Section 1 - Recognizing Risk

Click on a title to go directly to that page.

Why Practice Food Safety  6
Foodborne Illness: Risks & symptoms  7
Underlying Causes of Foodborne Illness  8
FAT TOM: What You Need to Know  9
Risk Levels of Different Foods  10
Common Food Handling Mistakes  11
Clean, Separate, Cook & Chill  12
References & More Info  13-14
In business, reputation is everything. A reputation for food safety demonstrates that you care about the quality of your product and the health of your customers.

Consumers care about food safety. A poll conducted by Ipsos Reid in 2010 showed that 77% of Canadians are concerned about the safety of the food they eat.

**Food-safe practices:**

- Create a positive impression that builds customer loyalty, gains referrals and earns repeat business

- Attract new business; consumers will shop at a clean market stall over a messy one

- Contribute to business longevity and the bottom line

- Give your business a marketing advantage, so long as you do what you claim to do

- Protect the health and livelihood of all workers who handle food

Handling food safely also reflects on the reputation of your local farmers’ market,* and ensures that the doors to direct marketing remain open.

The alternative to handling food safely exposes your business – and potentially the entire farmers’ market – to the risk of shutdown for whatever length of time the health inspector deems appropriate.

---

* The term “farmers’ market” refers to a seasonal, multi-vendor, community-driven (not private) organization selling agricultural, food, art and craft products including home-grown produce, home-made crafts and value-added products where the majority of vendors are primary producers (including preserves, baked goods, meat, fish, dairy products, etc). A farmers’ market has a legal obligation to enforce food safety measures.
What You Need To Know
Foodborne Illness

Typically only a small percentage of all incidents are reported.

Usually people fall sick within a day or two of eating contaminated food, but symptoms can appear hours or even weeks later.

Symptoms are usually flu-like and may include fever, nausea, vomiting, diarrhea and stomach cramps.

In severe cases, foodborne illness can have a long-term impact on someone’s health, and occasionally, causes death.

People most vulnerable to food borne illness include the elderly, children, those already in poor health and pregnant women.

Public health experts estimate that there are 11 to 13 million cases of foodborne illness in Canada every year.
There are essentially three types of hazards that cause foodborne illness: physical, chemical and biological.

1. **Physical hazards**
   Hair, fingernails, wood splinters and metal fragments generate the most complaints as they are the most visible contaminants. Improper hygiene, handling and packaging makes food vulnerable to physical hazards.

2. **Chemical hazards**
   Additives, allergens, pesticides, drug residue, toxins, metals and cleaning agents generally result from cross-contamination introduced during production, processing or marketing.

3. **Biological hazards**
   Fungi, moulds, yeast, worms, viruses and bacteria are microorganisms that present the greatest health risk. Improper cooking, cooling and hygiene practices, along with untreated water, soil and feces are all contributing factors.

There are two main types to understand: spoilage and pathogenic, or pathogens which are the most treacherous.

**Bacteria are the most serious cause of biological food-borne illness.**

1. **Spoilage bacteria** are present when food breaks down, and cause it to smell, look and taste bad.

2. **Pathogens** are the bacteria most likely to cause illness or even death, and you can not see, taste or smell their disease-causing presence.
FAT TOM is a term made up of initials representing the conditions favourable for pathogens—and decidedly unfavourable for food safety:

- **F** Food is the host that pathogens need to survive.
- **A** Acidity or alkalinity of food.*
- **T** Time is of the essence. The number of pathogens doubles every 15–20 minutes.
- **T** Temperature matters. Temperatures of 4°C/40°F to 60°C/140°F favour pathogen growth. That’s the “danger zone”.
- **O** Oxygen: Its presence or absence affects bacterial growth. (Most foodborne pathogens need oxygen to survive; botulism, however, doesn’t.)
- **M** Moisture encourages the growth of pathogens; dryness discourages it.

*Alkaline pH levels of 4.6 and up favour the growth of pathogens. Acidic pH levels of 4.5 and less discourage their growth.

If FAT TOM were a person, he’d be a sneaky master criminal who steals into your kitchen, pantry or workplace, ruins your food and spreads foodborne illness, undetected.

Understanding how FAT TOM works underhandedly to ruin your food allows you to take precautionary measures and implement safe practices.
Food Safety Matters

What You Need To Know

Risk Levels of Different Foods

All foods are not created equal when it comes to foodborne illness. Foods that are better hosts to bacteria are considered high-risk, or potentially hazardous.

**Risk Levels of Different Foods**

**Lower-risk foods**
- Breads, buns and most baked goods
- Fresh fruits and vegetables
- Pickles and vinegars
- Candies
- Jams, jellies and preserves
- Syrups, honey

**High-risk foods**
- Meat or meat products
- Fish and seafood
- Poultry
- Eggs
- Dairy (yogurt, butter, cream, milk, cheese or products that contain them, such as quiches and cream pies)

**Lower-risk foods**
- Meat or meat products
- Fish and seafood
- Poultry
- Eggs
- Dairy (yogurt, butter, cream, milk, cheese or products that contain them, such as quiches and cream pies)

All foods have the potential to carry foodborne illness if they are not properly handled or processed. Wash all fruits and vegetables under running water before preparing or serving.
Common Food Handling Mistakes

Most Common Mistakes

Poor personal hygiene, and in particular, poor hand washing practices are a common, yet easily rectified oversight when handling food.

Poor sanitation of equipment, utensils and food contact surfaces allows the transfer and growth of bacteria.

Poor temperature control is another common mistake—either by exposing food to the danger zone from 4°C/40°F to 60°C/140°F, or by incorrect cooking or reheating practices, or by using inappropriate thawing methods or chilling practices.
Remembering to clean, separate, cook and chill will help you perform the best practices associated with each, found throughout this guide.

These four principles are key to the prevention of foodborne illness:

1. **CLEAN** hands, surfaces, utensils and equipment often and thoroughly.

2. **SEPARATE** different types of food; keep raw meat and ready-to-eat foods separate; store similar foods together; use separate cutting boards & utensils for raw meats and produce.

3. **COOK** food to the correct temperature using a food probe thermometer for meats; keep hot foods hot, at 60°C/140°F or hotter until served; bring sauces, soups & gravies to a boil when reheating; heat leftovers to 74°C/165°F.

4. **CHILL** high-risk foods; keep cold foods cold; keep refrigerated food at 4°C/40°F or colder & frozen at -18°C/0°F or colder; for insulated coolers, use ice made from drinking water; defrost food in the fridge, under cold running water or in the microwave.

Reheat food served at market once only.
Food Safety – True or False?
Eat Right Ontario

Food Safety: Understanding Foodborne Illness
Eat Right Ontario

Food Safety Tips > Fact Sheets
Canadian Partnership for Consumer Food Safety Education

Bacterial Foodborne Illness in Canada: The Problem
Canadian Partnership for Consumer Food Safety Education

Safe Food Handling in the Home
Health Canada

Food Recall Alerts – High Risk

Causes of Foodborne Illness
Canadian Food Inspection Agency

Reminding Canadians of Potential Safety Concerns in Home Canning and Bottling

cont’d . . .
What Help Is Available

References & More Info cont’d

Marketing Food Safely: Farm Direct Advantage, Chapter 3: Bad Bugs
Alberta Farmers’ Market Association, 1-780-644-5377

Marketing Food Safely: Farm Direct Advantage, Chapter 5: Danger Zone Ahead
Alberta Farmers’ Market Association, 1-780-644-5377

MarketSafe Student Workbook 2010, Unit 1, The Causes of Foodborne Illness
Province of British Columbia, BC FOODSAFE Secretariat, Camosun College
FOODSAFE and MarketSafe Resources, 1-800-663-6105