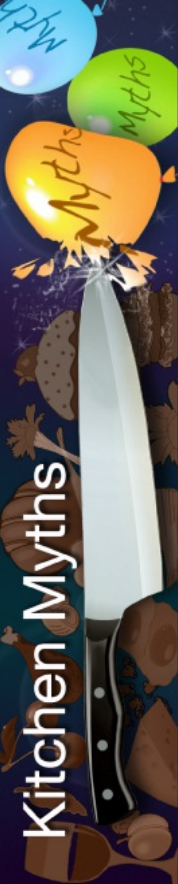


Kitchen Myths



Facts and Fiction About Food and Cooking

Peter Aitken, PhD

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Food Storage

You should not store coffee in the freezer.

Bread becomes stale by drying out.

It's OK to store flour and other ground grains in the pantry.

Frozen chicken lasts more or less forever.

Store tomatoes in the fridge for best flavor.

Butter must be kept refrigerated.

Odds and Ends

Cold water boils faster than warm water

To keep coffee hot longer, add

milk just before drinking.

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Searing meat seals in the juices.

For best results, use an uncovered pot when blanching vegetables.

Add oil to pasta cooking water to keep the pasta from sticking.

A pinhole in a raw egg will prevent cracking while boiling.

Use water instead of milk when making scrambled eggs.

With onions, slice, dice, or use the food processor—it's all the same.

Add raw potatoes to already-boiling water.

When grilling a burger, flip it only once for best results.

You can keep meat moist by cooking it in a stew or braising it.

Adding salt to the cooking water keeps greens green.

Tear basil, rather than cutting it, for best flavor.

Hot pan, cold oil to prevent sticking.

Don't salt meat before cooking.

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Salt your scrambled eggs after cooking for best results.

A food processor grinds meat as well as a traditional meat grinder.
The best way to measure flour is the “dip and sweep” method.
When baking muffins, fill empty cups with water for even baking.
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done.

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Gas cooktops are better than electric.

Introduction

We've all heard of urban legends, those plausible-sounding but false stories that circulate so widely on email and blogs, such as the old lady who microwaved her cat or the Nieman Marcus \$250 cookie recipe. There are several web sites, such as Snopes, devoted to researching and exposing these fake stories—and verifying those that are true. The same sort of thing happens in the world of food and cooking, and this book is my answer—kitchen legends, if you will. I call them kitchen myths.

So, who am I and why did I write this book? I am a retired medical school professor with a long-standing interest in food and cooking. It was natural, I guess, for my scientific mindset to carry over into my cooking. Over the years I kept noticing that certain “accepted truths” about food and cooking just didn’t seem right. For example, I had always soaked dry beans overnight before cooking them, but one day I forgot. In a rush the next morning, I just put the unsoaked beans on the stove to simmer. They took a bit longer, but they came out just fine. The need to soak dry beans, in other

words, was a *kitchen myth*. Over the past few years I collected some of these myths on my blog at www.kitchen-myths.com, and now I figure it's time for a book!

How do I know these are myths? Why should you believe me over someone who says that something I call a myth is in fact true—particularly if that person is your mom or some famous TV chef? I can't answer that question for you, but I can say that all of the information in this book has been carefully researched. I do not claim that something is true or false just because I heard it somewhere,

because I read it in a cookbook, or because it seems to “make sense.” I require that something be backed by a credible source (the key word here is *credible*) and/or that it be in accord with accepted scientific knowledge. In most cases this is also backed up by my personal experience (although let me emphasize that my personal experience is not, by itself, enough). I certainly do not claim to be infallible, but I do try hard to present accurate, verifiable information. Believe me, I have had several—no, make that many—of my own long-held cooking “facts” demolished by

this research!

Why don't I cite sources with my myth busting? There are several reasons. First, I wanted the book to be casual and readable and not come across like a boring academic paper. Second, I have found that many people will hang onto their old beliefs no matter how much evidence to the contrary is presented—this is true in all of life, not just cooking, as the evolution and global warming “debates” illustrate. Evidence, for these people, is a way of supporting what they already believe and not a basis for changing their beliefs. Finally, the Web is full

of “citations” that seem to support pretty much any hair-brained idea, and all too many people can’t distinguish a valid source from an invalid one; “valid” to them means “supports my belief.” So, no citations—but here are some of my major sources:

- Harold McGee’s books *On Food and Cooking* and *Keys to Good Cooking*.
- Alton Brown’s shows and books. (He is the only TV chef I know who takes a fact-based approach to cooking.)
- Mark Bittman’s *How to Cook Everything*.

- Peter Barham's *The Science of Cooking*.
- *Modernist Cooking*, a 5-volume set of cookery books, full of fascinating information, recipes, and photos.
- Robert L. Wolke's *What Einstein Told His Cook*.
- *Kitchen Mysteries* by Herve This.
- *The Cook's Illustrated* magazines and cookbooks.
- The Food and Drug Administration.
- The Department of Agriculture.

Based on readers' responses on my Kitchen Myths blog, I found out

how many people really don't like having their long-held beliefs challenged (and this is just cooking, not politics or religion!). I was amazed at how steamed up some people get when I tell them that what they "know" to be true is in fact a myth! I have been accused of being a shill for the high-fructose corn syrup people and being in the pay of the MSG manufacturers, that's how desperate some people are to hang on to their beliefs. In actuality, I have no connection whatever with the food industry.

Bottom line, if you disagree with something I say, fine, but I am *really*

not interested in hearing about it. You can leave comments on the blog (as long as you follow the civility rules that are posted there). Note, however, that the blog does not present as many myths as you'll find in this book.

Happy cooking, happy eating!

—Peter Aitken, PhD

Health and Nutrition

A high-protein diet is bad for your kidneys

The “rationale” behind this myth is that digesting and processing large amounts of protein puts a strain on your kidneys, which are responsible for filtering the blood and removing certain waste products. This myth became more widespread when low-carb diets, which typically involve eating more protein, became popular. The only problem (common to all myths!) was that there was precious little data to support this notion. Several recent studies looked

at the question and found that a high-protein diet did not affect kidney function in people with normal kidney function. These studies were published in *The International Journal of Sports Nutrition and Exercise Metabolism*, *The Annals of Internal Medicine*, and *Nutrition & Metabolism*.

Note, however, that one of these studies suggested that in people who already have some degree of kidney insufficiency, a high-protein diet seemed to hasten renal decline. So, if you are considering going low carb, you might want to have a kidney function test first to make

sure it is normal.



D'Anjou pears

Compared to sugar, high-fructose corn syrup (HFCS) is worse for your health.

Regular table sugar, or sucrose (also called cane sugar) is made of equal parts of two simpler sugars, glucose and fructose. When

digested, it immediately breaks down into these two components and that's what your body absorbs: glucose and fructose. HFCS has the exact same constituents in a slightly different proportion: The most common HFCS, used in soft drinks, contains 55% fructose and 45% glucose (hence, *high fructose*). So, ingesting HFCS instead of table sugar gives you a wee bit more fructose and a wee bit less glucose. Big whoop. To listen to some people, HFCS is the end of civilization as we know it! Yet, many studies have been conducted comparing HFCS to table sugar, and

they have failed to turn up any real difference in their effects on the body, including insulin, triglycerides, blood glucose, or appetite-related hormones.

The HFCS alarmists also overlook two interesting facts:

1. The most common type of HFCS, called HFCS 55 because it contains 55% fructose, is used primarily in soft drinks, and it is supposedly evil because it contains too much fructose. Yet, there is also HFCS 42, used in some beverages, baked goods, and processed foods) which contains

42% fructose and 53% glucose—more glucose than fructose. Somehow they are both equally evil, according to the alarmists, one because it contains too much fructose and the other because it contains—what, too little fructose? Oh please!

2. Honey, beloved of health food fans, contains more fructose, relative to glucose, than the worst HFCS—38% fructose and 31% glucose, approximately. I don't recall hearing about any anti-honey campaigns, do you?

This does not mean that HFCS

is good for you! It just means that it is no worse than cane sugar. More and more evidence indicates that the problems with sugar are not the type of sugar you eat, but the amount. Overdoing it on organic honey is just as bad as eating too much of any other source of sugar.

What about taste? Some people claim that, for example, soft drinks made with cane sugar taste better than the HFCS versions, and they'll go to great lengths to get it, such as driving to Canada to buy cane sugar Coke. I can't tell the difference, but perhaps some people can.

Fruit should be eaten only on an

empty stomach.

This whopper has been around in one form or another for quite a while. The dire things that will supposedly happen to you if you eat fruit with other foods are enough to frighten anyone—or more likely, send them into gales of laughter. For example, “graying hair, baldness, nervous outburst, and dark circles under the eyes.” If, however, you only eat fruit only on an empty stomach, you will have “beauty, longevity, health, energy, happiness, and normal weight.” Yeah, right—and I’ll be young, rich and handsome!

The truth is that there's nothing harmful about eating fruit with other food. In fact, for diabetics and those with fructose intolerance, eating fruit with other foods is generally better than eating it on an empty stomach because it slows the rate at which the fruit's sugars are absorbed into the blood.



Vegetable and fruit market in Nicaragua.

Aspartame causes health problems.

Aspartame, more commonly known by the brand names NutraSweet,

Equal, and Candarel, is the most widely used artificial sweetener. Perhaps its most popular use is in sweetened drinks, such as diet soda. Since its introduction in 1981, there has been a constant chorus of individuals claiming that aspartame caused this health problem or that health problem. Among the things that have been blamed on aspartame are cancer, multiple sclerosis, birth defects, dementia, depression, and hair loss. There's only one problem—there's no real evidence for any of this. A large amount of legitimate scientific data have failed to show any negative

health effects of aspartame, with the sole exception of people suffering from the rare metabolic disorder phenylketonuria. Just as one example of how thoroughly aspartame has been investigated, the European Scientific Committee on Food released a review in 2002 that summarized some 500 individual reports. Their conclusion? Aspartame is “entirely safe” when consumed in approved amounts—which is a bit more than 13 cans of diet soda a day for a 130 pound person.

Don't be fooled by the seemingly “scientific” information presented on

some web sites. A lot of this stuff is entirely made up and the rest is distortions of real studies, intentional or not, by people with no scientific understanding. So, enjoy your Diet Pepsi, if that's your choice, and ignore the doom-sayers.

Eating grilled meat increases your chance of cancer.

Sorry, it just ain't so. I say "sorry" because there are some people who seem to want grilled meat to be unhealthy—beats me as to why. Perhaps it's the "if it tastes good it must be bad for you" syndrome, or vegetarians wanting to scare meat-eaters? Anyway, this myth got its

start because grilling—like some other cooking techniques—produces heterocyclic amines (HCAs), which are “reasonably anticipated” to be carcinogens in humans. What this means is that there is no evidence that they actually are carcinogens in humans, but someone thinks that if they keep looking long and hard enough they will find some evidence. For example, a recent prospective study in 120,000 women found no relationship between breast cancer and eating red meat or the way the meat was cooked. “But ... but ... but...,” the worry-warts will say, “HCAs cause cancer in rats and

mice!” Yes, but we are not rats or mice (most of us, anyway) and what’s true for them is not always true for us. There is evidence that early humans adapted a digestive system to safely eat cooked food while rodents did not. Also, just because a high dose of something, like the high doses of HCAs that the experimental rats and mice were given, causes a health problem does not mean that the very small doses we get in our food will also cause a problem.

Brown eggs are more nutritious than white eggs.

In fact, you can’t judge an egg by its

cover, or some such. The color of an egg's shell has nothing to do with the quality of what's inside but rather is related to the color of the hen's feathers and earlobes. I am particularly fond of buying eggs from a local farmer because the dozen eggs will contain a mix of white, brown, speckled, and green.



Four Eggs.



The four eggs, later.

A craving for a specific food is your body's way of telling you that it needs a nutrient that's present in that food.

Nice try, but you cannot use this myth to justify your chocolate or ice cream or potato chip attack! The human body just does not work this way. A craving is a psychological, not a physiological, phenomenon, although it's also been suggested that certain foods, such as chocolate, may trigger the release of "satisfaction" signals in the brain. Either way, however, it has nothing to do with nutritional needs.

Raw vegetables provide enzymes that promote healthy digestion.

Sorry, no, never, nyet, fuggedaboutit. Raw plants do contain enzymes that are broken

down by cooking, but (1) these are plant enzymes that have no function in the human body, and (2) enzymes in raw food will be broken down by the digestive process anyway, like any other protein. Furthermore, those places that promote “live” enzymes are just feeding you a bunch of hogwash in order to separate you from your money. An enzyme is just a chemical (a protein, to be exact). It can no more be “live” than a tube of toothpaste.

The thin layer of gray flesh on salmon should be taken off.

Just under the skin of salmon you'll often find a thin layer of grayish

flesh. It's admittedly not very attractive, but it may be the healthiest part of the meal! This layer is rich in omega-3 fatty acids—y'know, that “good” fat we're all supposed to eat more of—and low in the pink pigments present in the rest of the flesh. It does not have an objectionable flavor, either, at least to my taste. The appearance issue can be avoided by either leaving the skin on or serving your skinless salmon with the gray side down.

By the way, if you prefer to skin the salmon before cooking, do not throw the skin away. Brush it lightly with soy or teriyaki sauce and broil

until crisp—it's a real treat!

Organic food is better for your health.

I am all for organic food and buy it whenever I can (as long as the price is not too outrageous). But, I do so out of concern for the environment and for the farm workers. There is, to my knowledge, no scientific study that shows harm to people from eating nonorganic food. In fact, a close examination of the organic food movement shows some strange inconsistencies. For example, nicotine, naturally occurring in tobacco, has long been known to be toxic to humans, but it is permitted

as an insecticide on organic food because it is a “natural” product. The same is true of other toxic natural pesticides, such as rotenone and pyrethrum. Yet, synthetic pesticides with demonstrably lower toxicity are banned. Go figure!

It's also a myth that organic foods retain more of their nutrients—the best evidence says that this is not the case. And it's been claimed that organic foods are produced with higher safety standards and are less likely to have, for example, *E. coli* contamination. Nope.

Another myth is that organic food comes from small, family-run

farms and buying it helps support the individual farmer as opposed to the huge corporations. Nope again. The large corps have jumped on the organic bandwagon in a big way, which is a good thing in some ways, but organic is no longer the province of the small farmer. In fact, at our local (and excellent) farmers' market, a majority of the vendors, all small local farmers, do not sell produce that is officially organic because of the hassles and expense of getting the organic certification.

So, buy organic by all means if you want, but do it with a knowledge of the facts.



Purple-top turnips.

Drinking fruit juice is just as good as eating fruit.

I recall when my daughter was playing soccer and the parents took turns bringing drinks for the kids. There were some moms who would go ballistic if someone dared offer

their kid a soft drink, but would be perfectly happy for them to drink as much apple or grape juice as they wanted. Guess what? Many “fruit juices” are just sweet, flavored water with no more nutritional value than a Coke (a bit of vitamin C is meaningless) and just as much sugar. Even real fruit juices aren’t much better. In fact, drinking fruit juices has been linked in several studies to increased health risks and weight gain.

When you eat a piece of fruit, you get everything in the fruit—the sugar, yes, but also the fiber and other constituents that don’t make it

into the juice. The fiber has the effect of slowing down the absorption of sugar into your blood stream, a good thing. This also has more of an appetite-satisfying effect, making it less likely you'll crave a snack soon.

This is not to say you should banish fruit juices from your life. But, don't fool yourself that they are somehow better than other sugary drinks.

Brightly colored vegetables have the most nutrients.

Some intensely colored veggies are indeed packed with nutrients, think for example of leafy greens like kale

and chard. But, a pale countenance is not necessarily a sign of nutritional poverty. White beans (navy, great northern) have as much fiber and protein as, say, kidney beans. White cabbage has lots of vitamins, calcium, iron, and fiber. White cauliflower is packed with antioxidants. Don't judge a veggie—or a fruit, for that matter—by its color.



Duckling ready for steaming.

MSG is bad for you.

MSG, or monosodium glutamate, is an amino acid that was originally isolated from seaweed. It was found to provide a flavor that was neither sweet, salty, sour, or bitter (the four traditional basic tastes). This savory

taste, called umami, is considered by some to be a fifth basic taste; other say it's merely an enhancer of other flavors, not really a flavor in itself. Rather, MSG makes food taste better—it is a flavor enhancer. Either way, MSG can improve the taste of food and it rapidly gained popularity as an additive in many restaurant and processed foods.

Then came “Chinese restaurant syndrome,” so-called because people would complain of various symptoms after eating at Chinese restaurants, where MSG was a popular additive. Subsequent to this, a raft of scientific studies failed to

turn up any shred of evidence for a health effect of MSG, and in fact people who vociferously claimed to be MSG-sensitive have proven unable, in double-blind studies, to reliably tell whether food has MSG in it. Plus, there's the fact that Parmesan cheese and tomato paste, among other foods, have high levels of glutamate and no one gets a "syndrome" from them. So, stop worrying about MSG and enjoy your lo mein.



Broccoli at the farmers market.

Avoid aluminum cookware because of Alzheimer's disease.

This myth got its start a number of years ago when medical researchers found elevated levels of aluminum in diseased tissue from the brains of Alzheimer's patients (dead

ones, I hope). One logical possibility (but not the only one) was that the raised aluminum level was responsible for causing the disease. Get exposed to too much aluminum, from your job perhaps or your cookware, and you would have a better chance of coming down with this awful disease. People started avoiding aluminum cookware, and some still are—unnecessarily it turns out. Subsequent research has failed to show any connection between aluminum exposure and Alzheimer's, and it is believed that the elevated aluminum in the brains of Alzheimer's patients is a result of the disease

process. In other words, high aluminum levels do not cause Alzheimer's, but rather Alzheimer's causes high aluminum levels.

Food Safety

Microwave cooking is radiation and makes foods poisonous.

Yes, microwaves are radiation, just like the light from the sun, the warmth from a cozy fire, or the signal that brings you radio shows. But, it is *nonionizing* radiation, which means that it has no effect on food other than heating it up. It has nothing whatsoever to do with the truly dangerous *ionizing* radiation that is associated with atomic bombs and nuclear power plants.

Put hot food that you want to cool right in the fridge.

Home cooks are—or should be—rightly concerned about food safety. A big part of this is preventing bacterial spoilage, which can cause food poisoning. If the food's hot enough, the heat kills the bacteria. If it's cold enough, the bacteria are inhibited and can't do their dirty work. It's that middle “danger zone” of temperature, from 41° Fahrenheit to 140° F, that's the worry.

So, what do you do with a big pot of stew or soup that you have just cooked? Put it in the fridge right away? That will certainly cool the soup as quickly as possible, but with the unintended side effect that the

rest of the food in the fridge can be warmed into the danger zone as the soup cools. Your best bet is to let the soup cool on the counter for about an hour and then put it in the fridge, striking a good compromise between cooling the soup quickly and not warming the fridge. Other ideas for speeding the cooling are dividing a large amount of soup among several smaller containers, putting the pot in a water bath and running cold tap water around it, floating a zipper bag full of ice cubes in it, or—if you live in Minnesota and it's winter—putting the pot in the garage or an unheated shed.



Carrots.

Vinegar that has developed a sediment in the bottle should be discarded.

Opened bottles of vinegar, particularly wine vinegar, may develop a layer of cloudy sediment on the bottom after a while. If you

think that this means the vinegar has “gone bad,” you may be tempted to toss it out. Fact is, the vinegar is still perfectly good—the sediment does not affect the taste and is harmless. For aesthetic reasons only you may want to strain the vinegar through a paper coffee filter to get rid of the sediment.

For safety, wash raw chicken before cooking.

Yes, raw chicken can be a bacterial hazard, but washing it doesn't help. Tap water won't kill germs, and washing may splash those germs to other areas of your kitchen. Also, the bacteria can be within the meat

as well as on the surface. Cooking the bird thoroughly and sanitizing anything that came into contact with the raw meat are important, but forget the washing.

You can scrape surface mold off of home-canned jams and they will be safe to eat.

If you have anything growing on the surface of your homemade jarred jam, it's a sure sign that the canning process did not work to sterilize the contents of the jar. You may think you can scrape it off and eat the clean-looking jam or jelly underneath, but that's taking a chance. Molds often produce invisible, microscopic

filaments that penetrate into the food and will remain behind when you scrape the visible mold away. These filaments can contain toxins that cause illness. Not worth the chance, in my opinion.



Clams ready for steaming.

Green spots on raw potatoes may be unsightly but are safe to eat.

The result of improper storage, most notably exposure to light, these green spots should be cut away and discarded. They may contain a toxic chemical called solanine, which can cause unpleasant digestive symptoms. Store your taters somewhere that's dry, dark, cool, and well ventilated.

You must cook pork to well-done for safety reasons.

The long-held opinion that pork should be cooked thoroughly is based on the transmission of the parasite *Trichinella spiralis* whose

larva can be present in pork meat (also in wild game). The cooking kills the parasite. But, it's been known for a long time that the *Trichinella* larvae are killed at temperatures considerably lower than required for well-done. Old habits die hard, however, and countless pork roasts have been cooked to leathery toughness as a result.

Many professional chefs and home cooks have long known that pork with some pink remaining in the center is perfectly safe. Now, the USDA is finally wising up—it has changed the recommended internal temperature for whole cuts of pork

from 160° Fahrenheit to 145°, with a 3-minute rest period after removing from the heat. Note that the 160° temperature is still recommended for ground pork.

Ground beef that's brown at the center is spoiled.

When you buy a chunk of ground beef at the market, you sometimes see that the outer surface is red while the center of the portion is more brownish. This is perfectly natural and has nothing to do with the freshness of the meat. Muscle—and that's what meat is, of course—contains myoglobin, a protein that stores oxygen. When exposed to

oxygen on the surface of the meat, the myoglobin combines with the oxygen to form oxymyoglobin, which is red. Where there is little or no oxygen available, as in the center of the meat, you'll have metmyoglobin, brownish/purple in color. Either way, it has no relation to freshness. Of course, ground beef can spoil, but your nose is the best judge of that.



Oyster mushrooms growing on a stump.

Foods such as chicken salad made with mayonnaise are prone to quick spoilage.

Another old wives' tale (or old husbands' tale if you prefer). Mayonnaise, because of its relatively low pH (in other words, it is acidic)

will actually help prevent spoilage. When chicken salad or something similar spoils, it is the other ingredients spoiling, not the mayo. When going on a picnic or setting out a buffet it is important to keep foods cold, but there's no reason to avoid mayo. This is true of commercial mayos, at least in the United States where commercial mayo is required to contain a certain minimum level of acidity (I do not know about other countries). Homemade mayo may have less acidity and therefore may be more prone to spoilage.

Ingredients

Remove the seeds from hot peppers to reduce the heat.

False, but true in a way. The heat in hot peppers comes from a chemical called capsaicin, and most of the capsaicin is contained in the pith, the white material that holds the seeds in place. The seeds actually contain very little. So, you could remove just the seeds from a pepper and affect the heat not at all, but because most people remove the pith along with the seeds, they get the desired result. Although, hot peppers are supposed to be hot, so why would

you do this? Another mystery!

Never put bananas in the refrigerator, they'll become inedible.

The skins will darken, but refrigeration slows ripening of bananas the same as it does other fruits. The insides will be fine.



Onion and cheese tart.

Kosher salt tastes better than “regular” salt.

Many cooks and recipes specify that kosher salt be used. Why? Truth be told, because it's trendy, mostly. Kosher salt is relatively pure sodium

chloride, and so is the usual table salt that is available in every supermarket at half or less the price. If you think you can taste the iodine in iodized salt, buy the uniodized version and save some money.

I do like the larger grains of kosher salt because when cooking I prefer to grab salt with my fingers to add to a dish, rather than using a shaker and the larger grains don't stick to my fingers as much. But, I am not fooling myself that my food tastes better as a result.

By the way, kosher salt is really misnamed. It is not "kosher" in the sense that observant Jews can eat it

but can't eat other salts. It's true name is "koshering salt" because it is traditionally used to salt meats in the kosher butchering process.

Use only the leaves from cilantro.

Some people take a great deal of care to remove the leaves from cilantro sprigs, discarding the stems and using only the leaves in their recipe. This is really unnecessary because the stems have the same great flavor as the leaves and it's a shame to waste them (unless, of course, you want only leaves for aesthetic reasons). This habit of removing the stems may be a holdover from parsley, where the

stems can indeed be bitter and should be removed for most uses.

Replace your vanilla extract at least once a year.

Good cooks pay attention to the freshness of their spices and other flavoring agents, and may be tempted to toss that year-old bottle of vanilla extract and replace it with a new bottle. The fact is, vanilla extract is very long-lived and will last for years without loss of flavor if kept sealed in a cool, dark place. The extract contains about 35% alcohol, almost as much as vodka, and is therefore very stable. So, save your money for other things!

Vanilla beans are another matter; they will degrade over time.

Just-squeezed lemon and lime juice taste the best.

I used to think so until I read that experienced bartenders like to let the juice sit for 3 to 4 hours after squeezing for best flavor. A test by *Cooks Illustrated* verified that letting the freshly squeezed juice sit, covered, in the fridge for 4 hours (but not much longer) gave a “more mellow yet complex flavor.” Doesn’t work with other citrus juices, however. In fact, orange juice is best squeezed just before serving for best flavor because sitting for even a

few hours can permit the formation of limonin, a harmless but bitter-tasting compound.



Rustic Bread.

All salt measures the same.

I recall seeing a puzzle when I was

in high school that asked if we would rather have a barrel of dimes or a barrel of half dollars. We all chose the half dollars, but it turned out that was the wrong choice. You see, a half dollar takes up more space than five dimes, so the barrel full of 10-centers would contain more money.

The same is true of salt. A given weight of salt—and it's the weight that's important in cooking—will take up more or less space depending on the size of the grains, or crystals. For the same weight, large crystals = more volume, small crystals = less volume. Common kitchen salts vary quite a bit, with Diamond Crystal

kosher salt having relatively large crystals, standard table salt having relatively small crystals, and Morton kosher salt falling in between. Thus, to equal the weight of 1 teaspoon of table salt you would need about 1.5 teaspoons of Morton kosher salt and 2 teaspoons of Diamond Crystal kosher salt. Sea salts vary as well, with some being equal to, and others less salty than, table salt.

Fresh shrimp are better than frozen.

This is true if you can get really fresh shrimp—that is, shrimp that have never been frozen—but that's not likely unless you live near the coast,

and doubtful even then. The fact is, almost all shrimp are frozen on the boat, as soon as they are caught, so the “fresh” shrimp in your grocer’s fish case are simply frozen shrimp that have been thawed. You’re better off buying the still-frozen shrimp and thawing them just before you need them.

On a related subject, stay away from the already peeled shrimp. Yes, you’ll save a bit of work, but shrimp always taste better when cooked in the shell. If you have to peel them before cooking, then the shells make an easy and tasty stock that can be frozen for later use.

Garlic that has started to sprout is perfectly OK to use.

Sprouted garlic is perfectly safe, but the green sprouts themselves can impart a bitter taste to your food. If you remove the green sprout and use the remainder of the clove, you can avoid this problem.



Homemade Italian sausage.

You must scald milk before using it in certain recipes.

This myth has some basis in fact. Raw milk (milk that has not been pasteurized) contains enzymes that can interfere with the thickening action of milk and the rising of bread. The scalding destroys these enzymes. Today, almost all the milk that is sold has been pasteurized, a process of heating the milk to destroy bacteria. This has the same effect as scalding the milk, so by the time you buy the milk those nasty enzymes are already gone. Unless you milk your own cow, you can skip the scalding.

Scalding can however be beneficial if you are making yogurt or other cultured milk products. Even pasteurized milk contains some bacteria, and they can compete with the yogurt culture and affect the result. By heating milk to 180° F you eliminate most of these other organisms and give the desirable bacteria a clean slate to work with.



Slicing homemade bacon.

All fruit will continue to ripen after picked.

We have all bought slightly green bananas because we know that they will continue to ripen over the next few days. Is this true of all fruit? No. At the risk of over-simplification, fruits can be divided into those that

ripen after picking and those that don't. In the first category you'll find bananas, avocados, peaches, pears, plums, mangoes, cantaloupe, and tomatoes (technically a fruit). The non-ripeners include pineapples, citrus fruits, grapes, most berries, cherries, and most melons. Buy these fruits only when they are already ripe.

Toast black peppercorns before grinding for best flavor.

Many spices benefit from a quick toasting to develop their flavor. Cumin, coriander, fennel, and many other whole seeds are more fragrant when toasted (a small, dry fry pan

over medium heat, shaken regularly, until the seeds smell good). What about black pepper? It's the exception: toasting the peppercorns actually lessens the lovely pepper flavors. Save your toasting for other spices.

The best scallops are pure white.

Actually, the exact opposite is true. Pure white scallops, also called "wet" scallops, have been soaked in a solution of sodium tripolyphosphate, which acts as a preservative and also causes the scallops to absorb water so they weigh more and bring in more income for the seller. Most people

can detect an “off” taste in wet scallops, and because of the extra water they can be hard to brown. Unsoaked, or “dry,” scallops are never pure white but have a subtle, off-white or ivory color.

If you must must must have scallops and can get only the wet ones, you may have some luck hiding the off taste by soaking them for half an hour in water with added salt and lemon juice.

Kosher meat is higher quality.

This all-too-common belief seems to make sense. Wouldn't a company that is preparing products to meet religious restrictions also use more

care and attention in the entire process, and meet more stringent standards when it comes to humane animal treatment, cleanliness, and so on? Nice idea, but not true. “Kosher” means nothing more than “kosher,” which means pretty much only that there are no forbidden creatures (for example, your kosher hot dog is just beef, no pork), the animals were slaughtered a certain way, and that meat and dairy products are kept strictly separate (there’s a whole lot more to Jewish dietary laws, but these are the basics). Being kosher does not mean the animals were raised

humanely or sustainably, that health safety standards were rigorously followed, that the meat is fresher, or than the workers were treated fairly. All these things may be true of kosher meat, but there's no guarantee. There are, of course, many kosher meat products that are very high quality, but the same is true of non-kosher products.



Red snapper head for fish stock.

Acidic marinades make meat tender

Many people believe that an acidic marinade—one containing wine, vinegar, or citrus juice—will make meat tender. In fact, the opposite is often the case. Acid interacts with the proteins in the meat, causing the

protein molecules to pack more closely together and thus squeeze liquid out of the meat. The result? Tough and dry steak, chicken, or what have you. What's more, extended exposure to acid can cause the surface of the meat to become mushy because the proteins start to break down. The rule, then, would be to keep acidic marinade periods short, but then of course the flavor won't get into the meat very well. My approach is to rely on non-acidic marinades.

The fact is, marinades in general don't have nearly the effect that many people think they do because

the flavors just cannot penetrate beyond a millimeter or two at the surface. Salt and water in a marinade can penetrate deeper, and the benefit of most marinades is the result of this factor.

What about sauerbraten, the delicious wine and vinegar marinated pot roast? Its tenderness comes not from the marinade but from the long, slow cooking.



Roasting red peppers over charcoal.

Soak rice before cooking for best results.

Some people believe that soaking

the raw rice before cooking is a good idea. While rinsing the rice certainly is, soaking gives a lower-quality result. The soaked rice does cook faster, but individual grains tend to overcook and often burst. The culprit is the starch granules in each grain of rice. With soaking, these granules are already saturated when cooking starts, so they start swelling immediately. With unsoaked rice, it takes some time, at the start of cooking, for the granules to absorb water. The result is rice with more separate grains and less “gumminess.”

The rinsing is important, even if

the raw rice is perfectly clean, to remove surface starch from the rice grains. In some specialized cases, where you want the result to be sticky (sushi rice) or to have a creamy consistency (risotto), you would skip the rinsing.

When using tomatoes for cooking, discard the seeds and jelly for best flavor.

In actuality, the reverse is true. The seeds and jelly contain a lot more of the flavor-enhancing compound glutamic acid than the tomato's flesh, so removing them can compromise the flavor of the final dish. Glutamic acid is the source of

the umami, or savory flavor of many foods, and you certainly don't want to remove it. This is what's behind the flavor-enhancing abilities of monosodium glutamate (MSG). So, leave the seeds and jelly in your recipe if at all possible—your taste buds will thank you.

Salted butter is better for baking.

The main choice you have when buying butter is salted versus unsalted. For most uses, the choice is clear—unsalted is preferred, particularly for baking.

For general cooking use, such as frying eggs or making sauces, I prefer unsalted because it lets you

control the amount of salt in the recipe. For spreading on bread or toast, I also prefer unsalted because the salt in salted butter can hide the lovely butter flavor. In baking, the excess water that salted butter almost always contains can have an unwanted effect on your recipe. So, stick (pun intended) with unsalted butter.



Pork spareribs with spice rub, ready for the smoker.

Don't wash raw mushrooms because they will absorb water.

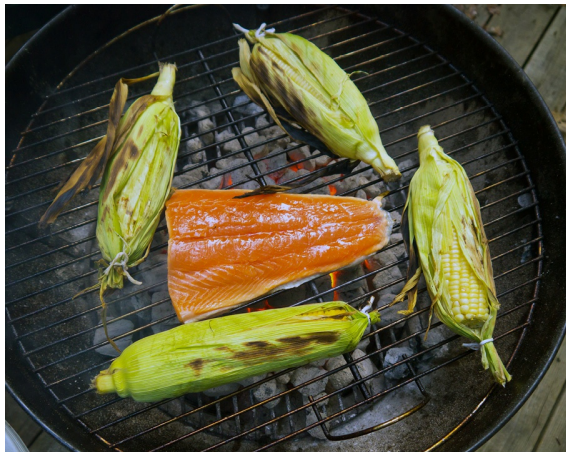
Mushrooms naturally contain a lot of water, up to 90% by weight according to some sources. This makes them difficult to sauté

properly because they will give off that water and end up stewing, at least until the water cooks off. But, they won't absorb more water if you wash them. Of course, some water may adhere to the gills, but that can be shaken or dabbed off.

Fresh seafood is always better than frozen.

Most seafood lovers always head to the fresh fish counter and never go near the frozen seafood case. Why? Because fresh—that is, never frozen—seafood is generally considered to be higher in quality. This is a misconception. It's true that high-quality fresh seafood is the gold

standard, meaning seafood that has been handled properly, kept at the proper temperature, and isn't too old. Unfortunately, most of the "fresh" seafood sold in this country does not meet this standard—you see some pretty sad-looking specimens for sale! In contrast, much of the frozen seafood is frozen right on the boats, soon after being caught, or maybe as soon as the boat returns to port. The result can be very good quality fish or shellfish, better than the tired old fillets at the fish counter. So don't turn your nose up at it.



Salmon and corn on the grill.

Myths about dried beans.

There are three “facts” you’ll often hear about cooking dried beans, such as kidney beans, chickpeas (garbanzos), and great northern beans. It turns out they are all

myths.

1. You must soak beans before cooking. You can soak beans of course, but the only advantage it provides is to shorten the cooking time.

There's no reason not to start cooking dry beans directly as long as you have the time to simmer them long enough.

2. You must not add salt to beans during cooking or they will not soften. Tests show that the only difference between beans cooked side by side with and without salt is that one batch is salty and the other is not. Some

people feel that salting during cooking gives better flavor because some of the salt ends up inside the beans.

3. You must not add acid, such as tomatoes, to beans during cooking or they will not soften. Acid does in fact have an effect on beans, tending to keep the skins intact, while alkaline substances (baking soda) help the skins to break down. In both cases, however, the beans cook perfectly well. You can use this to your advantage, adding tomatoes during or after cooking depending on whether you want

whole beans or mushy beans.

Note, however, that soaking can help reduce the “gas attack” effect that some people experience after eating beans. Bring dry beans and water to a boil, remove from heat, and let sit for an hour. Drain, add fresh water, and continue cooking. This removes some of the chemicals in the beans that cause the gas.

Let picked tomatoes sit in the sun for best ripening.

Particularly near the end of the season, gardeners often have to pick unripe tomatoes to save them from frost. It's a common

misconception that the best place for these tomatoes to finish ripening is on a sunny windowsill. The fact is, tomatoes do not need direct sunlight to ripen, even when they are still on the plant. Sunlight does no harm, but it also does no good. The best way to ripen them is to seal them in a brown paper bag, preferably with a ripe banana. This works because ripening fruit produces a harmless gas called ethylene, which in turn hastens the ripening process. By sealing them in a bag, you trap the ethylene so it has more of an effect—and, a ripening banana adds its own ethylene to the process.

Grass fed beef is superior to “regular” beef.

Well, if you like dry, chewy beef, this may not be a myth for you. That, unfortunately, is how almost all grass-fed beef stacks up against corn-fed. Y’know, people didn’t start feeding corn to steers just for the heck of it! It produces a better product, at least to most people’s taste. Oh, you can find people who will look you in the eye and claim that grass-fed beef tastes better, but if you look closely you might see a bit of a twitch at the corner of their mouth (for the humor impaired, that’s a joke so don’t get all het up).

There's no denying that there are problems with the feedlot system, from which most beef in the United States comes. This involves both the treatment of the animals and environmental issues. There's more than one side to this issue, however. The fact is, most grass-fed beef comes from South America, where vast tracts of rainforest are leveled to make pasture for the cattle. Your grass-fed steak may not actually be as environmentally friendly as you think.

Organic food tastes better? Not always.

I am all for eating organic food. It

helps the environment, it's better for the farm-workers who aren't exposed to toxic pesticides, and I would just as soon not eat artificial chemicals with my meal. But does it taste better? Not necessarily. Being organic or not has no relation to the taste of a food—when it comes to flavor, some organic food is great, most is OK, and some is pretty poor. The same goes for non-organic food. So, use organic ingredients by all means if you like, but don't expect it to make your meals taste better.

It used to be true, back in the early days of the organic food

movement, that organic foods were higher quality. This wasn't because they were organic, however. Originally, almost all producers of organic food were small, dedicated farmers who devoted great care to their products and sold only locally, so things were in fact likely to be fresher and tastier. Now, however, the corporate giants have gotten into the field in a big way, and this is no longer the case.



Dried ancho peppers.

A rare hamburger is potentially dangerous.

Well, it depends. A lot of attention has been given to the dangers of eating a burger that hasn't been thoroughly cooked. There's good reason for this. Commercial ground

beef is made in factories in huge batches, and a single burger can contain meat from dozens or hundreds of individual animals. The chance of bacterial contamination making it into the supermarket package is not insignificant, and this is a risk that many people don't want to take. In fact, some states have banned restaurants from selling burgers that are not well cooked. Too bad, because real burger aficionados know that the best tasting burgers are cooked to medium at most.

Is there a way around this? Yep—grind your own beef. If your

ground beef comes from a single chuck or sirloin roast (or a mix of the two, my favorite), there's a vastly smaller chance of contamination. You must observe proper procedure, of course, making sure your grinder is spotlessly clean and keeping everything cold. Buy your meat from a reputable, high-turnover retailer. There's no absolute guarantee against contamination, of course, but the risks are much, much lower this way and you can enjoy a juicy, pink-in-the-center burger again.

Coffee labeled “fair trade” is the highest quality.

The Fairtrade Labeling Organization was started in response to the plight of farmers, including coffee growers, who often received dismally low prices for their product. If a coffee cooperative met certain labor, environmental, and social standards (among other things), their coffee could carry the Fair Trade label, and it commanded a higher per-pound price than it would otherwise (still a low price, but definitely an improvement). Fair trade coffee is a small part of the total coffee market, about 1/2 of 1%, but it allows socially conscious consumers to ensure that the growers of their

coffee are receiving a fair shake—a good thing.

Unfortunately, many people have the misconception that any coffee labeled Fair Trade is automatically of the highest quality, but this is not the case. It's an open secret among high-end coffee roasters that Fair Trade coffee is often of lower quality. After all, the requirements for earning the Fair Trade label have nothing to do with the quality of a grower's coffee, but only with meeting the Fair Trade requirements. When the price a grower receives for coffee has nothing to do with quality, there is no

incentive to work to maintain or improve quality—with predictable results.

I am all for the Fair Trade idea, I have traveled in Central America and am aware of how much work goes into growing and harvesting coffee, and these people should definitely be paid fairly. The fact is, however, that if you are fussy about the taste of your coffee, as I am, and seek out only the highest quality beans, the growers of those beans will have received more than the Fair Trade price for their crop. So, if you like the Fair Trade coffee that you buy, that's great, but if you really want to

help the growers, insist on the highest quality coffee you can find. Hint: It's not at Starbucks.



Freshly roasted coffee beans.

When you add alcohol to a recipe it all evaporates during cooking so there is none in the final dish.

Here's another "common sense" myth that turns out to be false. Alcohol has a lower boiling point than water so it should all evaporate first, right? Nope—that's not the way it works. The alcohol will evaporate faster than the water but there will still be some left after even extended cooking. The list below shows just how much alcohol is left after different methods and periods of cooking:

- Alcohol added to boiling liquid and removed from heat: 85%
- Alcohol flamed: 75%
- No heat, stored overnight: 70%

- Baked 15 minutes, alcohol stirred into mixture: 40%
- Baked 2.5 hours, alcohol stirred into mixture: 5%

The bottom line is that no one is ever going to get tipsy from alcohol in a cooked dish, but people who want to avoid all alcohol for religious or medical reasons need to be aware that some alcohol will remain even after long cooking.

Aside from the color, cremini mushrooms are no different from the white ones.

Your taste buds will give the lie to this myth. The brown cremini have a

deeper and more mushroomy flavor than the white mushrooms. Choose based on the needs of your recipe.

On a related note, did you know that portobello mushrooms are nothing more than large creminis?

A worm in an ear of corn means you can't eat it.

The corn, not the worm! The corn earworm, *Helioverpa zea*, is the larva, or caterpillar, of a moth. There is almost always one per ear, and they inhabit the tip of the ear, feeding on the kernels. I have seen a lot of people at the local farmers' market rejecting ears of otherwise excellent corn because there's a

worm. What a waste! Organic corn usually has a worm because spraying with toxic insecticides is the only way to prevent them. All you need to do is cut off the tip of the ear, removing the worm and the damaged kernels, and you'll be fine. I'd much rather eat an ear of corn that had a worm removed than one soaked with insecticides.



Green peppers for sale at farmers market.

All thickening agents are created equal.

A common technique in cooking is to use a starch to thicken a liquid such as a gravy or sauce. Wheat starch (flour) and corn starch are perhaps

the most common, but potato starch, arrowroot, and tapioca are also used. Does it matter which one you use? Most definitely. These agents differ in five ways.

- Flavor: Does the thickening agent add its own flavor to the sauce or is it neutral in taste?
- Thickening power: Just how thick can you go?
- Consistency: The molecular structure of some starches results in long strands that can give the sauce a stringy texture.
- Stability: Will the sauce remain thick with long cooking or will it

thin out?

- Appearance: Is the resulting sauce clear or opaque?

Now let's look at how the various thickening agents stack up:

- Wheat (flour): smooth consistency, low maximum thickness, good stability, strong flavor (which can be greatly reduced by cooking the flour in fat before adding to the liquid), and opaque appearance
- Corn starch: smooth consistency, moderate maximum thickness, moderate stability, strong flavor, and opaque appearance

- Potato starch: stringy consistency, very high maximum thickness, poor stability, mild flavor, and clear appearance
- Tapioca flour: stringy consistency, high maximum thickness, poor stability, no flavor, and clear appearance
- Arrowroot: stringy consistency, high maximum thickness, good stability, no flavor, and clear appearance



Variety of acorn squash.

When sautéing food in olive oil, use extra virgin oil for the best flavor.

We all know that extra virgin olive oil has the best flavor. But, it turns out that these flavors pretty much all vanish when the oil is heated to sautéing temperatures. If you still

want to use olive oil, for the health benefits perhaps, save your money and use a cheaper refined oil, saving the extra virgin for salads, dipping bread, and other non-heated uses. If you want that lovely olive oil flavor on cooked foods, drizzle a bit of the good stuff on after cooking.

Food Storage

You should not store coffee in the freezer.

Oh pish-tush! For medium to long-term storage (more than a couple of weeks) this in fact the best place to store coffee. Coffee goes stale mainly because the oils in it (I am talking roasted coffee, whole beans or ground) react with oxygen in the air and go rancid, giving it a stale taste. One way to prevent this is to seal the coffee away from air—this is why coffee in cans and some bags is vacuum packed. The second way is with cold, which slows down

chemical reactions. Cold, freezer, duh!

The reason I have heard for not storing coffee in the freezer is that it can absorb odors from the other food. Well, I dunno about you, but I wrap things tightly before they go in the freezer. Even if my leftover garlic and limburger tart comes unsealed, the coffee will be in a jar or zipper bag.

There is one situation when freezer storage may not be a good idea, and that when the weather is very humid and your kitchen is not air conditioned. Because moisture condenses on cold surfaces, there's

the risk of the coffee becoming moist when you take it out of the freezer to use. This would likely affect the coffee.



Hot bagels.

Bread becomes stale by drying out.

Stale bread...yuck. The crumb (the part inside) gets hard and stiff and the crust loses any crispness it might have had. Most people attribute this to drying out, but the opposite is in fact usually true. The bread is actually absorbing moisture, as shown by an increase in weight as the loaf goes from fresh to stale. The moisture absorbed by the crumb causes the starch granules to crystallize, hardening the bread. This is why the fridge is a bad place to store bread, even when it is well wrapped, because low temperatures speed up the starch crystallization

process (although freezing bread is fine because starch crystals don't form at freezer temperatures). It's also why a brief visit to the oven can improve stale bread; the heat drives out some moisture and helps melt the starch crystals.

Bread can dry out, of course, but that's another matter.

It's OK to store flour and other ground grains in the pantry.

Whole grains contain a small amount of oil, and this is where the problem arises. Over time, the oil can become rancid, and this will have a negative effect on the flavor of the grain. White flour and white rice

have been milled to remove the oil-containing parts, so they are OK at room temperature (this was in fact one of the main reasons behind the development of milling, to prolong storage life). Other items, such as whole wheat flour and brown rice, are better off stored in an air-tight container in the fridge, particularly for extended periods.



Marinated roasted red peppers.

Frozen chicken lasts more or less forever.

Like many people, I used to think that chicken would last a long time in the freezer without any loss of

quality (assuming it is properly wrapped to prevent freezer burn). Turns out this is not the case. Freezing chicken for more than about 2 months leads to a decrease in tenderness. The folks at *Cooks Illustrated* verified this using chicken breasts. Whether it's true for dark meat is unclear. Of course, chicken will *keep* forever in the freezer (it won't go bad), but the quality will suffer.

Store tomatoes in the fridge for best flavor.

Makes sense, right? Cold preserves food and slows down flavor loss for other foods, why not tomatoes?

Turns out they're unusual.

Flavor development in tomatoes depends on enzymatic activity that continues throughout the ripening process, even after picking. Chilling inhibits this process, resulting in less flavor.

Chilling—meaning temperatures below about 55°—also can affect the texture in unpleasant ways. Store your 'maters at room temperature.

Of course, many commercial tomatoes are so tasteless to start with that the deleterious effects of refrigeration won't be noticed!



Picking coffee beans in Nicaragua.

Butter must be kept refrigerated.

It seems to be almost universal, at least in the United States, for people to keep butter in the refrigerator. This is not really necessary if your kitchen stays relatively cool, say at

75° F or lower. The advantage is that the butter is not really hard when kept at room temperature, so it's always ready to spread on muffins or toast. I really dislike tearing up a piece of toast trying to spread rock-hard butter on it! You can keep your butter in a butter bell, which uses a water seal to protect the butter from air, odors, and dust.

Of course, butter that you won't be using soon should stay cold.

Odds and Ends

Cold water boils faster than warm water

This is another myth that falls into the “suspend the laws of physics” category. That hasn’t happened yet in my kitchen, and if it has in yours, you can probably get on TV. Seriously, to illustrate how ridiculous this idea is without getting into physics and formulas, think of it this way. If you put cold water on to boil, at some time before it boils the water will have become warm. Let’s say it takes time A for the water to go from cold to warm. Then after

some additional time it will boil—call the time it takes to go from warm to boiling B . So, the time it takes the cold water to boil is $A + B$ and the time it takes the warm water to boil is B . If this myth were true then time $A + B$ would be less than time B and there's just no way this could be no matter how many martinis you've had.

A variation of this myth claims that cold water boils faster than warm water if it has been boiled previously and then cooled off. The “explanation” in this case is that the first boiling drives dissolved air out of the water, which is true enough.

However, dissolved air does not affect the boiling of water, at least not in any significant way, so this one is nonsense too.

Apparently this myth has its origins in the fact that cold water *heats* faster than warm water. A pot of water at 40° will reach 60° faster than a pot of 70° water will reach 90° , given the same heat source. This is because the rate of heat transfer is proportional to the temperature differential between the heat source and the item being heated. But the cooler water will always take longer to boil.

It is true, however, that warm

water sometimes freezes faster than cold water. This happens only under very specialized conditions and has nothing to do with boiling water.

Note, however, that many people generally avoid using hot tap water for cooking because hot water may not be as clean from sitting in the water heater or from leaching substances from the pipes (a worry in houses with old plumbing).

To keep coffee hot longer, add milk just before drinking.

You've poured yourself a cup of coffee and then there's a knock on the door—the FedEx guy. You want your coffee to be as hot as possible

when you come back in a few minutes. Should you add the milk now or wait until just before you drink it? Most people would say to wait, but that's wrong.

Put the milk in now. Here's why: Dark-colored objects radiate more heat than light-colored ones, so the light coffee will radiate less heat than the black.

In addition, the heat loss is proportional to the temperature differential between the cup of coffee and the room air. By adding the milk now, you have slightly cooled the coffee, reducing the temperature differential and the heat

loss.

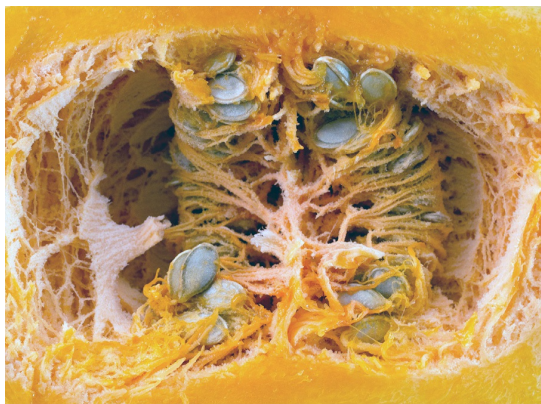
If you use cream or half-and-half, the fat may lessen the evaporation from the surface of the coffee and the resultant evaporative heat loss.

Of course, the difference is going to be small, and it's not likely you'll notice it.

“Real” chili cannot contain beans or tomatoes.

You hear this on a regular basis, mostly from Texans. The fact is that many delicious traditional (and nontraditional) chilis are made with beans and/or tomatoes. Of course, some places do horrid things with

chili (may God have mercy on Cincinnati). There is in fact some basis for this myth. Traditional Texas-style chili is usually made without beans or tomatoes, but that's just one regional variant.



Inside of a cooking pumpkin.

A box of baking soda in the fridge

or freezer absorbs odors.

This is a very clever and successful marketing ploy by the baking soda people, but the fact is that baking soda is very poor at absorbing odors. It seems to make sense, however, so lots of people have spent untold billions of dollars to put boxes of baking soda in their fridge or freezer to no effect. Activated charcoal would work much better but is expensive. Better to wrap your food and clean the fridge once in a while.

You feel drowsy after Thanksgiving dinner because of the tryptophan in the turkey.

Not so, but there's a nugget of truth in the origin of this myth. Tryptophan is an amino acid, and it—or specifically the isomer L-tryptophan—does in fact have the documented effect of inducing sleep. But, you have to take L-tryptophan on an empty stomach, without any other amino acids or proteins, for it to have this effect. I don't think the terms *empty stomach* and *Thanksgiving dinner* belong in the same sentence! Also, other foods, such as chicken, pork, and cheese, contain as much or more tryptophan than turkey, and you don't hear people claiming that these foods

cause drowsiness.

It's true, however, that tryptophan may be involved in feeling drowsy after any large, carbohydrate-rich meal. It's not the tryptophan in the food, however, but the tryptophan that's already in your body. Eating a lot of carbs causes insulin production, which in turn reduces the blood level of some other amino acids. As a result, the relative concentration of tryptophan in the blood is increased, which leads to more synthesis of the neurotransmitter serotonin, which makes you drowsy. That's the theory, anyway.

Other reasons for feeling drowsy after Thanksgiving dinner (or most any large meal):

- After a large meal, particularly one rich in carbs and fats, your body directs more blood flow to your digestive system and less to the brain.
- Thanksgiving dinner is often accompanied by a glass or three or eight of wine. Need I say more?

So, snooze to your heart's content after Thanksgiving dinner, but don't blame the turkey. Just be sure to wake up in time for

sandwiches.

All ice cubes are created equal.

Most of us use cubes made with tap water, using either an ice cube tray or a built-in ice maker. They tend to be cloudy and sometimes don't last as long as we'd like. But, ice is ice, right? Not necessarily. Home-made ice freezes from the outside in. Air that is dissolved in the water, plus any minerals (worse if you have hard water) are pushed to the center, last to freeze, where they create bubbles and haze. The resulting ice cubes contain less actual ice than bubble-free ones of equal size would, and when they melt you may find a

sediment of the previously dissolved minerals at the bottom of your glass.

To avoid this, use distilled water (no dissolved minerals) and bring to a boil briefly, then cool and freeze (the boiling drives out most of the dissolved air). You'll get clear, sediment-free cubes that last a good deal longer. Worth the effort? Maybe only for special occasions!



Homemade hamburger buns.

Different areas of your tongue are sensitive to different tastes.

I remember learning this in high school—the so-called tongue map that claimed that each of the four fundamental tastes were “picked up”

on different parts of the tongue: bitter in the back, sweet in the front, sour on the sides toward the back, and salt on the sides near the front. This was shown to be false long ago. All areas of the tongue are sensitive to all the tastes.

And yes, there are now believed to be more than four basic tastes. A fifth, called savory or umami, is widely accepted, and some researchers argue for a sixth, piquancy.



Close-up of cabbage core.

Live lobsters scream with pain when boiled.

It's commendable that people do not want to inflict pain on animals, but this one is definitely false on the first account (screaming) and probably false on the second (pain).

As for the “scream,” there’s the problem that lobsters have no throat, no vocal cords, no lungs, so how could they scream at all? The fact is that the noise is caused by air trapped in the shell. When heated it expands and forces itself out through small gaps, causing the sound—sort of like when you force air out between your tightly clenched lips to make a rude sound.

What about pain? No one can know for sure what a lobster or similar critter feels, but we can make educated guesses based on what we know about pain in other animals, specifically humans. And I

am talking specifically about pain, not discomfort or unpleasantness. Pain doesn't just happen automatically—it is the result of specific receptors, nerve pathways, and brain regions all cooperating to convert certain physical stimuli into the perception of pain. This has all been thoroughly worked out in humans and other vertebrates. But guess what—lobsters and other crustaceans are not vertebrates and simply do not have these nerve pathways and brain regions (they don't have a real brain at all, for that matter). In other words, no brain, no pain (sorry, I couldn't resist that

one!).

This does not mean that lobsters and similar animals do not feel anything, and it does not mean that there some stimuli they would rather avoid. These aspects of lobster and crab behavior are well established. But, that's very different from feeling pain.

Can we know for absolutely positively 100% sure that lobsters don't feel pain? No, because there's no way for us to directly experience what they do and do not feel. That should not stop us from making educated guesses. I feel pretty sure that eyeless cave fish cannot see,

and I have no doubt that you would feel pretty much the same pain that I would if you touch a hot stove, even though I cannot directly experience what the cave fish or you experience. I don't have proof that the cave fish does not see or that you feel pain, but I am pretty confident that these things are true.

So, if you are worried about lobsters feeling pain, don't eat 'em—but please, don't nag the rest of us.

Eating bananas makes you more attractive to mosquitoes.

Mosquitoes are attracted or repelled by various odors and also by the carbon dioxide you exhale, but the

bananas story is false. So is the claim that taking vitamin B-12 will make you less attractive to mosquitoes. Mosquitoes home in visually to some extent, particularly in the late afternoon, and they seem to like dark colors and movement. But, smell is most important, with the carbon dioxide that you exhale being the primary factor. Other poorly understood aspects of “personal odor” can have attractant or repellent effects, and probably explain why about 20% of people are considered to be “mosquito magnets.” These are the people you want to stand next to at an outdoor

party!

If you put the avocado pit in the bowl, guacamole won't turn brown.

The surface of guacamole turns brown by reacting with oxygen in the air. The guacamole that is directly under the pit won't turn brown because the pit prevents air from getting to it. Otherwise, the oxidation process turns the exposed surface brown, just as it does on apples and other fruits. You'll have much better luck protecting the surface from air by pressing aluminum foil or plastic wrap directly on it. A sprinkle of lime or lemon juice can help, too, because the ascorbic acid in the

juice (vitamin C) inhibits oxidation.



Salmon fillets in the smoker, on their way to becoming lox.

You cannot eat so much that your stomach bursts.

We've all said at one time or another

“I’m so full I am going to burst.” Well, in all probability you were far from actually bursting—rupturing your stomach—but that does not mean it can’t happen (never mind Mr. Creosote in Monty Python’s film *The Meaning of Life*).

An adult’s stomach can typically hold 1 to 1.5 liters of food, the point at which you feel really stuffed and 99.9% of us stop eating. If you keep cramming it down, you’re probably safe up to about 3 liters. Above that, who knows? This isn’t something you’d want to do an experiment on! Your gag reflex won’t help because once your stomach is this distended,

the muscles are stretched thin and cannot generate the force needed for vomiting. But, there are medically documented cases of stomach rupture due to excessive food intake, and it is, as you might well imagine, a very serious situation. However, except for people with certain eating disorders, it's nothing for the rest of us to worry about.



A Japanese chef's knife.

Sushi means raw fish.

Many people think that *sushi* is synonymous with raw fish. Not so—the term actually refers to the vinegared rice. This is made by dissolving sugar in vinegar (usually rice vinegar) and tossing with the hot, just-cooked rice. *Sushi* therefore refers to vinegared rice served with other ingredients which may or may not include fish (which in turn may be raw or cooked). The vinegared rice itself is referred to as *shari*. Raw fish served by itself without the rice is called *sashimi*.

Techniques

Searing meat seals in the juices.

This old saw has been around for ages, partly because meat cooked over low heat will exude liquid while meat cooked over high heat—seared—appears not to. When you cook meat, the collagen fibers contract and this squeezes liquid out of the meat regardless of the cooking temperature. With high heat, the liquid boils away immediately and you never see it, while at lower temperatures the liquid accumulates in the pan.

Another reason for this myth

may be that searing meat that will be stewed, roasted, and so on does indeed give much better results. It has nothing to do with sealing in the juices, however. Careful experiments were performed in which identical pieces of meat were cooked with and without searing. If searing did seal in juices, then the seared meat would lose a smaller percentage of its weight during cooking than the unseared piece. In actuality, both the seared and unseared meat lost about the same amount of weight.

Searing, or more specifically browning, is important because of the Maillard reaction. When the

proteins and sugars in meat are exposed to high heat (searing) a large number of chemical reactions take place, resulting in the creation of lots of new flavor elements. It is these flavors, both in the browned surface of the meat and in any pan juices that result, that make searing such an important step in some recipes.



State fair food shop.

For best results, use an uncovered pot when blanching vegetables.

Many recipes call for blanching vegetables, giving them a short and partial cooking in boiling water. Some folks claim that the pot should be uncovered so that the acids in the vegetables can escape. Otherwise, more of these acids will remain in the vegetables where they can adversely affect the color and texture. However, these acids are not volatile and will not “boil off” in either case, so covering the pot or not makes no difference. In my

experience, particularly for blanching vegetables that will not receive further cooking, it is important to cool them quickly so that residual heat does not continue to cook them more than you wanted.

Add oil to pasta cooking water to keep the pasta from sticking.

In theory, this will work—oil is slippery, after all! In reality, almost all the oil goes down the drain when you drain the pasta and the septic tank beasties will enjoy your good olive oil. Tossing the pasta with a little oil just after draining works much better. But, most sticking problems can be avoided by buying

high quality pasta (which sticks less than the cheap stuff), by not overcooking the pasta, and by making sure you are boiling it in enough water. Also, stirring the pasta for 10 to 20 seconds right after adding it to the boiling water makes stickiness less of a problem.

To reduce sticking in pasta that will be used cold, in a pasta salad perhaps, give it a good rinsing under cold tap water right after draining, then allow it to finish draining.



Browned beef shortribs, soon to be in a
beef and barley soup.

**A pinhole in a raw egg will prevent
cracking while boiling.**

This myth is based on the

reasonable idea that eggs crack, when being hard- or soft-boiled, because the air in the shell expands from the heat. The pinhole is supposed to release this pressure. Reasonable, yes, but tests show that a pinhole really does not reduce cracking. Rather, cracks occur either because the egg already has an invisible crack in the shell, which expands during cooking, or because the egg is being knocked about in the pan by too-active boiling.

Use water instead of milk when making scrambled eggs.

Some people will tell you that using milk when making scrambled eggs

and omelets results in tough eggs—that you should use water instead. It's puzzling how this myth continues to propagate because it is so easy to disprove for yourself. But if you require the pronouncement of some authority, tests by *Cook's Illustrated* (the “America's Test Kitchen” people) revealed that scrambled eggs made with water are less flavorful, do not fluff as well, and are not as soft as those made with milk. Cream is better still, but that's another story!

By the way, this advice is for eggs cooked to be moist and creamy, the way they should be. I

know some people prefer the dry style, which ruins the taste, so what you mix in doesn't really matter.



Sweet potatoes for sale.

With onions, slice, dice, or use the food processor—it's all the same.

Did you ever wonder why onions don't smell until you cut them? The

fact is that an intact onion contains very little of the thiosulfinates that are the source of the typical strong onion smell and taste. Only when you cut into an onion and break open some of the cell walls are these thiosulfinates created, the result of a chemical reaction that does not occur otherwise.

As a result, the way you prepare the onions does make a difference. Careful slicing with a sharp knife damages relatively few cells and creates less onion flavor. Hand dicing creates more, and zapping in a food processor creates the most. This makes the most noticeable

difference when you are using the onions raw, but it can also influence cooked dishes. It's also true that letting the cut onions sit around before using provides more time for the chemical reaction to occur, resulting in stronger flavor.

Be aware that the same principle holds with garlic—slice, mince, or crush will release different amounts of flavor. Prepare raw garlic just before using unless you want a really pungent flavor.



Dried red chili peppers.

Add raw potatoes to already-boiling water.

This is how I did it for years, but it turns out that starting with the spuds in a pot of cold water, then bringing to the boil (simmer, actually) gives better results and is faster. When

you put a potato into already-boiling water, the outer layer cooks faster than the inside, and by the time the center is cooked the outer layer may be a bit overcooked. This is more evident when you are cooking whole or half potatoes, and is admittedly a modest—but real—difference. On the practical side, starting in cold water takes a bit less time. So, start in cold water, bring to a boil over high heat, then reduce heat and simmer until done.

When grilling a burger, flip it only once for best results.

I am not sure where this one originated, but I hear it frequently. In

fact, flipping the burger several times during grilling gives more even cooking and a more evenly browned surface. You won't get those grate marks, but who cares? It's going in a bun anyway. It is true that you shouldn't press on the burger with your spatula during cooking—this just squeezes juice out, and we all love juicy burgers.

You can keep meat moist by cooking it in a stew or braising it.

This seems to make sense—cooking meat in a moist environment would keep it moist, right? Not necessarily. A major determinant of the final moistness of meat is how hot it got

during cooking. So, how you stew or braise the meat is really important. Cook at a boil, where the meat may reach over 200° F and it's likely to be dry. Cook at a gentle simmer, keeping things at 180° or so, and the results will be much better. This is why using a pressure cooker, where temperatures get even higher, is not the best technique for meat dishes.

Adding salt to the cooking water keeps greens green.

Nope. You may want the salt for the taste, but it has no effect on the color of the final product. A pinch of baking soda could actually improve color by making the water more

alkaline, but because most people have water that is already a wee bit alkaline to begin with, you may not notice a difference.

Tear basil, rather than cutting it, for best flavor.

When a recipe calls for fresh basil, you'll often hear chefs saying to tear it with your fingers, rather than shredding it with a knife, to get the best flavor. Sorry, but nope. The flavors in basil—like any herb—are primarily contained within the cells of the leaf. If you tear it, it tends to come apart between the cells so that less flavor is released (because it stays in the cells). If you cut the

leaf, you will break open the cells (some of them, anyway), releasing more flavor. This makes the most difference when you are using the basil raw, as in a tomato salad. In cooked dishes, such as a sauce, it does not make as much of a difference because the cooking gets the flavor out of the cells.

My technique is to wash the basil, pat dry with paper towels, and remove the leaves from the stem. Stack several leaves together and roll into a cylinder, then cut crossways into thin strips.



Assembling nacatamales, the national dish of Nicaragua.

Hot pan, cold oil to prevent sticking.

This mantra is repeated by many people as the best way to prevent food from sticking to the pan when

sautéing or stir frying. The idea is that you heat up the pan first then add the cold oil and almost immediately add the food. This works, of course, so it is not a myth in that it is untrue. It is, however, false to think that this is the only or the best way to prevent sticking. What you really want is “hot pan, hot oil,” and that’s what you are actually getting because the cold oil heats up almost instantly when added to the hot pan. You’ll get the same results if you heat the oil along with the pan rather than adding the oil at the last minute. In fact, some cooks prefer this technique because the

appearance of the oil in the pan can give you some indication of when the pan has reached the proper temperature.

Don't salt meat before cooking.

The idea behind this one is that the salt will draw out juices from the meat, removing flavor and preventing the surface from browning properly. In theory, salt can draw out moisture, but in the real world it does not seem to make any difference. I have salted meat before cooking innumerable times, including steaks for pan frying or grilling, roasts, and briskets headed for the smoker. I have never once

seen any juice being drawn out by the salt. In addition, there are innumerable cooks ranging from at-home amateurs to professional chefs and cookbook authors—including the super-fussy people at *Cooks Illustrated*—who direct that salt be put on meat before cooking. It's impossible to believe that if the myth were true, all these people would be blind to the supposedly dire effects.

If you use enough salt and let it sit long enough you will draw out moisture. But the real question is, does this reduce the quality of the final product? Not in my experience.

Of course, you must pat off the accumulated moisture with a paper towel before cooking if you want the meat to brown properly. In fact, drawing off some moisture may well concentrate the flavors and lead to a better result.

You can make a baked potato in the microwave.

The microwave oven certainly has many legitimate uses, but baking potatoes (or anything else) is not one of them. Sure, you can *cook* a whole potato in the microwave, but what you get is a steamed potato. The crispy skin and fluffy interior of the genuine baked potato require a

long cooking in dry heat.



Nacatamales ready for steaming.

Salt your scrambled eggs after cooking for best results.

Some people claim that salting the eggs before cooking can make them

watery, but this is not the case. In fact, waiting until after cooking to salt your eggs tends to make the curds firm and “rubbery.” Beating the salt into the eggs before cooking, on the other hand, gives a moister and more tender result.

A food processor grinds meat as well as a traditional meat grinder.

A food processor is a great tool, I use mine all the time. But, not for grinding meat for burgers, meatballs, and similar uses. The traditional meat grinder—remember those metal, hand-cranked units your mom would clamp to the kitchen table? —uses a totally different method to

grind the meat.

A traditional grinder uses a rotating auger, or screw, to force the meat through the holes in a metal plate while at the same time using a rotating blade to cut it. All the meat goes through the blade and plate exactly once, so the texture is even throughout. Change to a plate with larger or smaller holes for a coarser or finer grind.

In contrast, a food processor simply whirls a sharp blade at high speed and the blade cuts the meat into smaller and smaller pieces. It's very hard to get just the right grind—too coarse and the burgers will fall

apart, too fine and they'll be dense and rubbery—and it's also difficult to get an even consistency through the entire batch of meat. Even when you get it “just so” there something about the texture of food-processed meat that cannot match the results from a traditional grinder, at least in my opinion.

Meat grinders are available as attachments to some kitchen stand mixers, and the hand-cranked ones are inexpensive (particularly at yard sales). All you burger lovers, do yourself a favor and grind your meat the right way!



Cabbage about to become sauerkraut.

The best way to measure flour is the “dip and sweep” method.

Because baked goods rely on careful measurements, most cooks prefer the “dip and sweep” method in which a measuring cup is overfilled

by scooping into the flour and then the excess is removed by drawing the back of a knife across the top. It's been shown, however, that even professional cooks using the same measuring cup can vary by more than 10% when using this technique. It's still more accurate than spooning the flour into the measuring cup, but 10% variability is pretty bad.

The answer? Measure flour by weight, not volume. A decent kitchen scale is an essential piece of equipment, I think, and has many other uses. One problem, of course, is that relatively few baking recipes give weights, but you can make a

note of the weight you used for future references. The following conversions may also help.

One cup of this weighs approximately this many ounces

- All purpose (white) flour: 5
- Whole wheat flour: 5.5
- Cake flour: 4
- White sugar: 7
- Packed brown sugar (light or dark): 7
- Confectioner's sugar: 4



Shrimp with saffron rice and tomato relish.

When baking muffins, fill empty cups with water for even baking.

Suppose you have a twelve cup muffin tin and enough batter for only,

say, six muffins. This myth says to fill the empty cups with water or you'll get uneven baking and your tin might warp. It does no harm, but it's a waste of time and has no effect whatever on the evenness of cooking. Why would it? Even with all twelve cups full of batter, most of them are not adjacent to another cup on one or two sides and things cook perfectly fine. If your muffin tin warps, that's a sign of low quality, and maybe you need a replacement.

There is one scenario where putting water in the empty cups makes sense—if you have already greased them. Baking an empty,

greased cup makes for hard cleanup!

When making a meringue, you must not get even a tiny speck of yolk in the egg whites or they won't beat up properly.

There's a kernel of truth in this one. When you beat egg whites until they are stiff, you are actually creating a foam in which the egg white proteins form bubbles with the air you are beating in. Fats tend to collapse foams, and an egg yolk contains a lot of fat, hence the origin of this "rule." It may have had some validity when people made meringues by hand, but with today's power mixers

you'll be able to make a perfectly good, stiff meringue even if a bit of yolk gets mixed in.

Salt beef for hamburgers before grinding it.

Sounds like a good idea. After all, this will get the salty flavor evenly distributed throughout the meat, right? Actually, it's not such a good idea. The salt has an effect on the proteins in meat, and in ground meat the result is to bind them more tightly together. You end up with a rubbery texture, not at all the ideal burger you are hoping for. Salt the outside just before cooking, or at the table, for the best result. Mixing salt into

already-ground beef has a less pronounced but still unpleasant effect.



Lemon.

You must/must not salt pasta cooking water.

Now wait just a minute—how can

one statement and its opposite both be false? This is because there are so many divergent opinions about salting pasta water, often strongly held, and none of them is “true” in an absolute sense. Salting does not shorten the cooking time by raising the temperature of the water (it does, actually, but by a tiny amount that makes absolutely no difference in the cooking time). The fact is that salting does one thing and one thing only: It makes the pasta salty (well, duh!). You have to add a good bit of salt to get any real taste effect because most of the salt goes down the drain. There you have it. You

want salty pasta, add salt—otherwise, no.

But, there is one situation where I think adding salt is a good idea. For the common tomato-based sauces, the sauce can add the needed degree of saltiness to the dish. With oil-based sauces, however, we face the fact that salt does not dissolve in oil, so the sauce cannot add the needed salt (and the result is often the addition of too much grated cheese to get the desired salt level). Salting the pasta water in these situations can provide a better balance. The same is true of pasta that is destined for a cold

mayonnaise-based salad.

An electric mixer makes the best mashed potatoes.

NOT! Most of us have experienced good mashed potatoes, light and fluffy. We've also experienced the gummy, sticky mess of bad mashed potatoes, a close cousin to wallpaper paste. The difference lies in how the potatoes are handled.

Potatoes contain starch granules, the villain in this story. If too many of the granules burst and the starch gets out, you are headed for wallpaper paste city. If most of the granules remain unbroken, the starch does not get out and the

texture of the potatoes is not degraded. An electric mixer really beats up your potatoes, and the result is that a lot of starch granules are ruptured. A food processor is even worse.

The best mashed potatoes, in my experience, are made with a ricer or food mill. A close second best is the good old hand masher, which lets you take out your frustrations at the same time!

Cut and serve meat as soon as it is done.

'Fraid not. During cooking, some moisture comes out of the muscle fibers into the spaces between the

fibers, and if you slice the meat as soon as it is finished cooking, this moisture leaks out onto your cutting board. Let the meat sit a little while before carving and the fibers will reabsorb some of this moisture. How long? Five to 10 minutes at a minimum and longer, up to 30 minutes, for larger pieces such as roasts. Tent the meat with foil to keep it warm.

When baking bread, internal temperature is the best way to tell if the loaf is done.

I am usually a big fan of using temperature to judge when something is done, such as a beef

roast or whole chicken, so why not bread, too? I have seen several baking cookbooks recommend this, with a final internal temperature of 195 to 210° F (varies by type of bread). But, there were times when the thermometer said “done,” but the bread clearly needed more time in the oven. This happened the most with breads that were supposed to be cooked to a higher internal temperature, such as French bread and rustic Italian loaves.



Unagi donburi, Japanese for broiled eel on rice.

To investigate, I started putting a remote temperature probe into the bread near the start of cooking,

rather than checking the temperature only at the end. I was surprised to find that the internal temperature did not slowly climb from the starting temperature to reach the final temperature only at the end of baking. Rather, the temperature climbed fairly quickly to about 207° , taking only about two thirds of the baking time that I knew, from experience, was right for this bread. The temperature just sat at 207° for the remaining time. If I had taken the bread out as soon as it hit 207° , it would have been severely underdone.

Here's what seems to be

happening. As the loaf nears 212°, the boiling point of water, it can't get any hotter because the heat is carried away by the evaporating water. Even though the internal temperature is not rising, things are still happening—the loaf is getting dryer and the crust is browning, for example. So, that final 10 or 15 minutes is essential for the loaf to be done properly even though it reached the “done” temperature earlier. Lesson to be learned? Trust your experience and the recipe's advice to determine when the bread is done.

You cannot deep-fry in olive oil.

Olive oil has a lower smoke point than most other oils and as a result many people think you cannot use it for deep frying. Balderdash! This would be news to many Italians including the famous TV chef Mario Batali. Olive oil's smoke point is about 375° and most frying is done below that. Also, just because an oil smokes a little does not mean it is ruined.

Using olive oil for deep-frying is undoubtedly expensive. The least expensive olive oil is, in my experience, about twice the cost of other oils that are used for frying, such as peanut or canola. Plus you

should discard the oil after a single use, or at most two uses, because the low smoke point means that the oil degrades more during that first use. So, you may never actually want to use olive oil for deep frying, but it is most certainly possible—and can give terrific results for some recipes!

Equipment

Heating a pan prevents food from sticking by closing cracks in the metal.

Most cooks know that you should start with a hot pan to prevent or minimize food sticking. You may hear a bizarre theory that goes something like this. Food sticks to pans because it seeps into minute cracks and pits in the surface of the pan and then solidifies when heated, becoming stuck. If you heat the pan before adding the food, the metal expands and fills in the microscopic cracks and holes in the pan's

surface or at least makes them smaller. With fewer or smaller surface defects for the food to grab onto it is less likely to stick.

Unfortunately, whoever came up with this idea knew nothing about the physical properties of metals. When metal expands due to heating, each individual atom vibrates faster and faster and thus takes up more space. The result is the same as if each atom simply got a bit bigger, and the entire piece of metal, defects, holes and all, gets bigger. For example, if you heat a donut-shaped piece of metal, the outer diameter gets bigger and so does

the diameter of the hole. You have probably used this fact yourself when trying to get a metal screw lid off a glass jar. Running hot water over the lid expands the entire lid and loosens its grip on the jar, making it easier to remove. So, heating a pan would cause these hypothetical surface cracks to get larger, not smaller.



Chick pea and tomato stew.

You cannot do serious cooking in a microwave.

This is one of the very silliest myths but it refuses to die out. There are a lot of people who use their microwave for nothing but boiling water and reheating leftovers, and

they are really missing out on a lot. I suspect that this myth got its start when microwaves were a new tool and a lot of awful microwave recipe books were published. Some people tried to use their microwave as a general-purpose stove and oven replacement rather than as a more specialized tool that is well suited for some jobs but not at all useful for others. For example, you would not want to use a microwave for a roast beef, fried potatoes, or baked bread, but it works just great for things like rice, poached fish, and steamed veggies. I find it particularly handy for making polenta and

risotto, with results that are every bit as good as the stovetop with much less work and worry. If you want to expand your microwave repertoire I highly recommend *The Microwave Gourmet* by Barbara Kafka. Another excellent book is *The Moghul Microwave* by Julie Sahni (Indian dishes). Both are out of print but worth a search for a used copy.

You can't wash cast iron cookware with soap.

This myth seems to make sense—after all, you use fat to season cast iron and soap removes fat. Case closed, right? It's not that simple.

The seasoning layer on the

surface of the pan is formed when the pan is heated while in contact with some fat or oil. This may happen during normal cooking or during a special seasoning process that many people use with a new pan. The result is a chemical reaction in which the fat polymerizes, meaning that multiple individual fat molecules join together to form larger molecules. It is these larger polymer molecules that bind to the metal of the pan and form the layer of seasoning. And, guess what, the polymer is not dissolved by soap. So, it's perfectly OK to use a mild soap on your cast iron if you are so

inclined. Never use harsh detergent, put the pan in the dishwasher, or scrub with an abrasive, however, as these will take off the coating.

Of course, many people get their cast iron perfectly clean without soap, so there's no reason to use it. The idea that soap will ruin the pan is, however, a myth.



Pizza truck, Grenada.

Much new cast iron comes already seasoned. If not, it is likely coated with wax or shellac to prevent rusting, and you must remove this coating before seasoning. A good scouring with detergent will do the trick. Dry thoroughly, coat the entire surface, inside and out, with oil, and put in a 325° oven for about an hour. Let cool and wipe off excess oil and you are ready to cook. The best oil to use for seasoning is flaxseed oil. Lacking that, use lard or hard vegetable shortening like Crisco.

Regular vegetable oils such as corn and peanut will work but are not as effective.

You must use a serrated knife to slice ripe tomatoes.

You certainly can use a serrated knife for ripe tomatoes, but there's no need to. If you find yourself always turning to a serrated knife for this task, it is probably because your straight-edged knives are not sharp enough. A well-sharpened regular knife will make paper-thin slices from a ripe tomato—in fact, some people use this as a test for a knife's sharpness.

You can't make a good cup of tea in

the microwave.

Some people claim that you cannot make really good tea by boiling your cup of water in the microwave and then putting in the tea bag. The problem is that only the top layer of water is boiling. Water in the lower part of the cup is not hot enough yet and so the tea will not infuse properly. Perhaps—but the problem is easily solved by letting the water boil for 5 to 10 seconds before removing it from the microwave and adding the tea bag. This ensures complete mixing and heating of the water and your tea will be just fine.

Note, however, that some tea

experts claim that you do not want to use actively boiling water (212°) because it damages the flavor of the tea. I was informed of this by a devoted tea drinker—for black tea you want 195°, for green tea 175°, and for herbal tea 205-210°. To be honest, I really can't tell the difference, but apparently some people can.

However, be aware of a potential safety issue. Water can get superheated in the microwave. In other words, its temperature goes above the boiling point but it does not actually boil. This is usually the result of using a container with a

very smooth surface that lacks the minute rough spots that trigger boiling. When you then pop your tea bag into the water it boils all at once and can leap out and burn you. Of course, if you wait for the water to boil in the microwave, as I have advised, this will not be a problem, but you should be aware of it.

All pressure cookers are created equal.

Pressure cookers work because they allow you to cook food in water or steam above the usual boiling point of water. Under pressure that is higher than normal, water boils at higher temperatures, and these

higher temperatures cook your food faster and, sometimes, better. But, how much extra pressure? That's the question.

At normal atmospheric pressure, water boils at 100°C (212°F). If your pressure cooker raises the pressure by 7 PSI (pounds per square inch), the temperature goes up to 112°C . An increase of 15 PSI gives you 120°C and a 37 PSI increase in pressure gives you 140°C . The higher the pressure, the faster your food will cook. There's no practical way to measure the pressure in your cooker, so, be warned: the timing in pressure

cooker recipes may need to be modified based on the characteristics of your cooker. After a few tries, you should be able to get a feel for whether your cooker is faster or slower than typical.



Purple sweet potatoes.

Gas cooktops are better than

electric.

It's become almost an article of faith that gas cooktops are better than electric, and that any "serious" cook should aspire to owning one. This belief does not stand up to intelligent scrutiny, however. Gas cooktops are fine, of course, but when comparing them to electric, you will see that there's no overall objective superiority. Let's take a look at some of the ways gas and electric can differ:

- Response speed. When you turn the heat up or down, gas responds immediately. This is important for certain cooking

tasks. Electric is definitely much slower responding than gas. You can compensate to some extent by moving the pan off and on the element, but it's not nearly as convenient as gas. Winner: gas.

- Simmering. Many gas stoves, particularly high-end ones, have greatly improved simmering. For slow, even, worry-free simmering, however, electric is still the champ. Winner: electric.
- Boiling speed. In comparison tests, gas stoves are almost always slower to boil a large pot of water than an electric stove

with the same heat output rating. This is probably because a lot more heat escapes with gas (see below). Winner: electric.

- Use with a wok. Woks are designed for cooking over an open flame, and the fast response speed of a traditional thin steel wok will be compromised when used on an electric element. If you have an electric stove, you can do a perfectly good stir fry by placing a flat-bottomed wok directly on the element, but a round bottomed wok over a gas burner is better. Winner: gas.

- Escaping heat. It's unavoidable—a gas burner produces a lot of hot air that has no choice but to flow up and around your pan and into the kitchen. This means that less heat gets into your food, the pan's handles may get very hot, and the room heats up more. With electric and a pan that is not too small for the element, more heat goes into the food and less into the handles and the room. In addition, gas ovens vent more heat than electric ovens. Winner: electric.
- Choice of pans. Electric stoves,

particularly the flat top models, require the use of pans with reasonably flat bottoms. The bottom does not have to be perfectly flat, which is essentially impossible anyway, but if the pan is too far off flat the efficiency of heat transfer will be lowered. Plus, pans with a convex bottom (bowed out) can be unstable on a flat top stove, rocking or spinning while in use. In contrast, you can use pretty much any pan on a gas stove regardless of how flat the bottom is. Winner: gas.

- Cleaning. While the old-style coil

electric burners are not all that easy to clean, they are still easier than gas because you do not have to worry about gunk getting into the burners.

Needless to say, the new flattop electric ranges are a breeze to clean. Winner: electric.

The bottom line is that each type of stove has its strengths and weaknesses, and it's impossible to say that one is better than the other in any overall sense. Choose the type that best suits you.

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