

## How Long Is Too Long?-Reflections on The Five Second Rule

November 4, 2016

The other day I was in my office snacking on peanut M and Ms while trying to finish writing some of my notes. Much to chagrin, while my eyes were on the computer screen I accidentally knocked one of the M and Ms out of the bag, off my desk, and onto the floor beneath my desk.

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The other day I was in my office snacking on peanut M and Ms while trying to finish writing some of my notes. Much to chagrin, while my eyes were on the computer screen I accidentally knocked one of the M and Ms out of the bag, off my desk, and onto the floor beneath my desk. I quickly picked it up but then had to confront that age old conundrum: is food that has fallen to the floor for only a second or two safe to eat? And, if the food is no longer safe, just how unsafe is it?

Just to give some background to my situation, my office floor has a carpet that is infrequently vacuumed. Because I frequently eat at my desk, I periodically clean the surface. However, I do not actually prepare food at my desk. I think that the decreased exposure to infectious organisms in our population may be one reason why we have so much allergy. And finally, I am an infectious disease physician and I really, really like peanut M and Ms.

As reported in *The New York Times*, many others have wrestled with this question and the topic has been frequently researched. Most recently, investigators inoculated carpet, ceramic tile, stainless steel, and wood with a bacterium similar to *Salmonella*. They then dropped cut watermelon, bread, buttered bread and strawberry gummy candy from a height of five inches onto each surface. They then measured colony counts on the food after leaving the food on the surface for one, five, 30, and 300 seconds. After more than 2500 individual measurements, the researchers concluded that bacteria colonize food almost instantly. Even if only exposed for one second, all food groups were colonized.

However, different food groups and surfaces led to very different results. Bacteria from stainless steel and tile transferred easily to food while those on carpet did not. Wetter foods such as watermelon and buttered toast were much more easily colonized than firmer food such as gummy candy. In many ways, this seems pretty apparent. Have you ever looked at a piece of toast with jam or butter carefully after it has fallen to the floor? Ugh. That should immediately be discarded. However, a piece of candy with a hard, slippery shell seems a slightly different story. As for me and my M and M, I did not have to deliberate long. After a quick swipe, I popped it into my mouth and fortunately survived to write this blog

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