

Food Safety is Food Science

Most people are aware that there are “rules” of food safety, and that the health department has the authority to audit restaurants to check for adherence to these rules, but where do the rules come from? Every two years there is a conference of food protection. The conference brings regulators, food industry and public representatives together to review the previous model food code and make updates as warranted by science. The science is the result of many studies being conducted at universities across the world. Once the changes have been made, the group publishes the new model food code in the odd numbered year. From there the states take the model code and decide which parts to adopt. While the Food and Drug Administration is the regulatory agency behind the code, it is still a model and not the law of the land.

The food code has had some major changes over the past 10 years as the result of outbreaks. Prior to the 1999 food code, it was acceptable for food workers to prepare food using bare hand contact as long as the hands were clean and had not been contaminated. Hepatitis A outbreaks began to occur. This illness can be spread when infected food workers handle ready-to-eat foods, but these workers may not show any symptoms. So the food code was changed to add protection and prohibit bare hand contact with ready-to-eat foods. Many states chose not to adopt this part of the code and still allow bare hand contact. However, Missouri choose to adopt the FDA recommendation, and make it unacceptable, as of July 2001, for food service employees to touch ready-to-eat foods with bare hands.

The 1999 Missouri Food Code also lowered the refrigeration temperature requirements from 45°F to 41°F or less. Studies had shown the bacteria *Listeria monocytogenes* grew quite well at 45°F. Lowering the temperature by four degrees may not seem like a big change, but it can make a big difference in bacterial growth curves. The temperature difference was also a big deal to the refrigeration industry who protested that many refrigeration units were not designed to hold at 41°F or less, especially the large costly units at the retail level. It was decided that only new establishments would have to comply with the new temperature requirements, however, the trade-off was that units holding food between 41°F to 45°F would only be allowed to keep ready-to-eat foods for four days, while those meeting the new 41°F or less temperature could keep those same foods for seven days. Replacement refrigerators would have to meet the new requirement.

Missouri currently uses the 1999 food code, but is in the process of adopting the 2005-07 code with alterations. Hopefully in the next year this new code will go into effect, utilizing the latest science to support the requirements of the code and better protect Missouri residents.

For more information on food science, contact the Springfield-Greene County Health Department at 417-874-1424.