

Cross-Contamination: Something to Think About

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Sadly, most of us have probably had the misfortune to have experienced some discomfort attributable to “something we ate”. It is also a reasonably safe bet that we have seen stories in the news about products being recalled due to problems in the processing chain that have led to contaminated food being released for sale to the consumer. Many of these problems can be traced back to “cross-contamination”.

The unseen world around us is full of microorganisms - some of which are highly beneficial, while others are potentially dangerous. Even surfaces which we feel are clean may be teeming with these tiny life-forms.

Let's consider a purely hypothetical food processing facility where raw materials are brought into the plant to undergo a sequence of preparation steps. For fruits and vegetables, this could include washing and rinsing steps to thoroughly clean the surfaces prior to peeling, slicing, and packaging. For meat products, the process is more complicated, but the objective would still be the same - to have the carcasses cleaned and ready for further processing steps. In most processing facilities, there are physical barriers to prevent the spread of microorganisms from the “raw material side” into the “clean side” of the plant.

In an ideal world, the “raw material side” of all processing facilities would be totally isolated from the “clean side”. However, this is not always the case in practice. Although steps are taken to prevent it, workers from the “raw material side” could absent-mindedly wander into the “clean side” of the facility, bringing harmful microorganisms with them on their boots and clothing. Equipment intended for raw material handling could find its way into the finished product area without undergoing the proper sanitation. Even ventilation systems could combine air from the two sides of the facility and spread these undesirable microorganisms. As a result, product that was previously acceptable for human consumption may become contaminated through the process of “cross-contamination”.

All this may seem to be a million miles away from us as we sit in the comfort of our own homes. However, “cross-contamination” is closer than you may think. While we should not become alarmists, we should always exercise a proper degree of caution in how we handle our food. If we take a closer look, many of us would be amazed at just how careless we can be when it comes to the food we eat. I touched on this subject a few years ago in an article about Christmas and Thanksgiving turkeys, but perhaps a gentle reminder would be in order with regard to other events in the home.

When barbecuing, the raw meat is often taken from the kitchen to the grill on a plate. Any microorganisms on the meat are instantly transferred to the surface of the plate.

Once properly cooked, with the juices running clear and the internal temperatures at or above the recommended level, the meat should be safe to eat. However, placing the cooked meat back on the same plate that was used to carry the raw meat can re-contaminate the surface of the meat. The simple solution to this is to put the plate used for the raw meat in the dishwasher and use a clean plate for the cooked meat.

Another common source of cross-contamination is using the same dishcloth or sponge that was used to clean up spills from the raw meat to wipe down other work surfaces. This merely spreads the problem to the rest of the kitchen or food preparation area and creates a bigger problem in the process. Using disposable wipers for clean-ups and a disinfecting rinse of chlorine bleach will go a long way to reducing cross-contamination. The same can be said for the proper cleaning of kitchen utensils before using them for other food preparation tasks. We don't want lingering traces or deposits of food from one activity to be carried forward to the next thing we do in the kitchen

While the scenarios described above represent possible ways in which foods can become cross-contaminated, the ten most common culprits are our fingers and thumbs. We are continuously handling food and moving it from one location to another. After handling uncooked meat, we should thoroughly wash our hands with soap and warm water before moving on to the next task. Failure to observe this most simple step can have very undesirable consequences.

Proper food handling is a huge topic that is so important in ensuring our health and well-being. It is virtually impossible to cover all aspects of it within the limits of an article such as this. The main message to take away from all this is to exercise caution and to be mindful of the potential spread of microorganisms in all aspects of food preparation.