. Flavor is locked within them in the form of aromatic oils, which are released upon grinding, and again upon heating. The slow leak of time causes preground spices to relinquish flavor. Purchase whole spices whenever you can, and grind them with a mortar and pestle or spice grinder as you use them to experience the powerful release of aromatic oils. You'll be astonished by what a huge difference it makes in your cooking.

Salt and Sugar

Don't abandon everything you know about salt when you turn to making dessert. We're taught to think of salt and sugar existing in contrast to, rather than in concert with, one another: food is either sweet or savory. But remember that the primary effect salt has on food is to enhance flavor, and even sweets benefit from this boost. Just as a little sweetness can amplify flavors in a savory dish—whether in the form of caramelized onions, balsamic vinaigrette, or a spoonful of applesauce served with pork chops—salt will also improve a sweet dessert. To experience what salt does for sweets, divide your next batch of cookie dough and omit salt from half. Taste cookies from both batches side by side. Because salt will have done its aroma- and taste-enhancing work, you'll be astounded by the notes of nuttiness, caramel, and butter you detect in the salted dough.

The foundational ingredients of sweets are some of the blandest in the kitchen. Just as you'd never leave flour, butter, eggs, or cream unseasoned in a savory dish, so should you never leave them unseasoned in a dessert. Usually just a pinch or two of salt whisked into a dough, batter, or base is enough to elevate flavors in pie and cookie doughs, cake batters, tart fillings, and custards alike.

Considering *how* you plan to eat a dessert can help you decide which type, or types, of salt to use. For example, use fine salt that will dissolve evenly in chocolate cookie dough, and then top it with a flakier one such as Maldon for a pleasant crunch.

THE TWAIN SHALL MEET



CAESAR SALAD

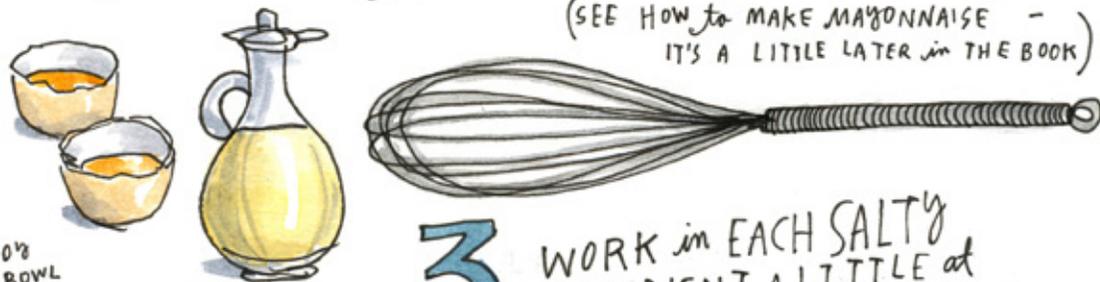
OR, AN EXERCISE in
THE ART of LAYERING SALT

1. START by PREPARING ALL your
SALTY INGREDIENTS.



2. MAKE A STIFF, UNSALTED MAYO

(SEE HOW to MAKE MAYONNAISE - IT'S A LITTLE LATER in THE BOOK)



STEADY THE BOWL WITH A DAMP DISH TOWEL



3. WORK in EACH SALTY INGREDIENT A LITTLE at A TIME. THEN ADD LEMON and VINEGAR.

THEN **TASTE**



NOW STOP.
NEEDS SALT, RIGHT? BUT WHAT ELSE?
→ MORE ANCHOVY? MORE PARM? ADD SOME.

NOW **TASTE AGAIN**

MAYBE ADD A LITTLE MORE WORCESTERSHIRE

TASTE AGAIN

KEEP REPEATING THIS TILL IT TASTES JUST RIGHT,
ADJUSTING with ACTUAL SALT AS NEEDED

THEN, ONCE you've NAILED IT, DIP SOME LETTUCE in for A FINAL TASTE



TOSS with CRISPY LETTUCE and TORN CROUTONS
TOP with PARM & PEPPER
to TASTE.



EAT.

SOURCES OF SALT



1. LITTLE FISH PACKED in SALT (ANCHOVIES, SARDINES, etc.) 2. CAPERS STORED in SALT OR BRINE
3. PICKLED and FERMENTED VEGETABLES, i.e. DILL PICKLES, CORNICHONS, KRAUTS, and KIMCHEES
4. FISH SAUCE 5. SOY SAUCE and MISO PASTE 6. CHEESE 7. MOST CONDIMENTS, SUCH AS MUSTARD, KETCHUP, SALSA, and HOT SAUCES 8. CURED MEATS, i.e. PROSCIUTTO, PANCETTA, BACON, etc.
9. NORI, KOMBU, and OTHER SEAWEEDS 10. OLIVES 11. SALTED BUTTER (OBVS.)

Layering Salt

From capers to bacon to miso paste to cheese, there are many sources of salt beyond the crystals we add directly into our food. Working more than one form of salt into a dish is what I call **layering salt**, and it's a terrific way to build flavor.

When layering salt, think about the dish as a whole and consider all of the various forms of salt you hope to add *before* you begin. Neglecting to account for the later addition of a crucial salty ingredient could result in oversalting. Think of layering salt the next time you make Caesar Dressing (page 000), which has several salty ingredients—anchovies, Parmesan, Worcestershire sauce, and salt. Garlic, which I like to pound with a pinch of salt in a mortar and pestle into a smooth paste, is a fifth source of salt. Since making a delicious, balanced dressing depends on working in the right amounts of each of those—and other, unsalted—ingredients, refrain from adding salt crystals until you're sure that you've added the right amount of everything else.

First, make a stiff, unsalted mayonnaise by whisking oil into egg yolks, drop by drop (find more specific instructions for making mayonnaise by hand on page 000). Next, work in initial amounts of pounded anchovies, garlic, grated cheese, and Worcestershire. Then, add vinegar and lemon. Taste. It will need salt. But does it also need more anchovy, cheese, garlic, or Worcestershire? If so, add salt in the form of any of those ingredients. But do it gradually, stopping to taste and adjust with acid as needed. It may take several rounds of tasting and adjusting to get it right. As with any dish with multiple forms of salt, add crystals only after you're satisfied with the balance of all other flavors. And to be sure you've gotten it right, dip a lettuce leaf or two into the finished dressing to taste, to ensure that the combination delivers the *zing!* you're after.

Even when following a recipe, if you realize that a dish needs more salt, take a moment to think about *where* that salt should come from.

Balancing Salt

No matter how attentive you are while cooking, there will be times you sit down to eat only to discover that you've underseasoned your dinner. Some foods forgive under-salting more readily than others. You can easily adjust a salad at the table with a pinch of salt. Stir a shaving of salty Parmesan into a cup of soup to bump up its seasoning. Other foods don't respond as well: no amount of salty sauce or cheese or meat could ever make up for bland pasta—the tongue will always know the water was nowhere nearly as salty as the sea. Roasted and braised meats cannot pardon the transgression of underseasoning, either.

Ever since witnessing a series of underseasoning disasters at Chez Panisse, I've been obsessed with preventing it. There was the day a cook forgot to add salt to the pizza dough altogether, an accident we didn't notice until the taster, when nothing could be done but remove pizza from the menu. There was the time I braised chicken legs that had been marked "salted" but clearly were not, a mistake that went undiscovered until I pulled the chicken from the oven and tasted it. Since sprinkling the surface of cooked meat will do little to make up for the lack of seasoning within, the only thing we could do was shred the meat, season it and turn it into ragù, to be served with pasta. The instance of underseasoning that made the biggest impression on me, though, was the time a very senior cook undersalted his lasagna, which he had already cut into one hundred pieces for that night's service. Since salting the top would do little to correct a mistake that had been made from within, as the intern I was given the task of gingerly lifting each of the twelve layers on each of the one hundred pieces of lasagna to sneak a few grains of salt into each one. After that, I've never underseasoned a lasagna.

You will also inevitably oversalt. We all do. It might happen soon after you become a member of the newly converted, now awakened to the power of salt. You might grow cavalier, like I did as a young cook with those pork roasts, and start to use so much salt, you render everything inedible for a while. It could happen when you're simply not paying attention. It's not that big a deal. We all make mistakes from time to time. I certainly still do.

There are a handful of fixes for oversalting. But none involves serving something terribly salty alongside something terribly bland. Intentional blandness won't ever cancel out oversalting.

Dilute

Add more unseasoned ingredients to increase the total volume of the dish. More of anything that's unsalted will work to balance out what's salted, but bland, starchy, and rich things are particularly helpful in these circumstances, because just a small amount of them can help balance out a relatively large amount of food. Add bland rice or potatoes to an overseasoned soup, or olive oil to an oversalted mayonnaise. While water evaporates from a boiling soup, stock, or sauce, salt won't, and what's left behind will be overly salty. The solution here is simple: add more water or stock. If you overseason a dish made with many ingredients mixed together, add more of the main ingredient and adjust everything else until it's all balanced again.

Halve

If you've already put the dish together and diluting will yield more food than you'll be able to use, then divide the oversalted amount and correct only half of it. Depending on what it is, you may be able to refrigerate or freeze the rest until you can get around to adjusting and using it. Or, you might have to face the sad reality of throwing it out. But that's better than using thirty dollars' worth of olive oil to correct a batch of mayonnaise, and then only using a quarter of it.

Balance

Sometimes, food that seems salty isn't actually oversalted; it just needs to be balanced with some acid or fat. Doctor up a spoonful of the dish with a few drops of lemon juice or vinegar, a little olive oil, or some of each. If it tastes better, then apply the changes to the whole batch.

Select

Foods cooked in liquid, such as beans or braises, can often be salvaged if the salty cooking liquid is discarded. If beans are too salty, change out the water. Make refried beans or turn the beans, but not their liquid, into soup, adding unseasoned broth and vegetables. If braised meat is just a little too salty, serve it without the liquid and try to balance it with a rich, acidic condiment such as crème **fraîche**. Serve a lightly seasoned starch or starchy vegetable alongside it to act as a foil.

USING RECIPES

Chef Judy Rodgers once said “Recipes do not make food taste good; people do.” I couldn’t agree more. Most of the time, the path to good food is simple: get the Salt, Fat, and Acid right, and apply the right type of Heat, for the right amount of time. At other times, you’ll need to consult a recipe. Whether for general inspiration or precise step-by-step instruction, a good recipe can be invaluable.

But recipes lead us to believe that cooking is a linear process, while most good food results from a circular one; like a spiderweb, touch one part and the entire thing will quiver. Earlier in this book, I described the alchemy of the perfect Caesar dressing. Here, for example, the amount of anchovies you add will affect the amount of salt, which will affect the amount of cheese you add, which will affect how much vinegar you need, which may need to be lightened by lemon juice. Every choice is part of a greater whole, with the ultimate goal of achieving the deepest flavor possible.

Think of a recipe as a snapshot of a dish. The better the recipe, the more detailed, in focus, and striking the photo. But even the most beautiful photos can’t replace the experience of being in a place, smelling its smells, tastings its tastes, hearing its sounds. Just as photos can’t satisfy all of our senses, nor should recipes subvert them.

A great recipe, like a great photo, tells a story, and it tells it well. Lesser recipes may not connect all of the dots. There are plenty of reasons for this, and while some of them may have to do with the skill of the cook or the accuracy of the recipe tester, or frankly, whether the recipe has been tested at all, they’re not important. Simply put, *no recipe is infallible*. You are the one cooking, you are the one who is present, you are the one who must use all of your senses—most of all, common sense—to guide you to the result you hope for. Over the years I’ve constantly been amazed by the way good cooks give up thinking critically and independently when they begin following recipes.

Instead, once you’ve chosen a recipe, don’t let your own intimate knowledge of your own ingredients and kitchen and, most important, your own taste be overridden by what you’re reading. Be present. Stir, taste, adjust.

Certain kinds of recipes—particularly those involving desserts—must be followed to the letter. But I believe that most savory recipes are little more than guides, and some guides are better than others. Learn to decipher the secret codes within recipes to see where they are leading you.

Once you understand that braising, stewing, and making ragù or beef chili all follow the same general trajectory, I hope you’ll feel liberated. Use your judgment to help decide which pan to use, how high to heat it, what fat to use for browning, and how to judge doneness, no matter what the recipe directs.

Sometimes, you can’t go wrong when you begin with the recipe on the package. The best pumpkin pie I’ve ever tasted was a version of the recipe on the Libby’s canned pumpkin label, with heavy cream substituted for the prescribed canned evaporated milk (indeed, this is the inspiration for the recipe I’ve included on page 000). The go-to recipe for corn bread at Chez Panisse is a slight variation on the recipe from the back of the Alber’s cornmeal box, made instead with freshly milled Antebellum cornmeal from Anson Mills in South Carolina. And my very favorite chocolate chip cookie of all time involves a tiny riff on the original Toll House recipe: a ¼ cup increase in the amount of brown sugar and a corresponding decrease in the amount of white sugar.

When making a dish for the first time, read several different recipes for the same dish and compare notes. Notice which ingredients, techniques, and flavorings are common to the recipes, and which are different. This will give you an idea of which aspects of the dish you must not compromise on, and where a little improvisation is welcome. Over time, as you get to know which chefs and writers are traditionalists, and which take more liberties, you’ll grow better equipped to decide between recipes and cooking styles.

When making foods from far-off lands, perhaps no ingredient is as important as curiosity. Cooking, and eating, foods from places we’ve never seen is as good a way as any (and better than most!) to expand your horizons, to remember that the world is a big, beautiful, place of endless magic and surprise. Let curiosity lead you to new books and magazines, websites, and restaurants, cooking classes, and of course, cities, countries, and continents.

The nature of cooking is ever-changing. Even the same pile of peas will taste different when cooked on two different days, as their innate sugars transform into starches. They'll have to be treated differently in order to extract the best flavor from them, and that means you need to pay attention and ask yourself what will work best today, here, with these ingredients.

With all of this—and everything I've taught you in Part One—in mind, I've compiled my most essential and versatile recipes and recommendations in Part Two. Organized somewhat differently than the recipes in a traditional cookbook, they reflect the patterns and lessons I've uncovered in Salt, Fat, Acid, and Heat. Refer to the charts and infographics to set your course. These resources are kind of like training wheels: use them until you feel comfortable cooking without them. Then abandon them, using only the four elements of good cooking as a guide. They are all you will need.



The other night, as I was watching *The Sound of Music* for the umpteenth time, unabashedly singing along, I heard a line from “Do-Re-Mi” in a whole new way. It goes: “Once you know the notes to sing, you can sing most anything.” Feel free to imagine my off-key belting as you let this idea sink in. Once you know the basics of Salt, Fat, Acid, and Heat, you can cook most anything, and do it well.

These are the four notes of the culinary scale; learn your way around them. Verse yourself in the classics, and then begin to improvise like a jazz musician, putting your own spin on the standards.

Think about Salt, Fat, Acid, and Heat every single time you set out to cook. Choose the right type of Heat for the particular foods you're cooking. Taste and adjust Salt, Fat, and Acid as you go. Be thoughtful, and use your senses. Consider these four elements when making dishes you've made hundreds of times, and use them to find your bearings when cooking exotic foods for the first time. They'll never let you down.

and NOW THAT
you KNOW
HOW to COOK...

PART TWO

RECIPES *and*
RECOMMENDATIONS



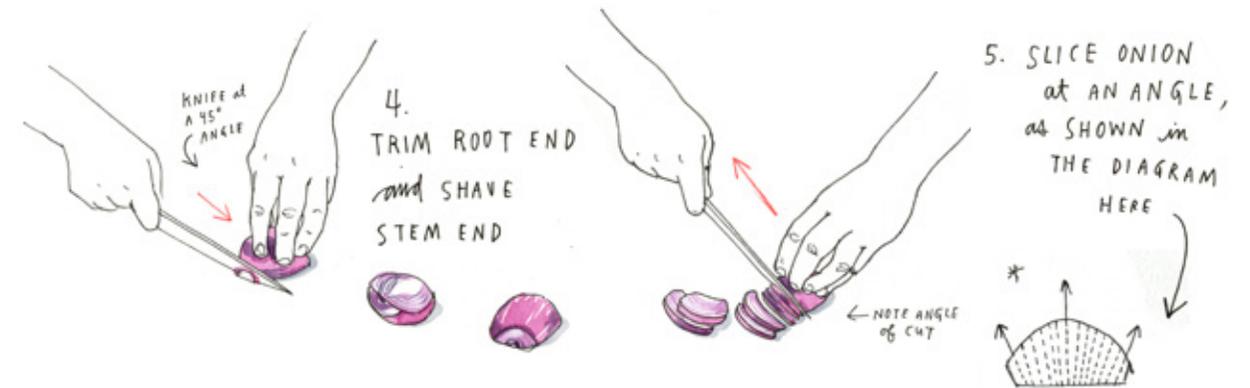
A FEW BASIC HOW-TOS

How to Prepare an Onion for Slicing & Dicing



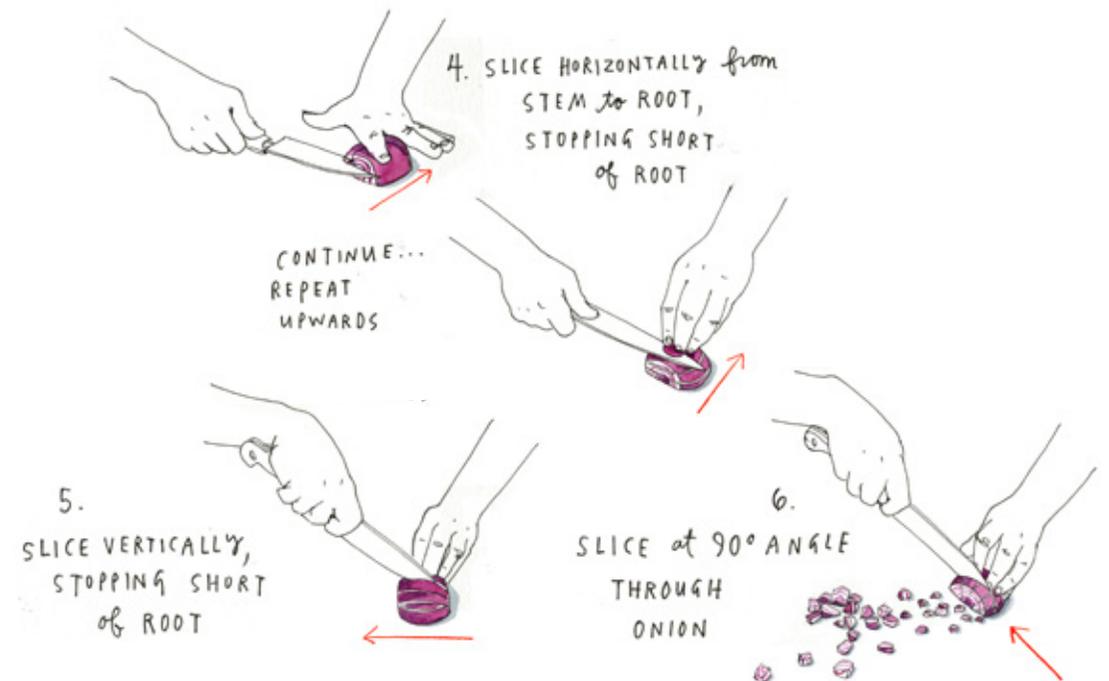
How to Slice an Onion

FOLLOW PREP STEPS 1-3, and THEN:



How to Dice an Onion

FOLLOW ONION PREP STEPS 1-3, and THEN:



RECIPES



SALADS

My *maman* is a fantastic cook. Her kitchen boasts a broad variety of foods and flavors, from tender lamb shanks to puddings scented with rosewater. But she only ever serves one of two salads at our dinner table: Persian cucumber, tomato, and onion, or *Shirazi* Salad (page 000), and a romaine-pecorino-sun dried tomato number. As a child, I quickly grew bored with salad. By the time I left for college, I'd disavowed it altogether.

Then I ended up at *Chez Panisse*, which may as well be called Alice's House of Salads because if there were ever a restaurant built on the supremacy of salad, it's *Chez Panisse*. I once heard Jacques Pépin say he could judge a cook's skill by how well he cooks an egg. For Alice—and by extension all of us who've worked for her—salad reveals everything she needs to know about a cook.

At *Chez Panisse*, I learned to build a salad—a great one—out of anything: any vegetable, fruit, or herb, beans, grains, fish, meat, eggs, or nuts. As with all good cooking, get the salt, fat, and acid in a salad right, and it will be delicious. For bonus points, add crunchy ingredients for textural variety and umami-rich ingredients for a flavor boost. For inspiration, look to salads such as Wedge, Caesar, and Cobb, which remain classics precisely because they achieve this ideal balance of tastes and textures.

Familiarize yourself with the following basic salad recipes, then begin to improvise with the ideal salad checklist in mind. Choose a flavor direction, and use the fat, acid, and herb combinations that reflect the tastes you seek.

From vibrant, raw seasonal produce to fresh-tasting herbs and vinaigrettes, every ingredient in a salad can be beautiful *and* delicious. Learn to dress salads properly, by tossing ingredients in a bowl with your hands, which will do an immeasurably better job than tongs or a wooden spoon. Let your fingers feel when all of the leaves are coated, then taste and adjust the seasoning as needed.

For salads with multiple components, such as Avocado with Heirloom Tomato and Cucumber (page 000), dress the less delicate cucumber slices in a bowl with salt

and vinaigrette. Alternate various colors of tomato slices on the platter, then top with spoonfuls of avocado, and season with salt and vinaigrette, then spoon the cucumbers around. Finish the salad—and indeed any salad—with the most delicate ingredients of all, a billowing nest of herbs or tiny arugula leaves tossed with a whisper of dressing and a little more salt.

Ideal Salad

LET'S BREAK IT DOWN.	THE WEDGE	THE CAESAR	THE COBB	THE GREEK
SALT	BACON and BLUE CHEESE	ANCHOVY, PARMESAN, and WORCESTER-SHIRE	BACON and BLUE CHEESE	FETA CHEESE and OLIVES
FAT	BACON, BLUE CHEESE, and OLIVE OIL	EGG, OLIVE OIL, and PARMESAN	AVOCADO, EGG, BLUE CHEESE, and OLIVE OIL	OLIVE OIL and FETA CHEESE
ACID	BLUE CHEESE and VINEGAR	LEMON, VINEGAR, WORCESTER-SHIRE, and PARMESAN	VINEGAR, MUSTARD, and BLUE CHEESE	VINEGAR or LEMON, MACERATED ONION, FETA, and TOMATOES
CRUNCH	ICEBERG LETTUCE and BACON	ROMAINE LETTUCE and CROUTONS	ROMAINE, WATER-CRESS, and BACON	CUCUMBERS
UMAMI	BACON and BLUE CHEESE	PARMESAN, ANCHOVY, and WORCESTER-SHIRE	BLUE CHEESE, BACON, TOMATO, and CHICKEN	TOMATO, FETA CHEESE, and OLIVES

Avocado Salad Matrix

Rich and creamy, avocados are one of my favorite affordable luxuries. You can easily build an elegant salad out of a ripe one. And since avocados pair well with all sorts of crunchy and acidic fruits and vegetables, instead of giving you a single recipe for avocado salad, I've organized a bunch of possibilities into this matrix.

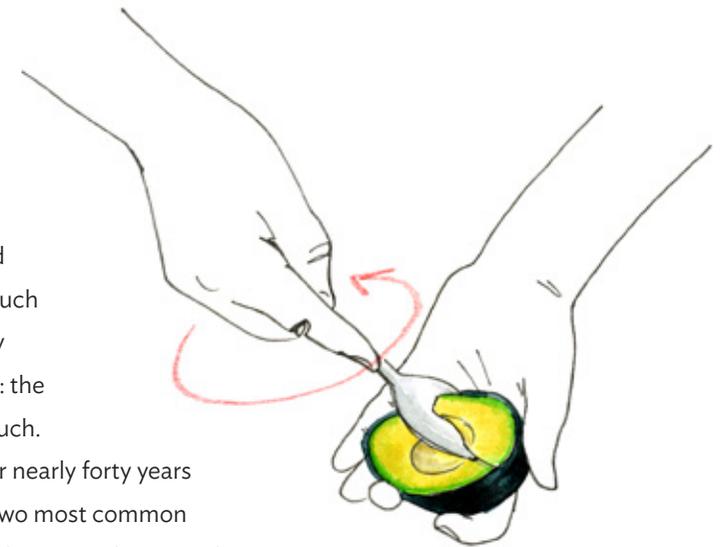
An avocado salad will make any meal more special, a point I once proved by bringing avocados, blood oranges, salt, and good olive oil to a yoga workshop. During our lunch break, we had a surprise birthday potluck for one of our classmates. I made a simple salad by slicing the citrus and laying it out on a platter, spooning the avocado on top, and then seasoning both with olive oil and salt. Served in the back of the gym, the salad was so refreshing and unexpected that everyone who tasted it still tells me it was the best salad of her life, even a decade later!

To make enough salad for about 4 people, begin with one ripe avocado (you can always add more to your liking!), and refer to the chart to see which other ingredients and dressings to add into your salad. Let the rest of your meal dictate the direction of the salad, from Morocco to Mexico to Thailand. No matter how you proceed, every single version will be improved by the counterpoint of a big pile of herbs, some shaved fennel bulb, or a handful of arugula.

Avocado

Hass avocados are the most widely available variety. They're also one of my favorites, with their silky texture and rich, nutty flavor. While a little less common, Fuerte, Pinkerton, and Bacon avocados are also delightful, with much milder flavor and creamier texture. Use any variety you like, as long as it's perfectly ripe: the avocado is ready when it's tender to the touch.

A friend who's been a hand surgeon for nearly forty years told me that avocados and bagels are the two most common causes of hand injuries. So please, please, please put the avocado down on the board when you whack at the pit with your knife to remove it.



Use one avocado for this salad, and wait until the last minute to cut into it, because it'll oxidize quickly, changing in both flavor and color. Once you've halved the avocado and removed the pit, use a spoon to scoop out rustic spoonfuls and place them directly onto the platter. Season each bite of avocado with flaky salt and drizzle with vinaigrette. If you have any mild pepper flakes, such as Marash or Aleppo, on hand, sprinkle them on top for a little hint of spice and a welcome color contrast.

Beets

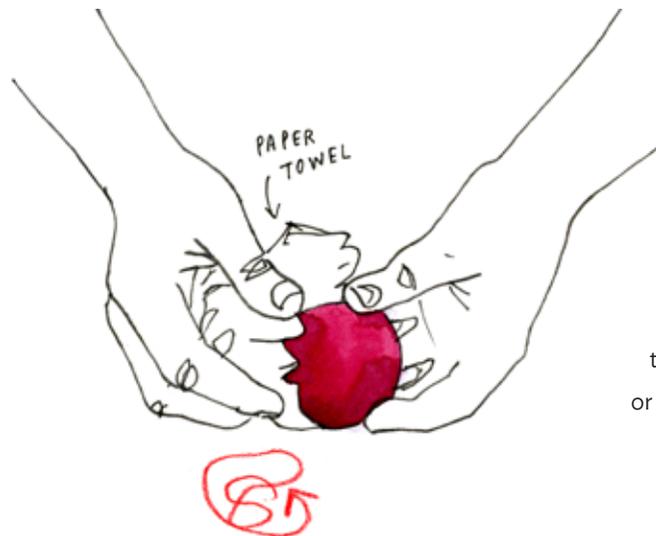
Use 2 to 3 small beets, tops and ends trimmed and rinsed. I've found that red beets are the most consistently delicious, but gold beets and the candy cane-striped variety called Chioggia lend stunning beauty to the plate. Even someone like me, who is obsessed with flavor, can make an exception for these varieties from time to time.

Preheat the oven to 425°F. Place the beets in a baking dish in a single layer and fill the pan with ¼ inch water—just enough to create steam in the pan without simmering the beets. Lay a piece of parchment paper over the beets and cover the dish tightly with foil. Roast for an hour, or until completely tender when pierced with a paring knife—there are few things less appetizing than undercooked beets. Pay attention to the aromas emitted from the oven—if you smell sugars caramelizing, it means all the water has evaporated, and you'll need to add more to prevent the beets from burning.

Let the beets cool just enough so you can handle them, and then peel by rubbing with a paper towel. The skins will slip right off. Cut into bite-sized wedges and toss in

a bowl along with 1½ teaspoons wine vinegar, 1 tablespoon extra-virgin olive oil, and salt. Let sit for 10 minutes, then taste and adjust seasoning as needed—remember that the right amount of acid and salt will amplify the beets' natural sweetness.

To serve, arrange the wedges on the platter—the rule when plating beets is: put them down confidently, and do not move them or they will stain, leaving a messy trail in their wake.



Citrus

Use 2 to 3 citrus fruits of any variety, including grapefruits, pomelos, oranges, blood or Cara Cara oranges, even mandarins. Combine a couple different varieties of citrus to enhance the flavor and aesthetics of the dish.

Cut off the tops and bottoms of the fruits.

Place on a cutting board, then remove the peel and the pith in strips with a sharp knife. Carefully slice oranges and mandarins crosswise, about ¼ inch thick, removing seeds as you encounter them. To **supreme**—or segment—grapefruits and pomelos, hold the peeled fruit over a bowl in one hand. Carefully use a knife with a sharp, thin blade to cut along the membrane down to the center of the orange. Continue cutting along both sides of each membrane to release every segment. When you're done, squeeze all of the remaining juice from the fruit into a separate bowl and use it to make Citrus Vinaigrette (page 000), *Granita* (page 000), or just drink it! Season the slices or segments lightly with salt as you place them on the platter.



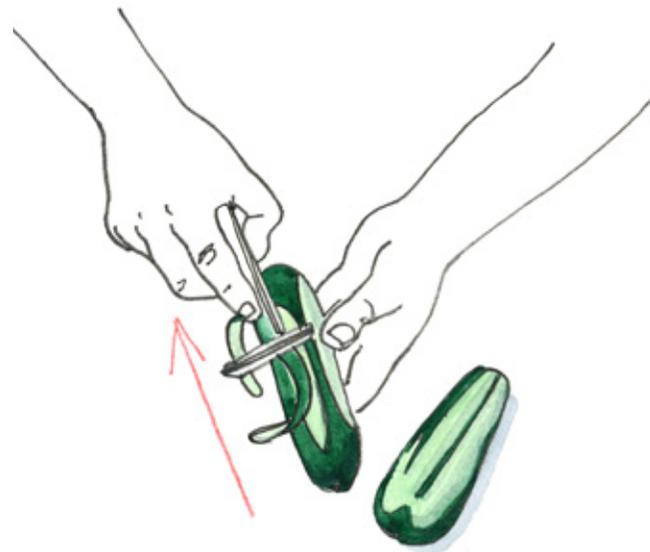
Tomatoes

Use 2 to 3 tomatoes when they're ripe and in season during the summer months. A few contrasting slices of heirloom tomatoes—try Green Zebra, Great White, a yellow variety such as Marvel Stripe or Hawaiian Pineapple, a pink one such as Brandywine, or a dark one such as Cherokee Purple—will likewise enhance how the salad looks and tastes.

Core the tomatoes with a paring knife, then carefully slice them horizontally, about $\frac{1}{4}$ inch thick. Season the slices with salt as you place them on the platter. As with the beets or citrus, arrange with an eye toward beauty, alternating colors of tomatoes with the other elements of the salad.

Cucumbers

While almost all of the other ingredients in this matrix are soft in texture and rich in flavor, cucumbers are crisp and light. Use about $\frac{1}{2}$ pound of any flavorful, thin-skinned variety. This works out to about two Persian, Japanese, or lemon cucumbers, or one small Armenian cucumber. Remove the peel in alternating strips. This is what I call a **stripey peel**, and I use it for all sorts of produce when I want to remove some but not all of the skin (leaving some peel behind is both a handy aesthetic trick and a technical one, since it provides structure and prevents delicate vegetables such as eggplant and asparagus from completely disintegrating as they cook). Halve the cucumbers lengthwise, and if the seeds are bigger than a peppercorn, use a teaspoon to scrape them out. Slice the cucumbers on the bias for a longer, more elegant, half-moon shape. Toss with salt and vinaigrette before spreading out onto the salad.



Macerated Onion

Place half a red onion down on the cutting board and cut it in half, parallel to the root end. Holding the two quarters together, slice the onion thinly to yield quarter slices. Place the slices in a bowl and dress with 2 tablespoons wine vinegar or citrus juice. Toss to coat. Let the onions sit in the acid, or **macerate** (see page 000), for at least 15 minutes before using. This process tones down their acrid bite. Keep in mind that as onions macerate, they'll absorb the acid, so as you incorporate them into the salad they'll add both tartness and a pleasant oniony crunch. If you like, drain the macerating acid and use it to build the vinaigrette.

Optional Additions

- Gently tear Slow-Roasted Salmon (page 000) or Tuna Confit (page 000) into two-bite-sized pieces, then arrange atop the salad. Drizzle with vinaigrette and sprinkle with flaky salt.
- Halve 2 Eight-Minute Eggs (page 000) and sprinkle them with flaky salt and freshly ground black pepper. Drizzle with extra-virgin olive oil, and if you like, lay an anchovy filet over each half. Arrange atop the salad.



the Avocado Matrix

	AVO, BEET, & CITRUS	AVO & BEET	AVO & CITRUS	AVO & TOMATO	AVO, TOMATO, & CUKE	AVO, BEET, & CUKE
AVOCADO (OBSVIOUSLY)	✓	✓	✓	✓	✓	✓
SALAD BASE						
BEET	✓	✓				✓
CITRUS	✓		✓			
TOMATO				✓	✓	
CUCUMBER					✓	✓
LAYER MACERATED ONIONS			✓	✓	✓	
OPTIONAL ADDITION						
SALMON or TUNA	✓	✓	✓	✓	✓	✓
EGG & ANCHOVY		✓		✓	✓	✓
VINAIGRETTE						
ANY CITRUS	✓	✓	✓			
LEMON	✓	✓	✓	✓	✓	✓
LIME	✓	✓	✓	✓	✓	✓
TOMATO				✓	✓	
RICE WINE		✓		✓	✓	✓
GREEN GODDESS		✓				✓

AVOCADO, BEET, and CITRUS SALAD



1. ARRANGE CITRUS



2. LAYER BEETS



3. LAYER SHALLOTS



4. LAYER AVOCADO



5. LAYER GREENS



6. EAT.

Smooth: Silky Sweet Corn Soup

Makes 10 cups

I'm a firm believer that the best cooking is not so much about fancy techniques and expensive ingredients. Sometimes the tiniest—and most inexpensive—thing will make all the difference. Nothing demonstrates that idea as well as this soup, whose secret ingredient is a quick stock made using nothing more than cobs and water. Use the freshest, sweetest summer corn you can find and you'll see how five simple ingredients can add up to a singularly flavorful soup.

8 to 10 ears corn, husks, stalks, and silk removed

8 tablespoons (4 ounces) butter

2 medium yellow onions, sliced

Salt

Fold a kitchen towel into quarters and set it inside a large, wide metal bowl. Use one hand to hold an ear of corn in place upright atop the kitchen towel—it helps to pinch the ear at the top. With your other hand, use a serrated knife or sharp chef's knife to cut off two or three rows of kernels at a time by sliding the knife down the cob. Get as close to the cob as you can, and resist the temptation to cut off more rows at once—that'll leave behind lots of precious corn. Save the cobs.

In a soup pot, quickly make a corn cob stock: cover the cobs with 9 cups water and bring to a boil. Reduce heat and simmer for 10 minutes, then remove the cobs. Set stock aside.

Return the pot to the stove and heat over medium heat. Add the butter. Once it has melted, add the onions and reduce heat to medium-low. Cook, stirring occasionally, until the onions are completely soft and translucent, or **blond**, about 20 minutes. If you notice the onions starting to brown, add a splash of water and keep an eye on things, stirring frequently, to prevent further browning.

As soon as the onions are tender, add the corn. Increase the heat to high and sauté just until the corn turns a brighter shade of yellow, 3 to 4 minutes. Add just enough stock to cover everything, and crank up the heat to high. Save the rest of the stock in case you need to thin out the soup later. Season with salt, taste, and adjust. Bring to a boil, then simmer for 15 minutes.

If you have an immersion blender, use it to carefully blend the soup until it is puréed.

If you don't have one, work carefully and quickly to purée it in batches in a blender or food processor. For a very silky texture, strain the soup one last time through a fine-mesh sieve.

Taste the soup for salt, sweetness, and acid balance. If the soup is very flatly sweet, a tiny bit of white wine vinegar or lime juice can help balance it out.

To serve, either ladle chilled soup into bowls and spoon salsa over it to garnish, or quickly bring the soup to a boil and serve hot with an acidic garnish, such as Mexican-ish Herb Salsa (page 000) or Indian Coconut-Cilantro Chutney (page 000).

Variation

Follow this method and the basic formula I described above—about 2½ pounds of vegetables or cooked legumes, 2 onions, and enough stock or water to cover—to turn practically any other vegetable into a velvety soup. The cob stock is unique to corn soup; don't try to replicate it when making any of the variations. Carrot peel stock won't do much for a soup!

And there's no cooking whatsoever required to make **chilled cucumber and yogurt soup!** Just purée seeded, peeled cucumbers and yogurt, then thin with water to your desired consistency.

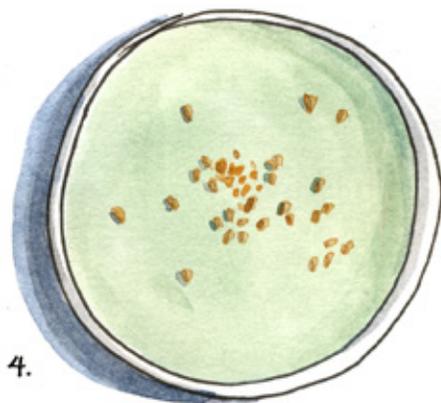
Turn the page for some some soup-and-garnish combinations to inspire your soup-making.



SMOOTH SOUP SUGGESTIONS



1.



4.



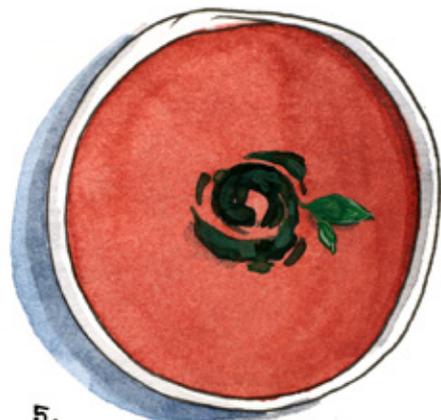
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9.



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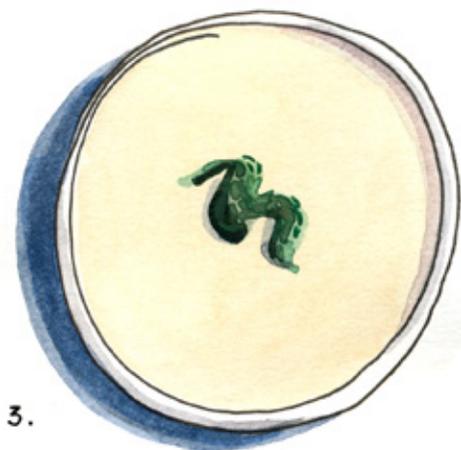
5.



7.



10.



3.



8.

1. BUTTERNUT SQUASH and GREEN CURRY SOUP w/ FRIED SHALLOTS and CILANTRO
2. CHILLED CUCUMBER and YOGURT SOUP w/ TOASTED SESAME SEEDS
3. ENGLISH PEA SOUP w/ MINT SALSA VERDE
4. TOMATO SOUP w/ BASIL PASTA
5. TURNIP SOUP w/ TURNIP GREEN PESTO

6. CAULIFLOWER SOUP w/ TOASTED PINE NUTS and CURRANTS
7. CARROT SOUP w/ YOGURT and CHAMOUILA
8. POTATO-LEEK SOUP w/ CRÈME FRAÎCHE and CRUMBLIED BACON
9. SPINACH and DILL SOUP w/ CRUMBLIED FETA and TOASTED PITA CRUMBS
10. ROASTED EGGPLANT SOUP w/ HARISSA

Pork Braised with Chilies

Serves 6 to 8

This is the single most versatile recipe in this book. I've prepared pork according to this method for diplomats at the US Embassy in Beijing and to distinguished guests at a thousand-year-old castle in northern Italy. But I especially love cooking it with my students at the end of every Heat class. We shred the meat and make tacos that we pile high with Tender Beans (page 000), Bright Cabbage Slaw (page 000), and Mexican-ish Herb Salsa (page 000). The best part? I get to take the leftovers home and enjoy all week long.

4 pounds boneless pork shoulder (sometimes called pork butt)

Salt

1 garlic head

Neutral-tasting oil

2 medium yellow onions, sliced

2 cups crushed tomatoes in their juice, fresh or canned

2 tablespoons cumin seed (or 1 tablespoon ground cumin)

2 bay leaves

8 dried chilies, such as Guajillo, New Mexico, Anaheim, or ancho, stemmed, seeded, and rinsed

Optional: For a touch of smokiness add 1 tablespoon smoked paprika or 2 smoked peppers such as chipotle Morita or Pasilla de Oaxaca to the braise

2 to 3 cups lager or pilsner beer

½ cup coarsely chopped cilantro for garnish

The day before you plan to cook, season the pork generously with salt. Cover and refrigerate.

When you're ready to cook, preheat the oven to 325°F. Remove any roots from the head of garlic, then slice it in half crosswise. (Don't worry about adding the skins to the braise—they'll get strained out at the end. If you don't trust me, go ahead and peel the whole head of garlic—I'm just trying to save you some time and effort.)

Set a large, ovenproof Dutch oven or stockpot over medium-high heat. When it's warm, add 1 tablespoon oil. When the oil shimmers, place the pork in the pot. Brown it evenly on all sides, about 3 to 4 minutes per side.

When the meat is brown, remove it and set it aside. Carefully tip out as much of the fat from the pot as you can, then return it to the stove. Reduce the heat to medium, and

add 1 tablespoon neutral oil. Add the onions and garlic and cook, stirring from time to time, until the onions are tender and lightly browned, about 15 minutes.

Add the tomatoes and juice, cumin, bay leaves, dried chilies, and smoked paprika or peppers, if using, into the pot and stir. Nestle pork atop the aromatic base, and add enough beer to come 1½ inches up the sides of the meat. Make sure the peppers and bay leaves are mostly immersed in the juices so that they do not burn.

Increase the heat and bring to a boil on the stove, then slip the pot, uncovered, into the oven. After 30 minutes, check to make sure the liquid is just barely simmering. About every 30 minutes, turn the pork over and check the level of the liquid. Add more beer as needed to maintain the liquid at a depth of 1½ inches. Cook until the meat is tender and falls apart at the touch of a fork, 3½ to 4 hours.

Remove the cooked pork from the oven and carefully remove it from the pan. Discard the bay leaves, but don't worry about fishing out the garlic since the sieve will catch the skins. Using a food mill, blender, or food processor, purée the aromatics, and strain them through a sieve. Discard the solids.

Skim the fat from the sauce and then taste, adjusting salt as needed.

At this point, you can either shred the meat and combine it with the sauce to make pork tacos, or slice it and spoon the sauce over the pork to serve it as an entrée. Garnish with chopped cilantro and serve with an acidic condiment such as Mexican crema, Mexican-ish Herb Salsa (page 000), or a simple squeeze of lime.

Cover and refrigerate leftovers for up to 5 days. Braised meat freezes exceptionally well. Simply submerge in cooking liquid, cover, and freeze for up to 2 months. To serve, return the braise to a boil on the stove with a splash of water.

Variations

- Any cut of meat from the list below will make a fantastic braise or stew. Memorize the basics of the recipe above, and then apply the steps to any cut of dark, sinewy meat you'd like. Refer back to the Heat chapter, page 000, for a detailed walkthrough of this braise, and a chart of average cooking times for various cuts of meat.
- When you're inspired to cook any of the classic braises and stews from around the world, do a little research. Compare a few different recipes for the same dish to see what ingredients or special steps are common to them all. Use the aromatics chart and the fat, acid, and spice wheels to guide you. The beauty of it all is, once you've got this braise in your pocket, you've got a hundred others in there, too.

Everything You Need to Know to Improve a Braise

Best Braising Cuts

Pork

Spare Ribs
Shoulder
Shank
Sausages
Belly

Beef

Oxtails
Short Ribs
Shank (*Osso buco*)
Chuck
Brisket
Round

Chicken, Duck, and Rabbit

Legs
Thighs
Wings (poultry only)

Lamb and Goat

Shoulder
Neck
Shank

Classic Braises and Stews from Around the World

<i>Adobo</i> (Philippines)	<i>Goat Birria</i> (Mexico)
Beef <i>Bourguignon</i> (France)	<i>Goulash</i> (Poland)
Beef <i>Daube</i> (France)	Lamb Tagine (Morocco)
Beer-Braised Sausages (Germany)	<i>Locro</i> (Argentina)
<i>Bigos</i> (Poland)	<i>Nikujaka</i> (Japan)
Braised Pork Belly (All over!)	<i>Osso Buco</i> (Italy)
Cassoulet (France)	Pork Cooked in Milk (Italy)
Chicken <i>Alla Cacciatora</i> (Italy)	<i>Pot au Feu</i> (France)
Chili Con Carne (US)	Pot Roast (US)
<i>Coq au Vin</i> (France)	<i>Pozole</i> (Mexico)
Country-Style Ribs (US South)	<i>Ragù Bolognese</i> (Italy)
<i>Doro Wat</i> (Ethiopia)	<i>Rogan Josh</i> (Kashmir)
<i>Fesenjan</i> (Iran)	Roman Oxtail Stew (Italy)
<i>Ghormeh Sabzi</i> (Iran)	<i>Tas Kebap</i> (Turkey)

Basic Braising Times

Chicken Breasts: 5 to 8 minutes if boneless, 15 to 18 minutes if on the bone. (If braising a whole chicken, split the breasts into quarters, cook them on the bone, and remove them from the pot when finished, about 15 to 18 minutes, allowing the legs to finish on their own.)

Chicken legs: 35 to 40 minutes

Duck legs: 1½ to 2 hours

Turkey legs: 2½ to 3 hours

Pork shoulder: 2½ to 3½ hours, longer if on the bone

Bony beef (short ribs, osso buco, oxtail): 3 to 3½ hours

Meaty beef (chuck, brisket, round): 3 to 3½ hours

Lamb shoulder on the bone: 2½ to 3 hours

Protein Shopping Guide

On average, 1 pound of each of the following will feed:

Fish filet: 3 people

Shell-on shellfish: 1 person

Bone-in roast: 1.5 people

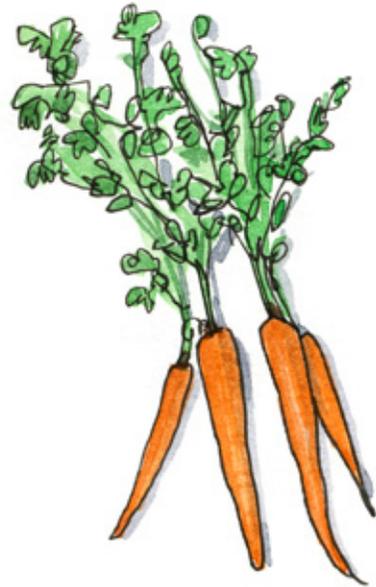
Steak: 3 people

Whole animals and meat on the bone: 1 person

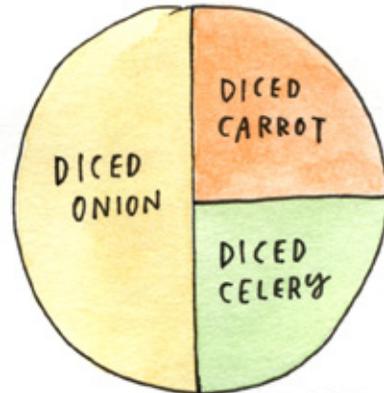
Ground meat for burgers or sausages: 3 people

Ground meat for ragù or chili: 4 people

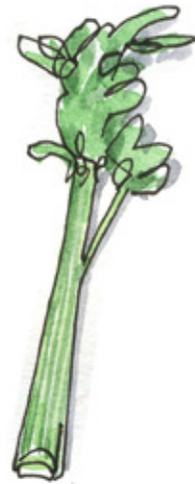
AROMATIC FLAVOR BASES of THE WORLD



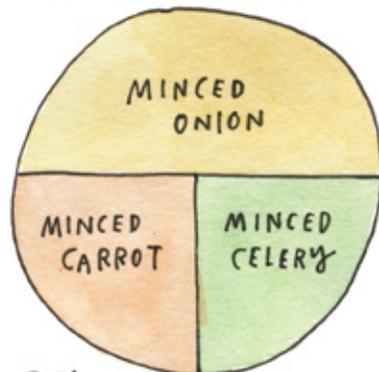
FRANCE: Mirepoix



COOK in BUTTER or OLIVE OIL UNTIL SOFT WITHOUT BROWNING



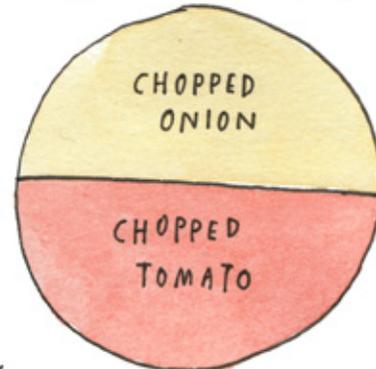
ITALY: Soffritto



COOK in ABUNDANT OLIVE OIL UNTIL SOFT and BROWN



CATALONIA: Sofregit



(OPTIONAL: GARLIC &/or RED BELL PEPPERS)
COOK in ABUNDANT OLIVE OIL UNTIL SOFT and BROWN

INDIA: Adu Lasan



GRIND into a PASTE using a MORTAR and PESTLE or FOOD PROCESSOR. RUB on MEAT or POULTRY BEFORE COOKING, or SIZZLE in OIL ALONG with SOFTENED ONIONS.



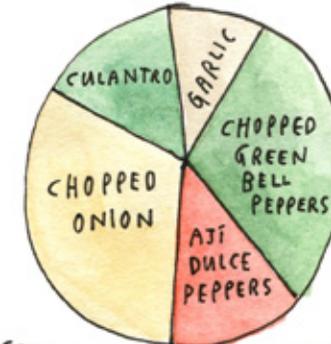
GUANGDONG, CHINA (CANTONESE COOKING): Aromatics



FOR MILD FLAVOR, ADD in LARGE PIECES at THE START of COOKING. FOR STRONG FLAVOR, MINCE and ADD at THE END of STIR-FRYING.

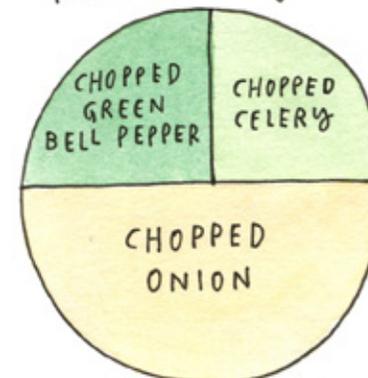


PUERTO RICO: Recaito



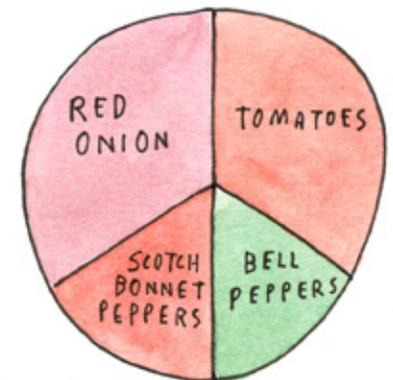
COOK in NEUTRAL OIL UNTIL SOFT and BEGINNING to BROWN

AMERICAN SOUTH: The Holy Trinity



COOK in NEUTRAL OIL UNTIL SOFT

WEST AFRICA: Ata Lilo



PURÉE EVERYTHING TOGETHER and REDUCE to a THICK PASTE



with $\frac{3}{4}$ cup of sugar (5 $\frac{1}{4}$ ounces), 2 tablespoons (1 ounce) cornstarch, 1 teaspoon finely grated lemon zest, 3 tablespoons lemon juice, and a big pinch of salt in a large bowl. (For frozen fruit, increase cornstarch to 3 tablespoons/1 $\frac{1}{2}$ ounces)

Pour fruit mixture into a 9 x 9-inch baking dish. Arrange the chilled shortcakes on top of the fruit. Place the baking dish on a baking sheet to catch any juices that bubble over. Brush shortcakes with heavy cream and sprinkle generously with sugar, then bake for 40 to 45 minutes, until the biscuits are cooked through and turning golden. Allow to cool slightly before serving, with vanilla ice cream if desired.

Aaron's Tart Dough

*Makes one 16-ounce tart dough,
enough for a 12-inch tart*

I used to be terrified of tart making, until my dear friend Aaron, who's as obsessive about flavor as I am, came up with this recipe after years of experimentation. Both versatile and forgiving, it works for any fruit or savory tart. Once you can make a delicious tart, practice making a beautiful one. Lay out toppings with an eye toward aesthetics. Alternate different colored plums, apples, tomatoes, or peppers for a striped pattern, or simply dot an asparagus tart with dollops of seasoned ricotta for contrast. The more senses to which your food appeals, the more delight it'll bring you.

One note: if you don't have a stand mixer, you can make this dough in a food processor or by hand with a pastry blender. Just make sure to freeze all of your tools, no matter which ones you use.

1 $\frac{2}{3}$ cups (8 $\frac{1}{2}$ ounces) all-purpose flour

2 tablespoons (1 ounce) sugar

$\frac{1}{4}$ teaspoon baking powder

1 teaspoon kosher salt or $\frac{1}{2}$ teaspoon fine sea salt

8 tablespoons (4 ounces) unsalted butter cut into $\frac{1}{2}$ -inch cubes, chilled

6 tablespoons (3 ounces) crème fraîche (page 000) or heavy cream, chilled

2 to 4 tablespoons ice water

Whisk together the flour, sugar, baking powder, and salt in the bowl of a stand mixer. Freeze, along with the butter and the paddle attachment, for 20 minutes. Chill the crème fraîche and cream in the fridge.

Put the bowl of dry ingredients on the stand mixer and fit with the paddle attachment. Turn the speed onto low, and slowly add the butter cubes. Once the butter is added, you can increase the speed to medium-low.

Work in the butter until it looks like broken-walnut-size pieces (don't overmix—bits of butter are *good!*). This will take about 1 to 2 minutes in the stand mixer, a little longer by hand.

Add the crème fraîche. In some cases, this will be enough to bind the dough with a bit of mixing. In other cases, you might need to add a spoonful or two of ice water. Resist the urge to add so much water, or mix for so long, that the dough comes completely together.

Some shaggy bits are fine. If you're not sure whether or not the dough needs more water, stop the mixer and take a handful of dough in your palm. Squeeze it hard, then gently try to break it apart. If it crumbles apart very easily and feels very dry, add more water. If it holds together or breaks into a few chunks, you're done.

On the counter, pull out a long piece of plastic wrap from the roll but do not cut it. In a quick, fearless motion, flip the bowl over onto the plastic wrap. Remove the bowl, and avoid touching the dough. Cut the plastic from the roll and, lifting both ends, use it to encourage all of the dough into a ball. Don't worry if there are some dry bits—the flour will evenly absorb the moisture with time. Just twist the plastic tightly around the dough, press the ball into a disk, and chill for at least 2 hours or overnight.

To freeze the dough for up to 2 months, double-wrap it in plastic and then wrap it in aluminum foil to prevent freezer burn. Allow the dough to defrost in the refrigerator overnight before using.



THE HERRINGBONE TART
(to END ALL TARTS)

Apple and Frangipane Tart

Makes one 14-inch tart

For the Frangipane

- ¾ cup (4 ounces) almonds, toasted
- 3 tablespoons sugar
- 2 tablespoons (1 ounce) almond paste
- 4 tablespoons (2 ounces) unsalted butter at room temperature
- 1 large egg
- 1 teaspoon kosher salt or ½ teaspoon fine sea salt
- ½ teaspoon vanilla extract
- ½ teaspoon almond extract

For the Tart

- 1 recipe Aaron's Tart Dough (page 000), chilled
- Flour for rolling
- 6 tart, crunchy apples such as Honeycrisp, Sierra Beauty, or Pink Lady
- Heavy cream
- Sugar for sprinkling

To make the frangipane, place the almonds and sugar in a food processor and grind until very fine. Add the almond paste, butter, egg, salt, vanilla, and almond extract and mix until you have a smooth paste.

Flip a rimmed baking sheet upside down and place a piece of parchment paper on top (it'll be easier to shape and fold the tart without the rim of the pan getting in the way). Set aside.

Before unwrapping the dough, roll the disk on its edge on the counter to form it into a uniform circle. Unwrap the dough and sprinkle the counter, the rolling pin, and the dough with flour to prevent sticking. Working quickly, roll the dough out into a 14-inch circle, to a thickness of about ⅛-inch.

To roll the dough into a circle more easily, turn the dough a quarter turn with every roll. If the dough does begin to stick, lift it carefully from the counter and use more flour as needed.

Roll the dough onto the rolling pin, and gingerly pick it up off the counter. Carefully unroll it onto the upside-down, parchment-lined baking sheet. Refrigerate for 20 minutes.

In the meantime, work on the fruit. Peel, core, and cut the apples into ¼-inch slices. Taste a slice. If the apples are really tart, place them in a large bowl, sprinkle them with 1 to 2 tablespoons of sugar, and toss to coat.

Use a rubber or offset spatula to spread a ⅛-inch thick layer of frangipane all over the surface of the chilled dough, leaving the outer 2 inches uncovered.

Layer the apples onto the frangipane, making sure there is plenty of overlap. As the fruit cooks it will shrink and you don't want to end up with any naked parts on your tart. To make a herringbone design, lay two rows of apple slices at a 45-degree angle (make sure they are all pointing the same way), then reverse the angle of the next two rows to 135 degrees. Continue the pattern until the dough is covered in fruit. Use two different colors of fruits for a particularly visually striking tart; here we used a variety of apples called Ruby Red, alternated with Sierra Beauty apples. Pink Pearl apples, with their cotton candy flesh, are also stunning. Green and purple plums, poached quince, or pears poached in red or white wine can also offer beautiful colors for you to work with. (If using more than one color, the pattern becomes 45 degrees color A, 45 degrees color B, 135 degrees color B, 135 degrees color A to achieve stripes.)

To create a pleated crust, fold the outer dough up and over itself at 1½ inch-ish intervals while rotating the tart. With each pleat, crimp the dough tightly and push it up against the outer circle of fruit. For a more rustic look, simply fold the dough over the fruit at regular intervals. Leaving it on the parchment paper, return the tart to the baking sheet, now on the top side, and refrigerate for 20 minutes.

Preheat the oven to 425°F, and set a rack to the middle position of the oven. Just before baking, brush the crust generously with heavy cream and sprinkle generously with sugar. Sprinkle some sugar onto the fruit as well. (Brush savory tarts with a lightly whisked egg and omit the sugar. When working with very juicy fruits, such as rhubarb or apricots, bake the tart for 15 minutes before sprinkling the fruit with sugar, which will encourage osmosis and cause it to weep. Give the crust a head start so it can stand up to the fruit.)

Bake on the middle rack of the oven at 425°F for 20 minutes. Then, reduce the heat to 400°F for another 15 to 20 minutes. Then reduce the heat to 350 to 375°F (based on how dark the crust is) and cook until done, about another 20 minutes. Rotate the tart as it bakes to ensure even browning. If the crust browns too quickly, loosely place a piece of parchment paper over the tart and continue baking.

The tart will be done when the fruit is tender, the crust is a deep, golden brown, and you can stick a paring knife under the tart and lift it off the pan with ease. The underside should also be golden-hued.

Remove from the oven and allow to cool on a wire rack for 45 minutes before slicing. Serve warm or cooled, with ice cream, Scented Cream (page 000), or crème fraîche (page 000).

Cover and refrigerate unused frangipane for up to one week. Keep any uneaten tart wrapped at room temperature, for up to 1 day.

Variations

- When working with really juicy fruits, such as apricots, rhubarb, berries, peaches, or plums, sprinkle a little Magic Dust over the frangipane to help absorb the juices and prevent a soggy crust. To make the magic dust, simply combine 2 tablespoons each toasted almonds, sugar, and flour in a food processor and grind into a fine dust. Use 4 to 6 tablespoons magic dust per juicy tart.
- For savory tarts, sprinkle about 2 tablespoons flour onto the rolled dough, and then spread on drained, cooled Caramelized Onions (page 000), or Parmesan, or both, to create a similar protective layer.
- For tarts made with precooked ingredients, such as roasted potatoes, radicchio, or butternut squash, adjust the baking time to 20 minutes at 425°F, plus 15 minutes at 400°F. Then check the tart for doneness, and continue baking at 350°F if necessary until the crust is golden brown and you can stick a paring knife under the tart and lift it off the pan with ease.

CARMELIZED ONIONS,
ANCHOVIES, and
BLACK OLIVES

PLUM and
FRANGIPANE

ROASTED
RADICCHIO
(DRIZZLE with AGED
BALSAMIC BEFORE
SERVING)

RHUBARB
and
FRANGIPANE

HEIRLOOM TOMATO
and AGED CHEDDAR



ASPARAGUS, RICOTTA,
and MINT

SUMMER SQUASH,
PARMESAN, and
PINE NUTS

APPLE, POACHED
QUINCE, and
FRANGIPANE

BUTTERNUT
SQUASH and
ROQUEFORT
CHEESE

APRICOT and
FRANGIPANE