



CULINARY CONNECTION

COMMON COOKING MYTHS DEBUNKED

BY R. ANDREW BRAUN, CDM, CFPP

COOKING IS STEEPED IN TRADITION, with recipes and techniques handed down through generations. This is a huge benefit to the young chefs of today, to gain the experience and wisdom of countless forebearers. Unless the time-honored traditions are *wrong*.

That's correct; unfortunately some of the things we are taught—even at prestigious culinary schools—are falsehoods, fabrications, and outright lies. The modern age has brought a massive interest in the science behind the techniques and traditions. And, upon close examination, chefs have been astonished to learn that some of their tightly-held traditions don't work and may do the opposite of what they intended in the first place. Some of these techniques are still a good idea, but for different reasons.

MYTHS DEBUNKED

Here are several common misconceptions when it comes to cooking.

1. Searing the outside of the meat before cooking makes it juicier.

This myth is incredibly common. It was still being taught in culinary school when I was a student, although it had already been scientifically debunked even then, and it is easy to see why. It seems to make sense! Meat shrinks visibly when you cook it, so shouldn't the shrinking on the outside tighten up the surface and make it harder for those juices to escape? Sadly, no, nothing can stop those precious juices from being squeezed out when meat is cooking. (Ji Hyun Yoo, January 2020) Don't get me wrong, searing meat is almost always a great idea, if not for a beautiful and appetizing appearance, then definitely for the flavors and aromas that come with the process, but some research shows a greater moisture loss after a high-heat sear. Your best weapons against moisture

loss are to not overcook the food, cook low and slow after searing, and let big cuts rest before carving.

2. All the alcohol burns off when you cook it.

Many chefs love alcohol, and it's rumored that some of them even cook with it. A nice blast of Marsala to deglaze a hot sauté pan, beer in the chili, bourbon in a sugary glaze, or sake in the teriyaki sauce—there is no denying alcohol's place in the kitchen. The falsehood is that the alcohol cooks out very quickly, especially if ignited. After 15 minutes of cooking, ~40 percent of the alcohol is still in the food. (J Augustin, 1992) *It takes about three hours of simmering to completely eliminate the alcohol from the finished product.*

I know what you're thinking, *but it lights on fire! The alcohol burns off!* Yes, this pyromaniac's dream come true is impressive, and dangerous. You should always use caution when doing this and review safety guidelines with your Safety Committee. Lower concentrations of alcohol will not vaporize and burn, and if you don't believe me, try the same pyrotechnics with beer. It won't work, because water (very not-ignitable) vapor is there in a greater proportion than alcohol. If you don't have three hours to cook the alcohol completely out, don't get upset. The small amount of alcohol that remains won't bother most folks, but some people—whether because of medication, addiction recovery, religious reasons, or allergies—need to avoid alcohol, even in the tiniest amounts. For example, the prescription drug *disulfiram* reacts with just trace amounts of alcohol immediately, making the person violently ill for hours, even from chicken marsala.



3. Adding salt to water makes it boil sooner, and oil keeps the pasta from sticking together.

This is a two-part myth that has always bothered me as a scientist and as someone who cannot stand waste. Yes, you should put salt in the pasta water, and a lot of it, to make your pasta taste amazing. What drives me crazy is the myth that salt will make the water boil sooner. Salt *raises* the boiling point of water, meaning it will take longer to boil, but not significantly enough for you to notice. If you want it to boil more quickly (forgive me if this is obvious) use the smallest amount of water you can without crowding the pot.

Also, adding oil to the pasta water to keep the pasta from sticking together is a similar myth with a totally different mechanism. Oil floats on water. It will not even touch the pasta. When you pour the whole mix into the strainer in the sink, the oil will be the first thing



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out and head right down the drain. If you are concerned with pasta sticking together, stir it early and often, and don't overcrowd your pasta pot. Oil is expensive, especially some quality olive oil, and literally pouring it down the sink for no reason is just wrong. If you are preparing pasta for some future date, you can add a *tiny* bit of oil to the cooked pasta before cooling to prevent sticking, and a little goes a long way. Even just a few quick spritzes of non-stick spray (not the soy-based stuff) is enough to keep your pasta from clumping together and coming out as one big noodle when you're trying to get it out the next day.

4. Fresh veggies are better for you than processed veggies.

Okay so this isn't precisely a myth, but it can still lead to negative outcomes. Nutritional content will vary between fresh, frozen, and canned products, but not the same nutrients and not the

same amounts. There are nutrients that are destroyed by the freezing process, others that are indigestible if consumed raw, and yet others that are rinsed away during the high heat pasteurization that occurs with canning. Confused yet? Ideally, we will include a variety of preparations and processing levels in our vegetable consumption, but reality is never so neat. The simple answer is that the healthiest vegetable preparations are the ones that you will eat the greatest amount of. A counterintuitive study found that people who consume large amounts of canned food receive more nutrients than people who don't. (Comerford, 2015) Canned food is affordable, simple to prepare, easy to eat, and has a practically infinite shelf life. Keeping, preparing, and eating fresh vegetables can be challenging and expensive. The window of opportunity is small, and waste just exacerbates the already-high costs.

5. Wooden utensils are unsafe.

Wooden spoons, cutting boards, platters, chopsticks, rice steamers, lunch boxes, and many other items, have fallen in and out of favor over the years because of their questionable safety. To make this worse, there's a lot of conflicting information on the Internet, and it can be difficult to sort out the facts. The myth that wood is porous and will absorb pathogens in the crannies that will then emerge to cross contaminate your next dish is false. (Nese O Ak, Jan 1994) Just like their polymeric cousins, *they only become unsafe when they are physically damaged, deeply*


scored by knife use, or cracking, splintering, or fuzzy.

If you are old-school like me and love wooden spoons for cooking soups and risotto, a big solid butcher's block for your cutting board, and wooden benches for baking, fear not! Wood utensils are just as safe as any synthetic material, and some experiments have even shown wood to be safer than plastic. You must be committed to washing and sanitizing these items by hand, avoiding high-temp dishwashing (not because it is unsafe, it'll just destroy wood in the long run) and always air dry after sanitizing. Wood can be sanded when it gets raggedy, won't scratch your pans, and it floats! Just don't leave it (or anything, please) over an open flame.

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FOCUS ON THE FACTS

If we learn anything from these common cooking myths, it is not to automatically believe everything we are told. There are far more myths in cooking than I could fit in this article, so sometimes it pays to be a rebel with an Internet connection. Modern chefs have totally free access to information, recipes, research, and instruction that the chefs of yesteryear could only dream of. Be careful, do your research, and take nothing for granted. 



REFERENCES

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CE QUESTIONS | CULINARY CONNECTION



This Level I article assumes that the reader has introductory knowledge of the topic. The desired outcome is to ensure a basic understanding and explanation of the concepts of the subject matter and recalling of related facts.

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1. Wooden cutting boards and utensils are:
 - A. Illegal in commercial kitchens
 - B. Just as safe as synthetic options
 - C. Safest when cracked, splintered, or fuzzy
2. When cooking with alcohol, chefs:
 - A. Should be aware that the dish still contains alcohol if cooked for a short time
 - B. Should use extreme caution because alcohol is flammable
 - C. Both A and B
3. When you salt your pasta water:
 - A. It makes the water boil faster
 - B. It flavors the pasta
 - C. It decreases the mass of the water
4. Fresh veggies might not be the healthiest option for everyone because:
 - A. They may result in fewer servings of veggies being eaten due to spoilage or prep time
 - B. Vegetables have dirt on them
 - C. The photosynthetic cells may cause quantum vibrations in the flux capacitor
5. Seared meats:
 - A. Will have a better aroma, appearance, and flavor
 - B. Both A and C
 - C. Will not retain their juices any better than unseared meats
6. An interest in the science of cooking has led to:
 - A. Debunking some of the myths in traditional cooking
 - B. More free information than ever available to the modern chef
 - C. Both A and B
7. Oil in the pasta water:
 - A. Floats on the top and has very little contact with the pasta
 - B. Keeps the pasta from sticking to the pot
 - C. Keeps the pasta from sticking to itself



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