

Kitchen Violations: Doing the Right Thing at Home



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A recently conducted survey of 1,000 Canadians, ≥ 18 -years-of-age revealed that 40% to 50% of Canadians lack the basic knowledge regarding food hygiene and food handling practices. The points of concern were:

- Lack of hand hygiene
- Cross-contamination
- Temperature abuse
- Improper sanitation

The reason that these are significant issues is that they all can increase the probability of foodborne illness in the home. As the majority of foodborne illnesses occur in homes rather than in restaurants, it was recognized that there is a need to educate Canadians on this subject. By undertaking a variety of swab samples from kitchens, the results indicated that pathogens, such as *Staphylococcus aureus* and *Escherichia coli*, have been demonstrated as the most frequently isolated microorganisms from kitchen surfaces. These microorganisms can possibly illicit foodborne illnesses.

Handwashing is the most important measure to prevent the spread of disease-causing organisms and reduce the risk of foodborne illnesses in the home and elsewhere.

Lack of hand hygiene and cross-contamination

The most noted and recurring deficiency resonates upon a severe lack of handwashing, the most important measure to prevent the spread of disease-causing organisms and reduce the risk of foodborne illnesses in the home and elsewhere. Effective handwashing involves rubbing all parts of the hands for 20 seconds; however, this is rarely observed. Pets which are often allowed in the kitchen during food preparation presents a major concern for cross-contamination, especially when hands are not being washed. Cross-contamination refers to the transference of harmful microorganisms from one area to another through physical action. It is imperative to educate the populace that without proper handwashing, one may become more prone to foodborne illness.

Temperature abuse

Temperature abuse, one of the leading causes of foodborne outbreaks, occurs frequently in homes. Refrigerator temperatures that are often in the danger zone (between 4°C and 60°C) will enable bacteria to double every 20 minutes thereby increasing the probability of food poisoning. The refrigerator temperature must be set at $\leq 4^\circ\text{C}$ to slow bacterial growth and should be equipped with a thermometer for verification. It is important to note that at 4°C, bacteria do not die; they are still capable of growing. One important foodborne bacterium that thrives at refrigeration temperatures and is capable of

eliciting food poisoning is *Listeria monocytogenes*. It is for this reason that leftovers should not remain in the refrigerator for more than three days. Labelling leftovers with the date will assist in ensuring that leftovers are either consumed or discarded within three days.

It is important to educate families on safe internal cooking temperatures to reduce the potential of foodborne illness.

Probe thermometers, a tool one may employ to verify internal cooking temperatures of poultry and meat, must be utilized in the home. It is important to educate families on safe internal cooking temperatures to reduce the potential of foodborne illness. One must pay particular attention during the holiday season where larger gatherings are common and high-risk foods are prepared. Pamphlets on food safety may serve as an effective vehicle to educate and inform the public at home.

Improper sanitation

The most astounding microbiological results can be found on the ordinary household dishcloth. The heterotrophic plate counts enumerated from a number of dishcloths were consistently in the millions per gram. Heterotrophic bacteria are naturally-occurring bacteria that

may consist of organisms which are pathogenic in nature. These heterotrophic bacteria are capable of being transferred to virtually any surface throughout the kitchen, in particular on plates where food will be served. In one instance the bacterium *S. aureus*, a well-known pathogenic organism that elicits foodborne illness, was isolated in such numbers that would potentially cause illness. Fecal coliform bacteria including *E. coli* were isolated in high numbers as well, indicating the presence of fecal contamination in the kitchen. While yeast and mould counts were also enumerated, such counts are not necessarily a concern for foodborne illness, but rather, a concern for food spoilage. Dishcloths must be changed on a daily basis to reduce the number of microorganisms throughout the kitchen as these cloths are commonly used to wipe down everything but the kitchen sink.

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Educating the public on food safety issues and how to prevent foodborne illness in the home is of paramount importance. Using vehicles, such as television, radio and public education to relay messages on food safety will hopefully reduce the incidence of foodborne illness.

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