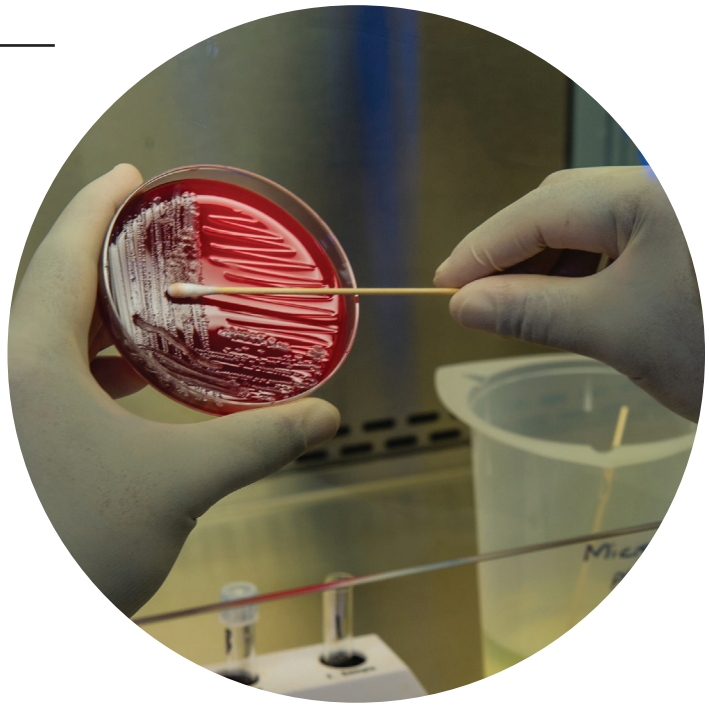
Food Poisoning and Food Pathogens

City of Ryde

CONTENTS

WHAT IS FOOD POISONING?



Food poisoning, also known as foodborne illness, is the result of eating contaminated, spoiled or toxic food.

Most food poisoning is caused by harmful micro-organisms (pathogens) getting into food.

The most common types of food poisoning are:

- Bacterial eg. Salmonella, Campylobacter, E.coli and Listeria
- Viral eg. Norovirus, Rotavirus and Hepatitis A
- Intoxication caused by the toxins produced by some bugs such as Staphylococcus aureus, Bacillus cereus and Clostridium perfringens.

The most common symptoms of food poisoning include nausea, vomiting and diarrhoea. In severe cases food poisoning may become life-threatening.

WHEN IT ISN'T FOOD POISONING

Harmful micro-organisms can be transferred from person-to-person with or without symptoms, or through contaminated surfaces. The symptoms they cause are the same as food poisoning even if food is not involved.

Some people have allergies and intolerances to specific foods or ingredients. These are not considered food poisoning.

Most foodborne illness have a typical incubation period (time between eating and onset of symptoms) of six hours to three days. Some food borne illness may not show symptoms for several weeks after consumption.

"I WAS SICK AFTER EATING SO IT MUST BE FOOD POISONING"

Sometimes gastrointestinal illness that was not caused by food is mistaken for food poisoning. While food can be the cause of gastrointestinal illness it is not the only cause:

- Contaminated water including swimming pools used by adults and children with very recent gastro illness can cause similar symptoms
- Viral illnesses are easily passed person-to-person are also a common cause and can be contracted from family, friends and contact with others that have had very recent gastro-type illness.

Good hand washing and personal hygiene can help reduce the risk of both person-to-person and foodborne spread of viral illness.

COMMON FOOD POISONING BACTERIA

MICRO-ORGANISM	TIME BETWEEN EATING AND ONSET OF SYMPTOMS	TYPICAL SYMPTOMS	TYPICAL FOODS*
Escherichia coli	2 – 10; days more commonly 3 – 4 days	Diarrhoea (often bloody), abdominal cramps	Improperly cooked beef, unpasteurised milk and juice, sprouts and contaminated water
Campylobacter	2 – 5 days	Fever, nausea, abdominal cramps and diarrhoea (sometimes bloody)	Raw and undercooked poultry, unpasteurised milk and contaminated water
Salmonella	6 – 72 hours; usually 12 – 36 hours	Headache, fever, abdominal cramps, diarrhoea, vomiting and nausea	Undercooked poultry, raw egg desserts and mayonnaise, sprouts, tahini

*The foods shown in the table have previously been found to be the source of the pathogens listed. This does not mean that these foods are always unsafe to eat, that such pathogens are always present, or that only these foods can carry the pathogen.

COMMON FOODS THAT CAUSE FOOD POISONING

Higher risk foods include:

- Undercooked mince and raw meat dishes
- Raw or undercooked poultry such as chicken, duck and turkey
- Raw or lightly cooked eggs including foods made from raw egg such as unpasteurised mayonnaise
- Small goods such as salami and hams
- Seafood
- Cooked rice not kept at correct temperatures
- Cooked pasta not kept at correct temperatures
- Prepared salads such as coleslaw, pasta salads and rice salads
- Prepared fruit salads
- Unpasteurised dairy products.

HOW DOES FOOD BECOME CONTAMINATED?

The micro-organisms or toxins may be present on foods because:

- The food type such as raw meat or fish which already contains bacteria
- They are transferred onto food by cross contamination from other foods, surfaces or people handling food
- Storing food in the temperature danger zone
- Cooking time and/or temperature did not destroy bacteria
- Cooling food for too long allowed bacteria to grow to harmful levels
- A food is past its “use-by” date indicated on the label.

WHAT CAUSES FOOD POISONING?

Food poisoning can be caused by eating contaminated food, allowing micro-organisms to grow on food.

Food can cause food poisoning by:

- Not cooking food thoroughly
- Not storing food that needs to be chilled below 5°C
- Someone who is ill or has poor hand hygiene handling the food
- Eating food after a ‘use-by’ date
- Cross contamination, where micro-organisms are spread between food, surfaces, utensils and equipment.

WHAT HAPPENS WHEN I MAKE A FOOD BORNE ILLNESS COMPLAINT?

An Environmental Health Officer will contact you to obtain more information. This will include:

- A description of the problem
- A description of the food type or product name and if packaged, date on the package
- The time, date and place where the food was consumed
- The time and date the illness began, symptoms and their severity
- Obtaining information about other people who consumed the food
- Requesting a medical report from your doctor or hospital
- Find out more about your medical history, occupation and places you have visited recently
- Requesting more information about other food you have eaten recently.

WHAT WILL COUNCIL DO IF A FOOD BORNE ILLNESS COMPLAINT IS SUBMITTED?

An Environmental Health Officer will conduct an inspection at the food business and will review the entire food handling process and the skills and knowledge of food handlers. This will include:

- Assessing the food types produced and ingredients of the alleged contaminated food
- Checking how food and ingredients are received, stored and prepared
- Reviewing that food and ingredients are stored under correct temperature control and how long food is not under temperature control during preparation
- Checking that food is cooked thoroughly to the appropriate time and temperature
- Assessing that all food contact surfaces, utensils and equipment used in the preparation of food are properly cleaned and sanitised
- Checking that food handlers effectively and regularly wash their hands before handling food
- Making sure that food handlers are not working or handling food if they are sick
- Looking for any evidence that the food may have become contaminated by pests or other means
- Conducting a skills and knowledge assessment of food handlers and staff at the business.

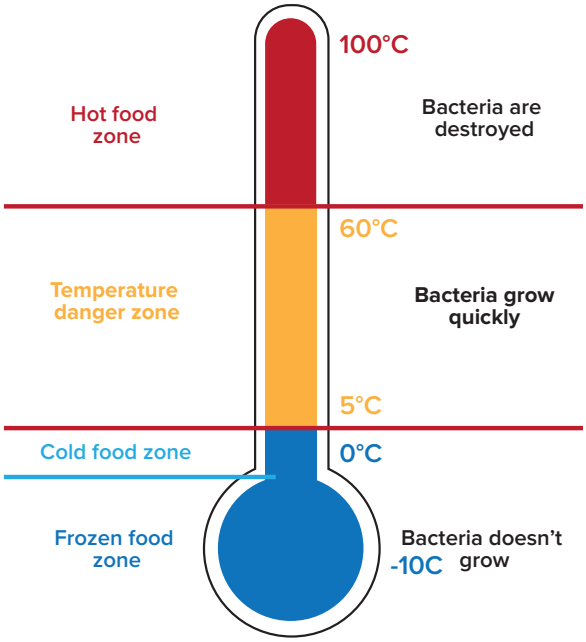
HOW TO CONTROL MICROBIAL GROWTH IN FOOD

We can control micro-organism growth in potentially hazardous food by:

- Controlling the temperature of the food
- Controlling the time the food is kept at room temperature
- Controlling the acidity or pH of the food
- Controlling the oxygen levels of the food
- Controlling the moisture content of the food
- Taking all practical steps necessary to prevent the food from becoming contaminated.

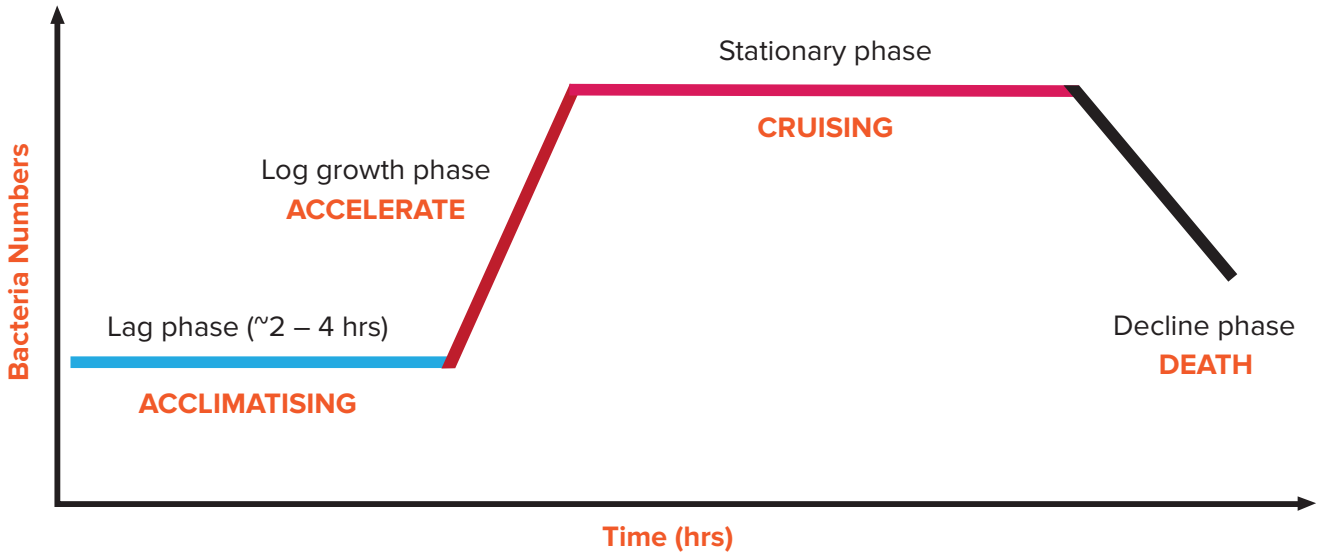
TEMPERATURE: CONTROLLING MICROBIAL GROWTH

- Most foodborne pathogens grow between 5°C to 60°C. This is the **temperature danger zone**
- Most foodborne pathogens grow best at room and body temperature
- Most foodborne pathogens are killed at temperatures above 60°C and can't grow at temperatures below 5°C.



TIME: CONTROLLING MICROBIAL GROWTH

Preparing food may require that food is in the temperature danger zone. When potentially hazardous food is in the temperature danger zone bad bacteria can grow.



TIME: 4-HOUR / 2-HOUR RULE – CONTROLLING MICROBIAL GROWTH

What is the 4-hour / 2-hour rule?

Studies show that food can be safely held out of temperature control for short periods of time without significantly increasing the risk of food poisoning.

The time that food can be safely held in the **temperature danger zone,** which is between 5°C to 60°C is referred to as the 4-hour / 2-hour rule.

The 4-hour / 2-hour must be followed when food is received, stored and prepared.

ACIDITY OR PH: CONTROLLING MICROBIAL GROWTH

Most bacteria require neutral conditions for optimal growth, i.e pH 6.6 – 7.5

- Most cannot grow at pH less than 4.6

To prevent growth of harmful bacteria, the NSW Food Authority has provided guidelines that require food retailers to acidify high risk foods.

For example: Raw egg products are required to be acidified to a pH of 4.2. The nutrients in the raw egg product provide resources for harmful bacteria to grow. Therefore to stop the growth of harmful bacteria, retailers must reduce the pH level of the raw egg product by adding ingredients such as vinegar or lemon juice.

Preventing contamination

- Food Storage
- Food handling
- Effective hand washing facilities
- Personal Hygiene
- Cleaning and Sanitising

FOOD STORAGE

- Make sure foods are covered and protected from contamination risk during storage
- Store raw foods such as raw meat and seafood on the bottom shelf and ready-to-eat food above raw foods
- Do not store food directly on floor
- Do not overstock cool room
- Do not try to cool large volumes of food all at once. Portion foods into smaller volumes for rapid cooling.

FOOD HANDLING

- Separate utensils and equipment for raw foods vs ready-to-eat foods
- Sanitise utensils and food processing equipment effectively after use
- Minimise unnecessary contact with ready-to-eat food and changing disposable gloves between tasks and discarding after use.

EFFECTIVE HAND WASHING FACILITIES

- Easily accessible for food handlers to routinely wash hands
- Hand basins have warm running water, soap and paper towel
- Hands washed after changing activity or touching money, hair, face or immediately after the toilet.

PERSONAL HYGIENE

- Sick or ill staff must stay home
- Washing of hands routinely and between activities or returning to work after a break
- Do not eat, drink or smoke when in the kitchen or handling food
- Change food handling gloves regularly and after handling raw foods.

CLEANING AND SANITISING

Cleaning and sanitising are separate procedures.

Cleaning: A process that removes visible contamination such as food waste, dirt and grease from a surface, usually using water and detergent

Sanitising: A process that destroys micro-organisms, reducing the numbers present on a surface to a safe level

Note: You must apply a food grade chemical sanitiser, only after thorough cleaning. Cleaning is not enough to prevent foodborne illness.

Always follow the directions of the food grade sanitiser.

For more information or advice, please contact
City of Ryde's Environmental Health Team – **9952 8222**
Email – **cityofryde@ryde.nsw.gov.au**
Visit – **www.ryde.nsw.gov.au/FoodSafety**

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