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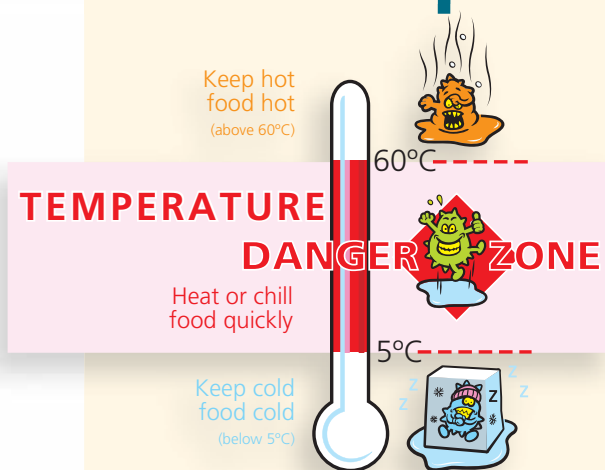
## WELCOME

### Welcome to summer!

Summer brings lots of great things for most people – holidays and warmer weather. But these very things can often mean extra work and stress for food businesses. In this issue we discuss how summer temperatures and large crowds can affect food businesses and offer some tips to help you manage food safely over summer; we look at how the potential influenza pandemic could affect your business and how you can start to prepare for that eventuality; we check out the results of a study into preservative use in New Zealand; and talk to Sally Hasell, the recently elected president of the NZ Institute of Food Science and Technology.

Have a merry and prosperous Christmas and New Year and keep the feedback coming in to: [4dCEditor@nzfsa.govt.nz](mailto:4dCEditor@nzfsa.govt.nz)

# Time / Temperature abuse



The temperature danger zone is the temperature range between 5 and 60°C. Within this temperature range, bacteria grow quickly and the more bacteria that are present, the more quickly food degrades and the more likely it is to cause a foodborne illness. Warmer temperatures mean that food will remain safe for **shorter** periods at these temperatures.

The term 'risky food' describes those foods that have the potential to cause a foodborne illness, including:

- cooked meats and food containing meat, such as sliced deli meats, smoked meat, poultry or fish, pate, casseroles, curries, lasagne and meat pies
- dairy products and foods containing dairy products, such as milk, cream, custard, baked goods containing cream or custard, soft cheeses, and dairy-based desserts
- seafood (excluding live seafood) and food containing seafood, such as seafood salad, fish cakes, cooked fish or shellfish
- prepared fruits and vegetables, such as prepared salads, cooked vegetables, cut melon, sprouted seeds and ready-to-eat fruit packs
- cooked rice, pasta dishes and fresh pasta
- cooked or processed foods containing eggs, beans, or other protein-rich food, such as soya bean products, eg quiche, hard-boiled eggs, soy milk, bean curd or fresh bean noodles
- gravies and sauces
- foods that contain any of the above, such as sandwiches and salads.

With the onset of warmer weather, food business operators need to be especially vigilant to protect the safety of risky ready-to-eat food products by ensuring that they are not held within the 'temperature danger zone' for any longer than absolutely necessary.

Summer presents several extra challenges for food businesses – people eating out on holiday place higher demands on food businesses that, in turn, need to hold more supplies so putting pressure on storage equipment and systems.

Here are some tips to help you manage food more safely over summer:

- Consider buying in food more regularly over the summer months, rather than receiving large deliveries and overloading storage facilities. Don't overload your fridge – make sure food has space around it for air to circulate. Overloading fridges reduces their efficiency and ability to keep food adequately chilled.
- Ensure you have a good stock rotation system in place. How do you know how long those sandwiches have been on display at room temperature?
- Make sure cleaning routines are in place, are adequate and are followed. Areas that need special attention over the summer months include ice cream scoop water (change hourly); milkshake mixers (clean every two hours); food preparation areas and utensils (clean and sanitise as you go) etc.
- Reduce the temperature of freshly cooked food that is not for immediate consumption as quickly as possible. This can be done by: spreading food onto clean, open trays; slicing up large pieces of meat; and by stirring soups and casseroles regularly. Put the food into the fridge as soon as it stops steaming.

**Remember that improperly stored or handled foods cannot be made safe by reheating because some bacteria produce toxins that are resistant to heat. If in doubt, throw it out!**

## Preservative levels in New Zealand foods are safe

In a recent survey the New Zealand Food Safety Authority found that New Zealand children consume safe levels of preservatives through their diet.

Preservatives are widely used to prolong the safety and quality of food by controlling the growth of spoilage organisms. Common forms of preservatives include; sulphites - used in foods such as sausages, hamburger patties, soft drinks, cordials and dried apricots; benzoates - used in soft drinks; and sorbates - widely used in products such as baked goods, drinks and spreads.

The survey's findings will be considered alongside the results from the 21st Australian Total Diet Survey which also reviewed the use of sulphites, benzoates and sorbates. The Australian review was done in response to evidence that some consumers (mainly children) could be exceeding the recommended acceptable daily intakes (ADI) of these preservatives.

It is important to note that young children are more likely to exceed the ADI than adults due to their higher consumption of food per kilogram of body weight. (NB. ADIs are set at a level that includes a safety buffer of at least 100 times lower than the observed safe level and are calculated over a lifetime of daily exposure.) While children may exceed the ADI for a few years, this drops as their bodyweight increases. Very few individuals are likely to exceed the ADI every day for life.

However, both surveys found that, for the majority of the people in the age groups evaluated, there is no public health and safety risk from eating a balanced diet that includes foods prepared using sulphites, benzoates and sorbates. New Zealand's results were generally lower compared with most international estimates.

Sausages were found to be the main food contributing to estimated sulphite dietary exposure for New Zealanders aged 5-15 years, with smaller contributions from soft drinks, hamburger patties, cordial and dried apricots. Estimated benzoate dietary exposure is almost solely due to soft drink consumption. Estimates for intake of sorbates were well within the ADI.

As a result of the survey, Food Standards Australia New Zealand is reviewing levels of sulphite and benzoate that are permitted to be added to foods (proposal P298). The review will include reconsidering the estimated intakes of preservatives and, if necessary, considering ways to reduce their consumption among those exceeding the ADI. A fact sheet and the initial assessment report for P298 can be viewed on FSANZ's website: [www.foodstandards.govt.nz](http://www.foodstandards.govt.nz)



## Pandemic planning for food businesses

Recent publicity surrounding avian influenza (bird flu) and a potential influenza pandemic is causing concern worldwide. There is no evidence to suggest the H5N1 bird flu virus can be easily transmitted from person to person, but experts are concerned that this may occur. There is also no evidence that any of the human cases have been acquired by people eating poultry products. Influenza viruses such as H5N1, like other foodborne illness pathogens, would be destroyed by cooking.

The Ministry of Economic Development strongly urges all businesses to be prepared for a possible pandemic by preparing a contingency plan. As a food business operator, you will face extra challenges to ensure staff and customers are protected from exposure to the virus as much as possible. Your plan should include the following:

- Identify essential functions (and the key people and skills you need to keep them running), and ensure that these are backed-up with alternative arrangements
- Mitigation of business disruptions, including possible shortages of supplies

- Minimise illness in workers and customers. You can expect that up to 50% of your staff will be away during the height of the pandemic. You should exclude any staff who show symptoms of the flu.

For more information about business planning, check out the Ministry of Economic Development's website at: [www.med.govt.nz](http://www.med.govt.nz). For more pandemic planning information see [www.moh.govt.nz/pandemicinfluenza](http://www.moh.govt.nz/pandemicinfluenza)

**For further information about the implications of the bird flu for the food industry, check out: [www.nzfsa.govt.nz/consumers/food-safety-topics/animal-diseases/bird-flu/index.htm](http://www.nzfsa.govt.nz/consumers/food-safety-topics/animal-diseases/bird-flu/index.htm)**

In a pandemic influenza situation, good hygiene practice measures will be even more important than usual:

Measure	How
Hand hygiene	Ensure everyone washes and dries their hands frequently, particularly before handling food and after coughing, sneezing or using tissues
Cough and sneeze etiquette	Ask people to use a tissue and cover their nose and mouth when coughing or sneezing and to wash their hands afterwards
Protective barriers, disposable surgical masks	In situations where regular work practice requires unavoidable relatively close contact with the public, consider installing protective barriers (eg perspex). People with respiratory infection symptoms should go home; staying at work increases the risk of infecting others, increasing absenteeism and perhaps affecting business continuity.

## Interview



Sally Hasell

**Sally Hasell** is the recently elected president of the New Zealand Institute of Food Science and Technology. Sally has a long history in many aspects of the food industry having worked as a consultant to a number of food processors, as a laboratory service provider with ESR, as a regulator with FSANZ and

NZFSA, in the dairy industry with Fonterra, and as a teacher at Christchurch Polytechnic. These days her focus is mostly on food regulation and the science that underpins science based regulation.

### What interests you about food science / food safety?

If you understand what makes food unsafe or unsuitable, and can communicate this to consumers, regulators and the industry, then they will understand what they need to do to produce safe food and to keep it safe. They become committed to getting it right because they understand why getting it right matters, whether we are talking about people's health, effective regulation or the profitability of a business. But you need to have the science right to get this commitment.

### How have you seen the profile of food safety change in your working career?

The biggest change has been the effect of the shift from food being commodities that are cooked, dried and canned and mostly locally produced to fresh, raw foods and a whole range of complex processed foods that are moist and chilled and may come from, or be processed, anywhere in the world. This has led to the emergence of a new

and different spectrum of pathogens, which creates numerous challenges for industry, regulators and consumers. The extent of the paradigm shift is not always appreciated and food safety strategies developed in the 1980s need rethinking to work in 2005.

### What is your current role in NZFSA?

Currently I am working with the Joint Food Standards team where I am involved with a variety of standard development issues such as the regulation of the rapidly expanding categories of functional and novel (new) foods. Today people eat foods that didn't exist 20 years ago and have expectation of foods that go far beyond satisfying hunger and these require a major rethink of food regulations. Linked to this is the particularly challenging area of looking at how risk analysis, that is used widely for assessing chemical and microbiological hazards, could be applied to the nutritional and functional aspects of food.

**And of course I am always available to talk about my passion; microbiology and food safety!**

## NZFSA Updates

### Foodsafe week

Foodsafe Week is held every year at the beginning of summer to educate consumers and food professionals about the things they can do to reduce the country's high levels of foodborne illness. Handwashing is the theme of this year's National Foodsafe Week promotion.

Stickers and posters with handwashing hints are available free from NZFSA or your local public health unit.

### Domestic Food Review

Good progress continues to be made on the DFR. In June 2005, Paper 6 - Compliance and Sanctions and Paper 7 - Criteria and Processes for Various Approvals were released for consultation. Thank you to the many of you that provided submissions on these documents.

A position paper describing the proposed way forward for New Zealand's domestic food regulatory regime is expected to be published for a final round of consultation in January. We will be on the road again, holding workshops to discuss the proposals in 11 cities, tentatively planned for late February 2006 (venues and dates to be confirmed). Following the consultation period and the analysis of submissions, recommendations will be put to Government. The Government will make their decision regarding the way forward and any legislative changes will be developed, followed by implementation, during late 2006 / early 2007.

### 2003 / 2004 Total Diet Survey

NZFSA has just completed the analysis of the latest 5-yearly comprehensive survey into what New Zealanders are getting in their diet. Foods, representing 75% of those most commonly consumed by the majority of New Zealanders, were sampled over a whole year and analysed for levels of environmental contaminants, residues and nutrients.

Key findings are that levels of contaminants (arsenic, cadmium, lead and mercury) and agricultural compound residues are mainly low and continuing to decline, while nutrient levels vary. Iodine levels for all age groups are low and of concern, iron also in low in some groups. Selenium levels are about right but sodium is too high for everyone. For the full results and analysis, check out NZFSA's website.

### Food Standards Code Corner

#### Did You Know?

Advertisements for food must not contain any statement, information, designs or representations that are prohibited by the Food Standards Code from being included on the label for that food.

# Tips for Christmas food safety

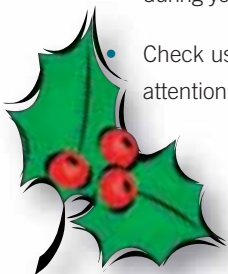
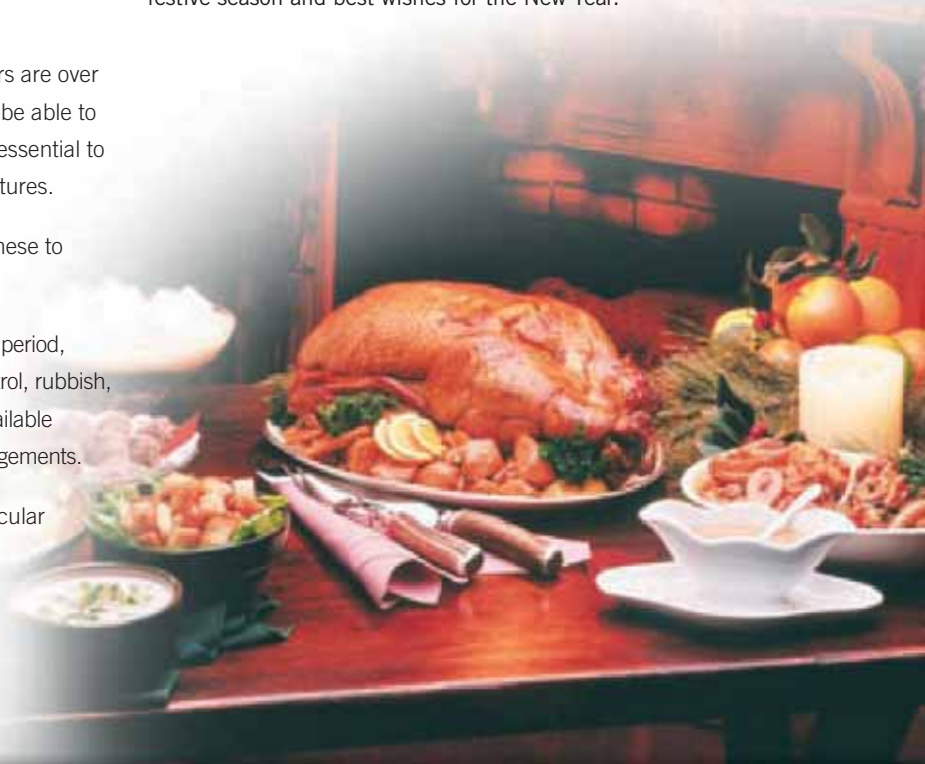


People celebrate Christmas and the summer holiday season by dining out more often than usual. That means commercial food premises have to cope with larger amounts of food than normal and take on temporary or occasional staff. These practices can increase the risk of foodborne illness so it's important to recognise these risks, and take precautions

Here are a few points to remember:

- Ensure that you have enough staff to complete all tasks, especially those relating to premises hygiene.
- Make sure that all temporary staff are trained, not just on their job tasks, but also on your business's food safety and hygiene practices.
- Staff replacing supervisors over the holiday period must have adequate training and be able to manage the critical control points of the preparation processes.
- Remind staff that food safety and hygiene procedures are a priority and must be adhered to.
- Make sure your staff do not work while they are ill with diarrhoea or vomiting, as your product could be contaminated by a symptomatic food handler.
- Consider extra storage facilities. If freezers and chillers are over stocked they will not function properly; cold air must be able to circulate in order to keep food safe. Remember, it is essential to maintain the correct/recommended product temperatures.
- Are your stock rotation procedures working? Check these to prevent insect infestations and other problems.
- Are the services you require available over the summer period, especially around Christmas? Check that your pest control, rubbish, electrical, and equipment maintenance services are available during your operating periods. If not, make other arrangements.
- Check use-by dates on incoming stock and pay particular attention to perishable goods such as dairy products.
- Ensure reheated food reaches 72°C, and is held there for at least three minutes. The food should be steaming hot. Reheat food only once, as lukewarm food is an ideal environment for fast growing bacteria.
- Use separate cutting boards and utensils for raw meats and ready-to-eat foods to avoid cross contamination.
- Wash your hands with soap and warm water, and then dry them thoroughly, before preparing foods and between handling raw meat or raw chicken. Use the 20/20 rule – wash for 20 seconds and then dry for 20 seconds.

On behalf of Northland Health and the Environmental Health Officers working in Whangarei, Kaipara and Far North Districts we wish all proprietors, their families and staff our greetings for the festive season and best wishes for the New Year.



For more information please contact:

## Northland Health, Community, Dental and Public Health Services

### Health Protection:

Whangarei

Ph 09 430 4100

KeriKeri

Ph 09 407 8759

### Health Promotion - for nutritional information:

Public Health Dietician

Ph 09 430 4101 ext 7898

### District Councils:

Far North District Council

Ph 09 407 8314

Kaipara District Council

Ph 09 439 7059

Whangarei District Council

Ph 09 430 4200

# Refrigeration – an essential control step during storage

Refrigeration is a Critical Control Point (CCP) in food storage – it's a vital step in keeping food safe.

Ready-to-eat food should be refrigerated at, or below 4°C to reduce spoilage, extend the shelf life of perishable foods and prevent the growth of most foodborne illness-causing bacteria.

## Here are some tips to manage your cold food storage

### Cooling food quickly

Refrigerators do not have the capacity to chill food rapidly. Cool food down before placing it into the chiller.

Cool food to 4°C, or below, as quickly as possible. Faster cooling times limit the time bacteria are able to grow or form toxins. Ideally, food should be cooled from 60 to 21°C in a maximum of two hours, and from 21 to 5°C within a maximum of four hours. The amount and density of a food, as well as its storage container will affect how quickly the food will cool.

Chill food quickly by:

- Dividing hot food into smaller portions and spreading it into shallow trays
- Stirring food with cold plastic paddles
- Using ice water baths to reduce food temperatures
- Using a commercial blast chiller.

### Storing food in the chiller

- Place refrigerated deliveries into cold storage as soon as they have been checked
- Use separate chillers for raw and cooked or ready-to-eat food to reduce the risk of cross contamination
- Cover any cooked or ready-to-eat foods stored in the chiller to reduce the risk of cross contamination
- Store cooked and ready-to-eat food above raw food if using the same chiller.

Store raw meats, fish and poultry where it is coldest and ensure that juices don't drip onto other foods. These juices might contain foodborne illness-causing bacteria, which can contaminate other foods.

- Avoid overloading the chiller. To cool food and keep it cool the air must be able to circulate around the food. Store food above the floor and away from walls in walk-in chillers
- Keep the door closed as much as possible to maintain the interior temperature
- Check the date marks of food regularly to ensure it is not past its use by date.



- Label and date cooked food to ensure effective stock rotation. Remember the FIFO 'First In First Out' rule. Discard any food that has spoiled, or has expired date marks
- Take out only as much food as can be prepared at one time and prepare it in small batches to reduce the time that food spends in the temperature danger zone
- Thaw cooked or ready-to-eat foods in the chiller, never at room temperature.

### Temperature monitoring

Monitor chiller temperatures at least daily to ensure food is stored at, or below, 4°C. Temperatures will vary with the type of refrigeration unit, and throughout your chiller. During summer your chiller may need adjusting to ensure it keeps food at safe temperatures. Commercial chiller units have a fixed thermometer, which measures the inside air temperature. However, you should also use a calibrated thermometer to measure the temperature of the food.

- Ensure probe thermometers are cleaned and sanitised before and after use to avoid cross-contamination
- Record temperature checks
- Take corrective action if the product temperature exceeds acceptable limits. Corrective actions might include re-checking the product temperature one hour later. If it is still above acceptable limits, discard the food. Or, calling the refrigeration company to arrange for repairs or maintenance.

### Cleaning and maintaining chillers

Minimise the risk of food becoming contaminated from your chillers by cleaning them regularly. This involves washing and sanitising the walls, floors and shelves. Also:

- Check refrigerators daily and clean up any food spills immediately
- Wipe and clean areas of condensation frequently to prevent it dripping on to food
- Check and clean condenser units and drip trays regularly
- Arrange regular maintenance checks of your chillers to ensure they are working properly to keep food safe.

For more information please contact:

### Auckland Regional Public Health Service

Private Bag 92 605  
Symonds St  
Auckland 1035  
Ph 09 623 4600  
Website: [www.arphs.govt.nz](http://www.arphs.govt.nz)



# Shellfish Looks Good, But Is It Safe To Eat?

Shellfish need special consideration for food safety for two main reasons:

1. They are filter feeders, meaning they can accumulate contaminants such as pathogenic bacteria and viruses, biotoxins and heavy metals from the waters they grow in.
2. As they are often served raw or only partially cooked, the levels of contaminants will not be reduced by cooking.

Minimising the risks to consumer safety from eating shellfish is the shared responsibility of the growers, distributors, wholesalers and you as a food business operator.

The New Zealand Food Safety Authority (NZFSA) runs a programme, funded by shellfish growers, to test shellfish and water samples from the coastline every week to make sure that shellfish are not contaminated with marine biotoxins from toxic algal blooms. Growing areas are closed and public warnings are issued when shellfish are not safe to eat. But once shellfish have arrived at your food premises the responsibility to maintain safety is yours.

The shellfish testing programme includes monitoring the growing waters, their catchment areas, and the shellfish themselves.

The waters and catchment areas are subject to a variety of investigations and testing to determine all possible pollution sources such as farms, factories, domestic waste, and wildlife. Shoreline surveys are also carried out to record how and when pollutants from such sources could enter the growing waters. Hydrology studies note water flow patterns, local weather conditions are monitored and a rigorous bacteriological testing regime is instigated to verify the water quality.

Using this information, the health officer can classify the growing area as 'approved' or 'prohibited'. Most commercial areas are approved with conditions that limit harvesting when environmental conditions impact on the shellfish's safety. For example, a certain level of rainfall, known to cause polluting land runoff, will trigger harvesting to be halted for a predetermined number of days. Areas may also be closed for harvesting when an unexpected pollution incident occurs.

Shellfish samples are also collected and tested weekly for the toxins known to be produced by harmful algal blooms. These results provide an early warning system for harmful algal blooms. When the levels of toxin in the shellfish exceed specified levels, the growing areas are closed for harvesting. Public health warnings are also issued advising the public not to collect shellfish from recreational areas of coastline.

Here are some tips you should follow to ensure you maintain the safety of shellfish once it has arrived at your food premises:

- Purchase shellfish from an approved source, not bargains at the back door. Keep all dockets and identification such as lease and harvest dates. This is important in case a trace-back is necessary.
- Upon receipt check the use by date, especially if frozen. Reject the product if you are unsatisfied.
- Check the label and ensure that any shellfish that needs to be cooked is not served until it has been cooked thoroughly.
- Shellfish is not a sterile product and bacterial populations will increase with temperature abuse. So don't leave it in the temperature danger zone for a prolonged period.
- Thaw frozen shellfish in the fridge/chiller.
- Display shellfish under refrigeration, or on chilled ice.
- Protect it on smorgasbords with sneeze guards.
- Do not display shellfish longer than two hours.
- Do not top up displayed shellfish with ones from the chiller.
- Discard unused shellfish from a display, or cook them immediately.
- Heat seafood chowder containing shellfish to a minimum of 80°C for at least three minutes.



For more information please contact:

## Public Health Unit

Level 4  
Hugh Monkton Building  
Cnr Rostrevor & Harwood Streets  
Hamilton  
Ph 07 838 2569

## Environmental Health Offices

Hamilton City Council Ph 07 838 6699  
Matamata - Paiko District Council Ph 07 884 8179  
Ruapehu District Council Ph 07 895 8188  
Thanmes Coromandel District Council Ph 07 868 6025  
Waipa District Council Ph 07 872 0030

Hauraki District Council Ph 07 862 8609  
Otorohanga District Council Ph 07 873 8199  
South Waikato District Council Ph 07 886 1710  
Waiakto District Council Ph 07 824 8633  
Waitomo District Council Ph 07 878 8801



# Food Poisoning on a Grand Scale- Could this happen to you?

## A Case Study

*Clostridium perfringens*. The king of the casserole! This organism has certainly caused a few problems in its time - generally associated with large pots of luke-warm casseroles.

*C perfringens* has two forms: vegetative (growth phase) and spore(survival phase). Its spores can survive cooking and during subsequent prolonged cooling these spores may germinate and multiply. When consumed, an enterotoxin (poison) is released in the gut. This can cause food poisoning, usually 10-12 hours later. Symptoms include watery diarrhoea and severe abdominal pain.

The details of a food poisoning outbreak case involving this spore-forming organism are revealed here:

A health protection officer (HPO) received a call from two members of the public suffering from diarrhoea and stomach pains. Some of their friends were also ill: they had all dined at the same restaurant the previous day, some for lunch and some for dinner.

After further questioning of the diners and the restaurant staff the HPO determined the following.

Number of people at lunch and dinner	119
Number of people ill	41 (5 at lunch and 36 at dinner)
Incubation period	10 hours
Symptoms	Diarrhoea, Abdominal Pain
Risk Factor Evaluation	Beef Casserole Significant

From the information provided, the HPO concluded the outbreak must be caused by *Bacillus cereus*, *C perfringens*, or *Salmonella*. Samples of the remaining beef casserole were taken and faecal specimens were collected from the affected diners.

The HPO's investigation at the restaurant involved a hazard analysis and critical control point (HACCP) review of the beef casserole processes and it found that:

- The casserole was prepared in a 20 litre batch
- No temperature checks were carried out during cooking
- The casserole was cooled in a large deep, plastic 21 kg bucket
- The casserole was reheated for serving.

### The critical failures or what went wrong:

No temperature checks during cooking, cooling and reheating were conducted.

- Although vegetative forms of bacteria are readily destroyed by heating, spores are very heat resistant and may survive cooking.

Food was cooled slowly in a deep bulk container favouring germination and rapid growth of spores.

- Food should have been cooled rapidly in clean, shallow containers no more than 10cm deep with a product depth of no more than 5 cm
- To prevent germination and the rapid growth of spores in foods like casseroles, when they are cooled the core temperature **should not** remain between 55°C and 27°C for more than one and a half hours and should then reach less than 4°C within another 5 hours.

The casserole was then reheated inadequately, and then held in the bain marie with no temperature checks carried out.

- Product must be reheated quickly and thoroughly to a temperature of 74°C and then held at, or above, 60°C.

The combination of these critical failures were ideal for survival and germination of spore-forming bacteria.

Faecal specimens from the affected diners confirmed *C. perfringens* and it was also found in the remaining beef casserole which was then disposed of, preventing more people being affected.

### The outcome:

The HPO highlighted the critical failures to the restaurant, which promptly changed its cooking, cooling, reheating and hot holding procedures. Additional refrigeration was installed to ensure foods could be efficiently and quickly cooled.

Don't let this be you. Remember, if food poisoning strikes someone more vulnerable - an infant, elderly person or immuno-compromised person, the consequences can be very severe.

To find out more on preventing spore-forming food poisoning outbreaks contact a Health Protection Officer in one of the offices below or contact your Environmental Health Officer at your local Council office.



For more information please contact:

### Toi Te Ora - Public Health

1143 Haupapa Street  
PO Box 1858  
ROTORUA  
Ph 07 349 3520  
Fax 07 346 0105

510 Cameron Road  
PO Box 2121  
TAURANGA  
Ph 07 571 8975  
Fax 07 578 5485

Garaway Street  
PO Box 241  
WHAKATANE  
Ph 07 306 0847  
Fax 07 306 0987

# Ice – the hidden hazard

The temperature's rising outdoors and the staff have really earned their money with the buffet presentation. The ham, mussels and crayfish are nestling in the bed of ice, water droplets from the ice glisten on the cocktail tomatoes and the guests are complimenting you as the roast beef aromas waft towards them on the balmy summer air. Happy, you dispense the ice into the requested beverages, unaware that a far more subtle danger will cause many of your guests to succumb to a foodborne illness.

Contaminated ice can be a source of serious foodborne illnesses. Yet for a product that is often consumed or used as an after-thought, the consequence of unhygienic production and handling are often overlooked. It is important to remember and understand that any bacteria within the water used to make the ice are not destroyed; they are merely preserved waiting for more favourable conditions (eg a temperature increase) so they can 're-activate'. Salmonella, Hepatitis A, E Coli and norovirus are just some of the diseases that can be transmitted through contaminated ice.

Here are some tips to ensure the ice you use is safe:

- Only use ice from a reputable supplier, preferably one who operates under a Food Safety Programme. If this is not possible, ask to see their records of microbial sampling of their product, their cleaning schedule, and filtration processes of the raw water.
- Use dedicated containers for the storage of ice. Ensure that any ice boxes are regularly cleaned and sanitised both inside and outside.
- Provide ice scoops at each location where ice is stored and used. Don't place the scoop back into the ice as any contamination from peoples' hands can then contaminate the rest of the ice which can then go on to further contaminate other food and beverages.
- Ensure staff are trained to use scoops and to clean ice storage areas properly.
- Reinforce personal hygiene habits, particularly hand hygiene.



For more information please contact:  
**Public Health Unit**

**Hawke's Bay District Health Board**  
PO Box 447  
Napier  
Ph 06 834 1815

**Public Health Unit**  
PO Box 119  
Gisborne  
Ph 06 867 9119

# Keeping Food Safe after an Emergency

Recently we have seen a number of emergencies in New Zealand, and around the world, which have impacted on the safety of food. Emergency events such as flooding or a power failure will affect the running of any food business.

The following are some ideas that can help you plan to keep the food safe after an emergency event. Every food premises should have a plan in place, so all staff members know what to do. You should contact your insurance company to discuss their claim procedures as part of this planning process.

## Water Damage

All floodwaters must be considered polluted as the water is likely to contain harmful bugs, sewage and/or chemicals. Any food that is submerged in floodwater must be considered unsafe and should not be sold or eaten.

## Loss of electricity

If the power is cut you should try to get it restored as soon as possible. Generators are an alternative power source where food requires refrigeration.

The length of time that food will remain safe in fridges and freezers with the power off will depend on the type of food, weather conditions (eg winter or summer temperatures) and the effectiveness of the insulation of the fridges and freezers.

Avoid opening the doors of fridges and freezers, as this will allow them to stay cooler for longer. Leave bottles, cans of drink and water containers in the fridge.

Any food that retains ice crystals, or is still frozen can be safely refrozen. Foods that have defrosted can still be used if the food has just defrosted and can be kept cold, ie the refrigeration is working again.

If you sell food that has been defrosted under these circumstances, customers should be informed that the food cannot be refrozen and needs to be eaten within two days. If you are unsure how long the power has been down and the food is warm, the food should be thrown out.

Every premises should have a portable food thermometer available to carry out temperature checks throughout the incident.

## How do you know if food is unsafe as a result of an emergency situation?

All foods should be inspected. In some instances changes in the smell or appearance of the food (eg a colour change or slimy texture) will be indicative that the food is unsuitable for sale.

## Disposal of food unfit for human consumption

All food affected by the incident must be disposed of safely. When the decision has been made that the food is unfit for human consumption it must be isolated and clearly marked stating that it is unsafe. It is important that the food is disposed of properly so that people can't get hold of and consume it.

All rubbish must be wrapped or put in a sealed container to avoid attracting vermin into the area.

## Cleaning up after the event

An electrician should check electrical appliances such as refrigerators and deep freezers. Refrigerators, stoves, ovens and freezers sustaining significant flood damage must be discarded.

Wash all floors, walls and shelves with clean water, and sweep to remove contaminated sediment. Then rinse down floors, walls and other equipment with a solution of household bleach (1 litre of household bleach to 10 litres of clean water). Leave the solution on for 30 minutes before rinsing it off with clean water. Keep windows open during this treatment and wear protective clothing. Follow this procedure with a wash of hot soapy water for the final cleanup. Ventilate the area thoroughly.

Remember that hand washing with soap and water is essential. A high level of personal hygiene at all times is very important to prevent the spread of disease.

## Remember the number one rule: "If in doubt throw it out"

For more information please contact:

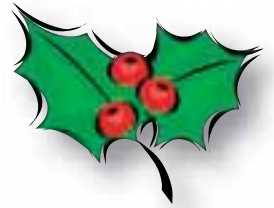
### Health Protection Unit

Taranaki District Health Board  
Private Bag 2016  
New Plymouth  
Ph 06 753 7798



# Fly on the Wall

## Goings on in the MidCentral Public Health Region



### Too hot for comfort or too cold to handle

What is a readily perishable food, and why is temperature important to its storage?

A readily perishable foodstuff supports the growth of bacteria. Foods containing high levels of protein, sugar, fat and water tend to be perishable.

These foods require particular control between preparation and consumption, ie during the storage or display stage.

With canned foods this 'control' is heating which kills all foodborne illness-causing bacteria. Once cans are opened or damaged the seal is broken and the food is no longer protected from contamination or spoilage.

The shelf life of food is sometimes increased by salting or adding preservative. Reducing the water content can reduce the ability for bacteria to grow, eg biscuits.

One of the most effective way of controlling bacteria numbers is to store food outside the temperature danger zone for bacterial growth: either below 4°C, or above 60°C.

This brings us around to the subject of **effective temperature monitoring**.

### The Good Stuff in our region

We found a good example of effective temperature monitoring at the Cactus Crème Café in Victoria Avenue, Wanganui.

Owner Raylene Stormont monitors all her refrigeration and freezer units on a regular basis and records the results so she can track problems, both with the food, or with the storage units.

Raylene says: "By recording temperatures, we can be confident that we are selling consistently safe food to our customers. Food is our business - a bad name is the end of us".

Well done Raylene.

Overall, Wanganui Environmental Health Officers (EHOs) report that they are seeing better monitoring of temperatures in food premises.

Another good example is Broadtop Home Cookery in Palmerston North. We recently caught them in the act of testing their pies with a digital probe to check that they were heated above 65°C. Their procedure includes testing each type of pie being heated on a tray, as they found heating times can vary considerably. They are put into the preheated pie warmer only when pies have been heated to above 65°C. Pauline says: "We know that a hot pie is a safe pie and so do our customers".



### The Not so Good Stuff

Local EHOs have commented on the following issues they have found during inspections:

Food handlers who have not completed food hygiene training ie NZQA 167, 168; evidence of rodents including bags of flour containing rodent droppings; fish and chip shops sifting and reusing used flour and breadcrumbs; open tins of food stored in fridges and chillers; and the lack of hair coverings.

### Food complaints reported to the local Public Health Unit this quarter:

Fudge slice containing foreign matter  
Mouldy meat pie  
Home-cooked fresh chicken with a growth/bruise inside  
Undercooked rotisserie chickens  
Wire from a pot scourer in Chinese takeaway  
A stone in a cereal bar  
A label with no ingredient or nutritional information  
Four suspected foodborne illnesses.

From all the EHOs at Local Authorities and the HPOs at the Midcentral Public Health Unit we would like to wish all the hard working food proprietors in our region a busy, profitable and safe Christmas and Happy New Year



For more information please contact:

### MidCentral Health Public Health Services

Palmerston North  
Wanganui

Ph 06 350 9110  
Ph 06 348 1775

Horowhenua District Council	Ph 06 949 4949
Manawatu District Council	Ph 06 323 0000
Palmerston North City Council	Ph 06 356 8199
Rangitikei District Council	Ph 06 327 8174
Ruapehu District Council	Ph 06 385 8364
Tararua District Council	Ph 06 374 4080
Wanganui District Council	Ph 06 349 0001



# Norovirus in raw oysters

Public Health Units in New Zealand often investigate norovirus outbreaks. Recently Regional Public Health (Hutt Valley District Health Board) investigated a norovirus outbreak associated with the consumption of raw oysters.

Norovirus is a common cause of foodborne illness. It is extremely contagious, easy to spread and only a tiny amount is required to cause an illness. Norovirus causes the classic 'tummy bug' or gastroenteritis – symptoms include stomach cramps, vomiting and diarrhoea. Symptoms usually develop between 10-50 hours after eating contaminated food, drinking contaminated water or other contact with the virus.

Oysters need special food safety considerations because they are filter feeders. This means they can accumulate any contamination that is present in their growing waters. These contaminants can include pathogenic bacteria, viruses, biotoxins and heavy metals. As oysters are often eaten raw or only partially cooked, pathogens (including norovirus) are not destroyed by a thorough cooking process.

Some brands of oysters are not suitable to consume raw - the label on the packaging will state if the product should be cooked. It is important that you read the product's label. Norovirus outbreaks have been traced back to importers, distributors and restaurant staff who did not read the label and served raw oysters that should have been cooked.



## Follow these food safety controls when you are preparing oysters:

Wash your hands frequently when handling raw oysters by:

- Wet hands and nailbrush with warm water
- Rub fingertips and nails with soap and brush under running water for 10 seconds
- Wet hands again using warm water
- Use soap to build up a lather for 10 seconds
- Rinse hands, dry thoroughly with a clean, or disposable, towel for 20 seconds

## Clean

Clean and sanitise preparation surfaces that have come into contact with suspect oysters as follows:

Clean surfaces then sanitise the area with, for example, a dilute bleach solution (1 cup bleach to 9 cups water).

## Cook

To ensure the virus is inactivated cook the oysters until the centre of the oyster reaches 90°C and hold it at that temperature for 90 seconds.

## Cover

Cover oysters for storage and ensure that they don't come into direct contact with other foods, nor leak onto them.

## Chill

As with any other perishable food, store below 4°C, or freeze.

For more information please contact:

**Regional Public Health**  
Hutt Valley District Health Board  
Private Bag 31 907  
Lower Hutt  
Ph 04 570 9002

**Choice Health Public Health**  
Wairarapa District Health Board  
24-26 Chapel Street  
Masterton  
Ph 06 370 5020

# Food Regulation Made Easy

## The regulatory environment

Currently there are two options for regulating food premises. The first option is registration with the local council. Under this option the Environmental Health Officer comes in at regular intervals to conduct an inspection pursuant to the Food Hygiene Regulations 1974. This provides a 'snapshot' view of how a premises is operating with corrective actions based around the physical environment in which food is being prepared.

The second option for a food business is to operate under a New Zealand Food Safety Authority (NZFSA) approved food safety programme (FSP). Under this system, food producers take the responsibility for producing safe food by implementing controls based around real and potential hazards involved in their food production process. Roles and responsibilities within the food business are clearly defined and become easily audited.

## So what is a food safety programme?

A FSP is the documentation that shows how you make safe food, by reference to current legislation, codes of practice and standards that are applicable within the food industry. By having this structure and monitoring systems in place an auditor can prove you are doing what you said you would do to assure the safety and related quality of the food your business produces.

## The process

Before starting down the FSP 'track' do lots of **reading**. A NZFSA resource pack, 'Food Safety Programme - how to protect your customer and your business' is available from your local Public Health Unit (see below for contact details) and is a good introduction to the basic requirements.

Your FSP is submitted to your local Public Health Unit where it is assessed for completeness. There is an assessment questionnaire included in the FSP pack which the PHU uses to check that all the necessary information is present. You should do your own check before submitting your programme to the PHU.

It is difficult to put an exact cost on the assessment as each programme is unique. If some of the major issues have not been adequately addressed we will contact you, or your consultant, and advise what information is required before

the assessment process can continue. Including a copy of the completed assessment questionnaire with the application and numbering all the parts, sections and pages makes our assessment quicker, which helps to reduce your costs.

When you are ready to submit your FSP an independent audit can either be completed and supplied with your application, or completed within 28 days of having your FSP approved.

When we assess that the FSP is satisfactory it is forwarded to NZFSA with a recommendation. If they agree with the recommendation NZFSA approves the programme along with an exemption to the Food Hygiene Regulations 1974 and notifies you, and your local Council, in writing. At this point your Council registration ceases and the exemption takes effect.

## For more information check out these websites:

[www.nzfsa.govt.nz](http://www.nzfsa.govt.nz)

[www.foodstandards.gov.au](http://www.foodstandards.gov.au)

[www.codexalimentarius.net/web/standard\\_list.do](http://www.codexalimentarius.net/web/standard_list.do)

If you don't have a lot of experience with quality systems (such as the ISO series) you might find it useful to employ a food safety consultant to assist you with the structure and content of your FSP. A list of food safety consultants can be found on the NZFSA website.



For more information please contact:

**Nelson Marlborough District Health Board Public Health Service**

**Nelson Office**  
**Blenheim Office**

36 Franklyn Street  
Wairau Hospital

Nelson  
Blenheim

Ph 03 54 61537  
Ph 03 520 9914



# Outdoor Dining 101

A lot of food premises throughout New Zealand have outdoor dining areas - whether it's a café or a stopover along one of our highways or byways, outdoor dining areas are everywhere. But, as with anything involving food, outdoor dining presents hazards that need to be controlled. An Environmental Health Officer from one of our local authorities recently observed a staff member at a cafe cleaning and wiping down outdoor tables contaminated with bird droppings. Using the same cloth the person went on to wipe down inside food surfaces and then the milk heating nozzle on the coffee machine. Needless to say some serious intervention was instigated!

Here are some tips to keep your customers safe from foodborne illness by preventing cross-contamination of food, staff and equipment in outdoor dining areas:

- Develop an outdoor dining area policy. This will include training all staff to be aware of the hazards of outdoor dining.
- Use a separate set of equipment and cleaning materials for cleaning outdoor areas. We recommend colour-coding cloths, buckets and brooms (eg green for outside). Using the same cloths for outdoor and indoor surfaces will just spread contamination.
- Are birds such as sparrows, poultry (ducks, geese, peacocks), rodents, feral cats, possums or other animals likely to contaminate the area? Birds and their droppings are the most likely problem that you will face; they are known to carry a number of pathogens (disease-causing organisms) including Salmonella and Campylobacter.
- Wash water in buckets must have disinfectant in it, and this must be changed regularly. Always follow instructions for correct dilution.
- Staff must clear plates quickly after customers vacate a table - so they get there before the birds! If birds get there first they will defecate on plates, tables and chairs. This means more work for your staff and disgruntled customers put off by the delay and mess.
- Food scraps also attract flies and wasps. Flying insects and birds annoy people and will certainly diminish the dining experience for your customers.
- Discourage customers from feeding the 'wildlife' in the café area. Try simple "Please don't feed the birds" signs.
- Regularly clean and sanitise areas where trays, dishes and water jugs are brought in from outside as contamination brought inside on these can cross-contaminate other equipment and surfaces, and from there get into food. Once again, think about the cloths used in this area.
- If trays are used they also need disinfecting - contamination picked up from a table onto the base of a tray is easily overlooked, spreading contamination around the premises with later use.
- Ensure your dishwasher is working properly to effectively sanitise the dishes.
- Hand washing is absolutely vital – all staff must follow strict hand washing procedures to prevent cross-contamination especially if they collect plates, wipe down tables outside or handle dirty plates and then go on to perform food preparation duties. Make sure wash hand basins are positioned for easy access and are well maintained.
- If other animals are a problem adopt similar practices; make the area unattractive to the animal(s), make sure no food scraps are left out, keep refuse areas tidy and all bins covered, clean up all waste carefully using disinfectants and separate equipment. If 'wildlife' problems persist call in an expert.

Thanks to Environmental Health Officer, David Shovel, Hurunui District Council.



**Cross-contamination** is the transfer of pathogens (disease-causing bugs) from dirty to clean items. Food can become contaminated from sources such as dirty utensils and cloths, birds and insects, dirty hands or unhygienic behaviour.

# Food safety and doggy bags

People often ask to take leftovers home from a restaurant. Originally, 'doggy bags' were for people to take home leftovers for their pets. But today consumers often take leftover food home for themselves. We are often asked if this is a safe practice. Owners of premises have concerns regarding liability if a consumer was to become sick after eating leftovers taken home in a doggy bag.

## Risks of doggy bags

Takeaways differ from food for doggy bags, in that takeaways are intended to be eaten away from the premises and are generally served very hot, or cold.

Leftovers can be exposed to a number of hazards:

- High risk food can be left for long periods of time in the temperature danger zone (between 4°C and 60°C) giving bacteria in the food a chance to grow to high levels
- If people handle, cough or sneeze over foods they can contaminate them with pathogens, eg *Staphylococcus aureus*
- Cross-contamination from raw to cooked foods.

## Minimising the risks

There are no rules preventing food businesses providing doggy bags to customers when they request them. However the following are some possible ways of minimising the risks to consumers and liability to food premises.

- Have a set of procedures for staff about how to deal with doggy bags
- Place food in a new clean food grade container
- Have an instruction sticker or leaflet providing information to consumers about the risks and safe food handling practices with their doggy bag. This advice could include the following messages:
  - Refrigerate food as soon as possible if it is not eaten straight away
  - Discard food if it is at room temperature for more than two hours
  - Reheat food until steaming hot all the way through
  - Reheat only once
  - Discard food if you don't eat it within two days.

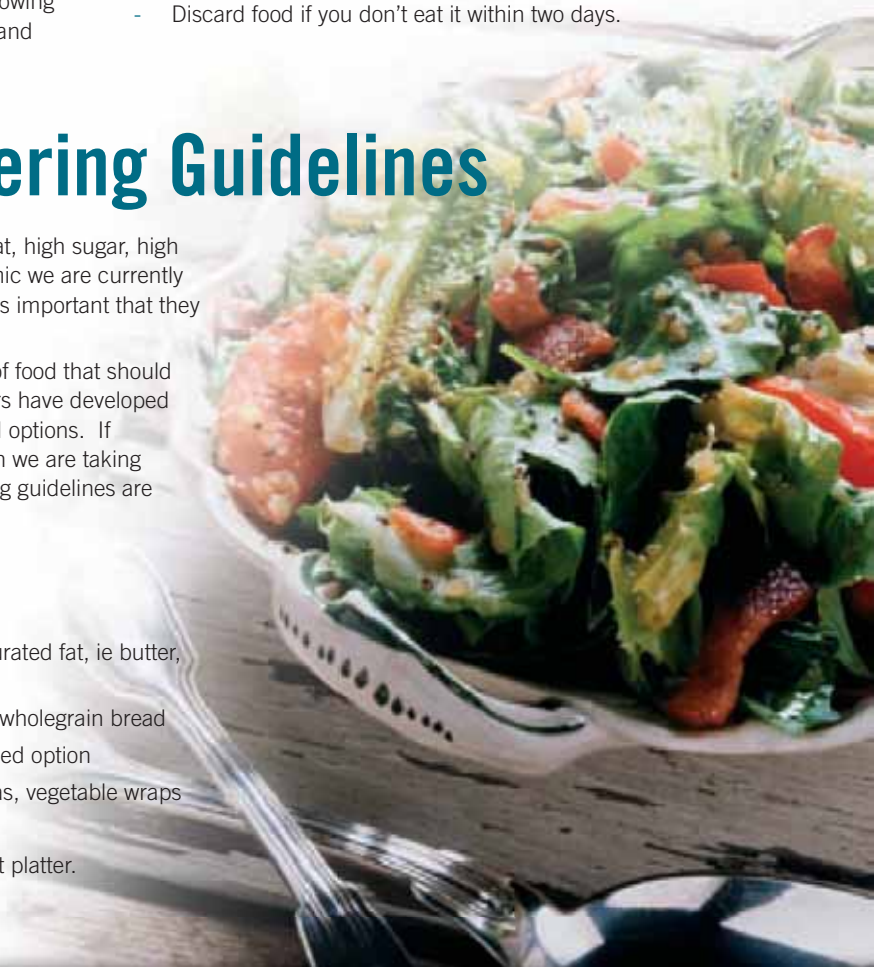
# Healthy Choice Catering Guidelines

We are living in an environment where people often eat high fat, high sugar, high salt foods everyday which is contributing to the obesity epidemic we are currently facing. Many consumers are looking for healthier food and it is important that they can easily make a healthy choice.

Some workplaces have nutrition policies that guide the types of food that should be provided in the workplace. South Island nutrition promoters have developed 'Catering Guidelines' to assist caterers to produce healthy food options. If workplaces are making the healthy choice an easy choice then we are taking positive steps towards a healthier eating environment. Catering guidelines are available from all Public Health South offices.

Tips for caterers:

- Purchase, store, prepare and serve food safely
- Prepare food items with minimal added fat, especially saturated fat, ie butter, cream, cheese
- Aim for 50% of sandwiches to be made from wholemeal / wholegrain bread
- Aim to serve only one (if any) deep-fried and/or pastry-based option
- Always include vegetarian options, eg vegetarian pita pizzas, vegetable wraps
- Offer small serving sizes, eg mini muffins
- Offer vegetable and fruit choices at every occasion, eg fruit platter.



For more information please contact:

**Dunedin** 57 Hanover St, PO Box 5144 Moray Place  
**Invercargill** 92 Spey St, PO Box 1601  
**Queenstown** Douglas St, PO Box 2180

Ph 03 474 1700 Fax 03 474 0221  
 Ph 03 211 0900 Fax 03 211 0899  
 Ph 03 442 2500 Fax 03 442 2505

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