Professional chefs are different from the rest of us, but the way they use salt really sets them apart. It’s worthwhile to follow their lead, because salt is just about the closest thing we have to a magic ingredient. Let’s take a closer look at three key ways that salt works wonders:

**1. Salt tastes good—and makes everything else taste good**

Why does salt taste good to us? According to the experts at the Monell Chemical Senses Center in Philadelphia, it boils down to biology. We like the taste because our bodies need sodium chloride.

And sprinkling a bit of sodium chloride onto other foods ensures that we’ll consume lots of other essential nutrients, too, because salt makes pretty much everything else taste better. Thanks to its chemical nature, salt has the amazing ability to intensify agreeable tastes and diminish disagreeable ones. What more could a cook ask for?

Perhaps you’ve heard the old saw about salt bringing out the flavor of a dish. Well, the scientists at the Monell Center say it’s absolutely true. The reason: Some flavor compounds are too subtle to detect, but when you add even just a teeny amount of salt, neurological magic happens: Suddenly, our taste receptors can detect flavors they weren’t able to sense before.

Salt enhances flavor. This is partially simply due to the fact that “saltiness” is one of the five primary basic tastes the human tongue can detect.  Those five tastes being: salt, bitter, sweet, sour, and umami (if you’re not familiar with this one, it is from glutamic acid, which is found in many foods, particularly some meats, and is the basis of the flavor enhancer monosodium glutamate, also known as MSG).

So, when you add salt to roasted squash, the squash doesn’t merely become salty; rather, the myriad complex flavors of the vegetable come to the fore. Add a bit of salt to bread dough, and likewise, the bread doesn’t necessarily taste salty; it just tastes the way bread should. And the salt in recipes for cakes, cookies, tarts, puddings, and other sweets isn’t there to make these treats salty; it’s there to ensure that they taste good.

**When’s the best time to salt?**

For the best-tasting soups, braises, and other slow-cooked dishes, add salt gradually throughout the cooking. That gives the salt time to disperse and interact with the molecules in the food. Sprinkling salt onto food just before you eat it does give you a big, up-front flavor bang, but not necessarily the deep, subtle seasoning you’d get from adding the salt while cooking.

**2. Salt enhances sweetness and blocks bitterness**

In addition to being a general flavor amplifier, salt has a special ability to enhance sweetness in foods. Taste two chocolate puddings that are the same in every way except that one contains a bit of salt and the other none: The one with salt will taste sweeter. That’s because sodium ions zero in on bitter flavor compounds and suppress them, making the sweet flavors seem stronger.

The extra salt has other effects as well though, outside of simply making things more salty.  Particularly, adding salt to foods helps certain molecules in those foods more easily release into the air, thus helping the aroma of the food, which is important in our perception of taste.

Salt also has been shown to help suppress the bitter taste.  So adding a bit of salt won’t just increase your salty taste perception, but will also decrease your bitter taste perception in any given food (which is why it is often sprinkled on grape fruit, for instance, before eating).

Finally, adding salt to sweet or sour things, while not shown to suppress sweet or sour flavors as with bitter flavors, will help balance out the taste a bit by making the perceived flavor, for instance of sugary candies or lemons, less one dimensional.

**3. Salt can make meat juicier**

I’m no culinary genius, but my friends think I am. Why? Because my roast chicken is always juicy. My secret? Salt. Before I roast a chicken, I treat the bird to a leisurely soak in salty water (a.k.a. brine). Of course, brining is no secret these days; in fact, it’s all the rage, because it really works.

Meats that tend to dry out during cooking—e.g., chicken, turkey, pork, shrimp—stay juicy and delicious if you brine them first. When you soak meat in brine, the salt water flows in, and the salt goes to work on the protein cells, altering them by loosening and unwinding the strands of protein and allowing them to sop up the brine. If you weigh your meat before and after brining, it will weigh more afterward, thanks to the liquid it has absorbed.

Of course, all this extra moisture would be useless if it were lost during cooking. But therein lies the magic of brining: The moisture isn’t lost during cooking. Well, some is—that’s inevitable because heat causes proteins to shrink and squeeze out liquid—but much less than if the meat hadn’t been brined. The result is moister meat that’s more flavorful, too, because the saltwater that the meat soaked up tastes good. For even better flavor, savvy chefs add other flavorings to their brine, like sugar, herbs, and spices; meat will drink in those flavors, too.

**Bonus Facts:**

* Adding salt to water will raise the temperature it boils at and lower the temperature it will freeze at.
* Pro-Tip: if you boil eggs in saltwater, it will make them easier to peel.
* Iodine and an anti-caking agent, typically calcium silicate, are typically added to table salt.  The former is added to help prevent thyroid disease, such as enlargement of the goiter, and the latter so that the salt won’t get lumpy in humid areas.  This anti-caking agent won’t dissolve in water though, so salt containing an anti-caking agent makes a poor choice for pickling and canning.  Salt with iodine added also makes for a poor choice for curing, as the iodine in large enough quantities will add a certain amount of bitterness to the cured food.
* Due to the fact that salt is a mineral, it can be stored more or less indefinitely without going bad or stale.
* Salt has been used as far back as history records to preserve meats, cheeses, and various other foods.  Its preservative nature works by absorbing moisture from the cells of bacteria and mold through osmosis.  This ends up making the mold and bacteria unable to reproduce and ultimately will kill them.
* One of the earliest known salt harvesting facilities dates all the way back to 6000 B.C. in China.  This saltwork harvested salt from the surface of Xiechi Lake near Yuncheng in Shanxi.
* Curing salt is used for curing meats. It is made up of 93.75% table salt and 6.25% sodium nitrate.  You’ll often see this dyed pink, so you won’t mistake it with ordinary table salt.
* French sea salt is distinct from most other sea salts in that it is made from sea water that is evaporated out of a basin with the resulting salt *not*being purified in any way.  So it contains many of the minerals naturally found in sea water.
* Hawaiian sea salt is very similar to French sea salt, except tends to have a pink-ish hue to it from red Hawaiian volcanic clay, which is rich in iron oxide.
* Sea salt is typically bad for canning or pickling due to the fact that it contains trace minerals that may discolor the food.  The food will likely taste more or less the same in these cases, but will look funny.
* Kosher salt tends to be the preferred salt for chefs.  This salt was originally developed for preparing kosher meats.  Cooks like it for a variety of reasons including: its coarser grains, which make it easier to handle with your fingers, measuring by touch; the larger grains also lend to making salt crusts on meat; it’s also free of iodine, making it good for pickling things; and iodine can affect certain molecules in some foods and itself has a somewhat bitter taste, so having salt free of iodine is typically preferred.
* Popcorn salt isn’t really any different than table salt except that it is ground much finer than table salt, which allows it to better adhere to popcorn kernels, potato chips, French fries, etc.
* Rock salt is cheap, non-food grade salt.  If you’re wondering how it cannot be food grade, but be used in the making of ice-cream, it doesn’t actually go into the ice cream, as some people think, but rather it goes in the ice-filled area around the tub or bucket of ice cream.  This lowers the freezing point of that ice and causes it to melt, aiding in the process of pulling the heat out of the ice cream in the container.  So basically, the rock salt is used to control the time to freezing of the ice cream in the container.
* The U.S. government mandates that food-grade salt contain at least 97.5% pure salt.