

## Mayonnaise is NOT the Culprit

Summer's here, in case you hadn't noticed! The calendar says so, officially, even though it felt like summer for some time before the calendar said so. Thank goodness it is raining, the way it is supposed to in summer!

If you are planning any summer outings, to the beach, to the parks, plan on taking along your food safety good sense along with the good food. As with all other aspects of our ever-changing world, food safety recommendations change too. The more we think about safe food handling, the more we study it. The more we study food and the bacteria that make us sick, the more surprises we find. Several of our old standard recommendations have changed in recent years.

Do you remember the advice to never take a salad that had mayonnaise along on picnics? To never leave a salad with mayonnaise out, because the mayonnaise would make it spoil faster? Well, the news is that, while the salad may still spoil, the mayonnaise is not the culprit! Actually, mayonnaise is the good guy in the story.

Studies actually found that, comparing salads dressed with and without the mayo, the salads without the mayonnaise spoiled faster. It does make sense, if you think about what mayo is made of. Plain simple mayonnaise is made from oil and acid, as in lemon juice or vinegar, with salt for seasoning, and an egg yolk to hold it all together. Bacteria, specially the ones that make us sick, don't grow well in oil. They don't grow in acid or acidic foods like lemon juice. They don't grow in salt. So, putting oil, acid and salt on something will slow or stop the growth of bacteria, not make it spoil faster.

How did the idea that using mayonnaise was bad get started? A lot of salads that use mayo do spoil. But, the problem is not the mayo. The problem is how we handle all the other ingredients in the most common summer salads. Take potato salad for example. The basic ingredients are boiled, diced potatoes, boiled diced eggs, chopped onion and celery, mayonnaise and mustard, plus whatever seasonings you prefer, such as celery seed, salt, and pepper.

The more you cut and dice something, the more surface area there is and the more chance there is for bacteria to grow. Most people will hold the potato and egg in their hand as they chop it. Some will put it on a cutting board. But, our hands carry bacteria, the knife carries bacteria, the cutting board carries bacteria. So, every pass of the knife through the food carries bacteria into the food. The more chopping there is, the more bacteria there are, and the more open surface for the bacteria to grow on. And the bacteria will grow.

Salads containing large amounts of proteins, for example tuna, chicken or ham, are even more problematic. The protein is excellent food for bacteria, and many of the bacteria that make us sick prefer foods high in protein.

If the salad is kept cold enough, the bacteria will grow very slowly if at all. By putting mayonnaise on the salad, the oil, acid and salt will all help to slow that growth. But, if the bowl of salad sits on a table and warms up, and because potatoes and eggs are such good foods, eventually the bacteria will override the inhibition of the oil and acid and start to grow. That's when we get sick.

So, feel free to use your mayonnaise in salads. Just remember to keep it good and cold. That way it will stay good and safe.

Another recent change is in the recommendations about how to safely cook and store eggs. High heat will make eggs tough, so you don't want to *boil* them, just hard cook them. And so that they will peel easily, most people want to cool them rapidly in cold water. The old, easy recommendation to hard cook eggs was to bring the eggs and water to a boil, turn off the heat and let the water cool slowly, or to boil them for 10 min. then put them in cold water to cool rapidly.

That seemed fine, until there was an outbreak of food poisoning traced to boiled eggs. What happened? There may be bacteria on the egg shell, there may be bacteria or bacterial spores (spores are similar to very resistant seeds), in the water. There aren't enough to make us sick there in the water, and they won't grow by themselves in the water. But the inside of the egg contracts while it is cooling. The studies finally showed that, if the egg cools in water that has bacteria or spores in it, those bacteria or spores in the water can actually be pulled into the egg through the pores in the shell. Once they are inside the egg, they will grow. When you eat the egg, they will either grow in you, or give you the toxins they produced while they were growing inside the egg. Either way, the end result is that you get sick.

So, what's the new, safe way to make hard-cooked eggs? Put the eggs and water in the pan, heat until it starts to boil. When it starts to boil, turn down the heat to a simmer, just enough to keep the water still bubbling a little bit. Simmer the eggs for 10-15 minutes. Add 2 minutes if they were refrigerator cold when you put them in the water. If you are going to use the eggs *immediately*, not store them at all, then you can put them in cold water to cool. But if there is any chance that they will sit for more than an hour in their shells, do not put them in cold water. Put them, dry, directly into the refrigerator to cool.

Cooling them rapidly in water or in the refrigerator will not make much difference in how easily they peel. A fresh egg will be difficult to peel, and older egg will peel much more easily. An egg that you buy today in the grocery may have only been laid yesterday by the hen on the farm. So, if you know you want pretty peeled eggs for deviled eggs for the picnic, plan to buy them in advance.

Cooking them too long, or leaving the heat high, so the water stays at a full rolling boil, can make the inside of the egg turn green. That is not dangerous. It just means that some of the protein started to break down. You can safely eat those eggs.

A cooked egg will not keep as long as a fresh egg, even in the refrigerator. Once the egg is cooked, you must keep it cold, either in the refrigerator or on ice in a cooler. If you want to have deviled eggs on the picnic, the safest thing to do is make them there. Take the hard-cooked eggs, the mayo and mustard, and mix it on the spot. You could mix the mayo, mustard, your salt, pepper and spices in a zipper-lock plastic bag. At the park, just before lunch time peel the eggs. Cut them in half, drop the egg yolks into the plastic bag, seal it and knead it with your hands until it is smooth and mixed. Snip a corner off the bag and squeeze the filling into the egg white halves. Ready to eat, and you didn't even get your fingers dirty! And you know you are giving your family safe eggs.

### Keep it Safe

Some standard safe food handling tips have not changed. Remember to: Keep it hot, keep it cold, keep it clean, and keep it separate. Hot foods must stay hot, and cold foods must stay cold. Those middle temperatures, from "slightly cool" up to "sort of warm", anything room temperature, are the right temperatures to let bacteria grow. In good food and at a good

temperature, bacteria can double their numbers every 20 minutes! Plan ahead for filling the cooler. Put everything in the refrigerator, or even better, put whatever can be frozen into the freezer ahead of time. Cold food going into the cooler will stay cold longer than warm food going into the cooler.

After the meal, take care of leftovers immediately. Try to plan ahead so that you don't have leftovers to worry about. If things have only been on the table a short time, and you still have plenty of ice in the cooler, leftovers can be recooled. But, if the ice is all melted, or if the food has been sitting out for a hour or so, the safe thing to do is throw all the leftovers away.

Take plenty of paper towels for cleaning up. If you don't want to take soap and water, there are now pump-bottles of alcohol in a gel form, for sanitizing hands.

Double-bag the burgers, hot dogs or chicken. Don't let any juice from raw meat get onto the other food or utensils. If you plan to put the meat out on a plate before you cook it, pack two plates, one for the raw meats and another for the cooked meat.

Some of this probably sounds like more hassle than you want to deal with, specially on your day off at the beach. But look at it this way. Food poisoning is no fun. It's much more common than most people realize, and it is avoidable. Why spoil a beautiful day at the beach by ending it with a bad night in the bathroom?

#### New Food, Nutrition and Health Agent

Hello! I would like to introduce myself to you. My name is Mary Keith, and I am the new Food, Nutrition and Health Extension Agent for Hillsborough County.

For the last six and a half years I have been working for WIC, first as a Nutrition Educator and then Public Health Nutritionist. I worked for four years in the Ruskin office, then two and a half years at the Sulphur Springs clinic. Prior to that I managed a residence hall in Gainesville, FL for several years, and worked in Kenya, East Africa for a year. In Kenya I was working with a mission group as a Nutritionist at a hospital in western Kenya. Before that I was the State Extension Specialist for Food Preservation and Food Safety in Illinois for six years. I also spent five years in the Peace Corps, organizing girls' clubs and teaching Home Economics in Paraguay, South America. I speak fluent Spanish.

I studied Secondary Education as a undergraduate at Penn State University before I went to Paraguay. When I returned from there, I went back to Penn State and studied Food Science. I received both my Master and Ph.D. degrees from Penn State. I studied Nutrition as my minor subject. Several years ago I passed the Florida state exam and am now a Licensed Dietitian/Nutritionist in this state.

I enjoy writing and teaching. If you have questions or suggestions for topics of interest to you for this page, please contact me at the Extension Office, or call me at 744-5519, ext. 136.