

SAFE PURCHASING

Purchasing is the **first step** in home food handling chain
The following hints will help you to avoid food safety problems



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SAFE PURCHASING

Don't buy:

- Food in those places where minimum hygienical food conditions are not guaranteed (cleaning, low temperatures, etc.)



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POTENTIAL SOURCES OF PROBLEMS WITH STREET FOOD

• HAZARDS OF THE ENVIRONMENT

Contamination

Airborne pathogens and chemicals
Insects and other vectors
Waste disposal

Growth

High ambient temperature



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POTENTIAL SOURCES OF PROBLEMS WITH STREET FOOD

• UNSAFE WATER QUALITY

Contamination

Contaminated water used for drinking
Contaminated water or ice mixed with food
Hand washing not adequate
Inadequate cleaning of serving utensils and pots



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POTENTIAL SOURCES OF PROBLEMS WITH STREET FOOD

• INADEQUATE HOT/COLD HOLDING

Contamination

Inadequate hygiene measures taken by person preparing the food

Growth

Food prepared too far in advance

Food displayed at ambient temperature

Leftover food kept overnight

POTENTIAL SOURCES OF PROBLEMS WITH STREET FOOD

• UNSAFE RAW MATERIALS

Contamination

Unreliable source

Unapproved chemical additives

Cross-contamination

Growth

Inadequate cold storage

Long waiting time

SAFE PURCHASING

Don't buy:

- *Swollen chilled food packages* - This fault is not uncommon and results from microbial action. Foods which can be affected include **fruit juices**, unprocessed **cheeses**, **pasta** and **yoghurt**.
- *Swollen and severely dented cans* - Swollen cans are rare and should always be brought to the notice of the store manager because it means all is not well inside the cans



SAFE PURCHASING

Don't buy:

- Dairy products and delicatessen items kept **outside** a refrigerated cabinet
- Refrigerated food such as pasta etc., **past its 'use-by' date** - at best it could have quality defects; at worst it could cause food poisoning
- Frozen and refrigerated foods which have been stored outside the "**load line**" in the display cabinet



SAFE PURCHASING

Don't buy:

- Frozen food packs containing **ice crystals** or packets with **clumps of ice** between them - Both conditions indicate re-freezing and probably loss of quality

Examine closely:

- *Cheese packed in transparent films* - Look for evidence of mould growth
- *Labels* - They should be informative. Favour those brands with labels which list **storage temperatures** or describe any special **precautions** necessary for **storage**.



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DRY STORAGE

- Dry storage areas must be clean, tidy, well ventilated and pest free (can become a food source for rodent and insects).
- Foods should not be stored in areas such as restrooms, stairwells or hallways.
- Foods should be stored off the floor and in closed containers.



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DRY STORAGE

- Stock rotation is a good management practice (FIFO).
- Foods and chemicals need to be stored **separately**. Chemicals should be stored below and away from foods to prevent chemical contamination.



DRY STORAGE

- **Fruit and vegetables** should be stored in dry, cool, well-ventilated areas preferably separate from other food.
- **Fruit** should be examined regularly as **mould** spreads rapidly. Also watch for small **flies** (fruit flies) that hover around rotting fruit.





FRIDGE



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Cold Storage Chart

FRIDGE

| Product | Refrigerator (4 °C) | Freezer (- 18 °C) |
|--|---------------------|---------------------|
| Eggs | | |
| Fresh, in shell | 3 to 5 weeks | Don't freeze |
| Raw yolks, whites | 2 to 4 weeks | 1 year |
| Hardcooked | 1 week | Don't freeze well |
| Liquid pasteurized eggs, egg substitutes, opened | 3 days | Don't freeze well |
| unopened | 10 days | 1 year |
| Mayonnaise | | |
| commercial refrigerate after opening | 2 months | Doesn't freeze |
| Deli & Vacuum-Packed Products | | |
| Store-prepared (or homemade) egg, chicken, ham, tuna, macaroni salads | 3 to 5 days | Doesn't freeze well |
| Luncheon Meats | | |
| Luncheon meats, opened package | 3 to 5 days | 1 to 2 months |
| unopened package | 2 weeks | 1 to 2 months |



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FRIDGE

| Product | Refrigerator (4 °C) | Freezer (- 18 °C) |
|---|---------------------|-------------------|
| Ham, Corned Beef | | |
| Corned beef, in pouch with pickling juices | 5 to 7 days | Drained, 1 month |
| Ham, fully cooked vacuum sealed at plant, undated, unopened | 2 weeks | 1 to 2 months |
| Ham, fully cooked, whole | 7 days | 1 to 2 months |
| Ham, fully cooked, slices | 3 to 4 days | 1 to 2 months |
| Hamburger, Ground & Stew Meat | | |
| Hamburger & stew meat | 1 to 2 days | 3 to 4 months |
| Ground turkey, veal, pork, lamb & mixtures of them | 1 to 2 days | 3 to 4 months |
| Fresh Beef, Veal, Lamb, Pork | | |
| Steaks | 3 to 5 days | 6 to 12 months |
| Roasts | 3 to 5 days | 4 to 12 months |
| Soup & Stews | | |
| Vegetable or meat added | 3 to 4 days | 2 to 3 months |



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FRIDGE

| Product | Refrigerator (4 °C) | Freezer (- 18 °C) |
|--|---|----------------------------|
| Fresh Poultry | | |
| Chicken or turkey, whole | 1 to 2 days | 1 year |
| Chicken or turkey, pieces | 1 to 2 days | 9 months |
| Cooked Poultry | | |
| Fried chicken | 3 to 4 days | 4 months |
| Pieces, plain | 3 to 4 days | 4 months |
| Pizza | | |
| Pizza | 3 to 4 days | 1 to 2 months |
| Beverages, Fruit | | |
| Juices in cartons, fruit drinks, punch | 3 weeks unopened 7 to 10 days opened | 8 to 12 months |
| Fish | | |
| Lean fish (cod, flounder, haddock, sole, etc.) | 1 to 2 days | 6 months |
| Fatty fish (bluefish, mackerel, salmon, etc.) | 1 to 2 days | 2 to 3 months |
| Cooked fish | 3 to 4 days | 4 to 6 months |
| Smoked fish | 14 days or date on vacuum package | 2 months in vacuum package |



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FRIDGE

| Product | Refrigerator (4 °C) | Freezer (- 18 °C) |
|---------------------------------------|--|---------------------|
| Dairy | | |
| Butter | 1 to 3 months | 6 to 9 months |
| Cheese, Hard (such as Cheddar, Swiss) | 6 months, unopened 3 to 4 weeks, opened | 6 months |
| Cheese Soft (such as Brie, Bel Paese) | 1 week | 6 months |
| Cream Cheese | 2 weeks | Doesn't freeze well |
| Cream—Whipped, ultrapasteurized | 1 month | Doesn't freeze |
| Cream—Whipped, Sweetened | 1 day | 1 to 2 months |
| Margarine | 4 to 5 months | 12 months |
| Milk | 7 days | 3 months |
| Pudding | package date; 2 days after opening | Doesn't freeze |
| Sour cream | 7 to 21 days | Doesn't freeze |
| Yogurt | 7 to 14 days | 1 to 2 months |



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FRIDGE

Refrigerate Promptly

Bacteria grow most rapidly in the Danger Zone — the unsafe temperatures between 4 °C and 60 °C, so it's key to keep foods out of this temperature range. And since cold temperatures keep most harmful bacteria from growing and multiplying . . . **be sure to refrigerate foods quickly!**



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BEFORE PUTTING FOOD INTO THE FRIDGE



- If we have bought a frozen product and it has become unfrozen, eat it immediately, never freeze it again!

- Don't leave food cool slowly outside the fridge.

- Don't put hot food inside the fridge.



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BEFORE PUTTING FOOD INTO THE FRIDGE



- Refrigerate or freeze perishables, prepared foods, and leftovers within **2 hours or less**

- Separate large amounts of leftovers into **small, shallow** containers for quicker cooling in the refrigerator.



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DURING REFRIGERATING TIME

Don't **over-stuff** the refrigerator. Cold air must circulate to keep food safe.



Keep your refrigerator between 0 and 4 °C and your freezer at - 18 °C

Separate raw materials from cooked food inside your fridge. Better cooked in upper shelves and raw materials down



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DURING REFRIGERATING TIME

Cover food to prevent cross-contamination

If possible eliminate **non-eatable** parts of food to prevent contamination

Open fridge's door only when necessary and close it as soon as possible.

Maintain your fridge in optimal **hygienical** condition



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DURING REFRIGERATING TIME

Use **leftovers** within 24 hours (reheating leftovers is one of the main causes of food poisoning)

Food that has been in the fridge the longest (**first-in**) must be the first **out**

Make sure that any **spillage**, especially milk or cream, is cleaned up really well straight away



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DEFROSTING AND CLEANING YOUR FRIDGE

Defrosting and cleaning should be carried out frequently to avoid build-up of ice, which reduces the efficiency of the fridge.

Bicarbonate of soda (one tablespoon to 4 litres of water) makes a good cleaner



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FROSTING

When frosting food...

- **clean** them and eliminate non-eatable parts
- when packing liquid food for frosting leave a **headspace**
- **separate** the quantity being consumed at one time
- be care because in old freezers food temperatures will normally not be much below **-12 °C** so food should not be kept longer than a few weeks.

DEFROSTING

Never defrost food at room temperature. Thaw food in the refrigerator, in cold water, or in the microwave if you'll be cooking it immediately.



Don't defrost food in hot water

Remember: frosting don't kill all microbial !

SOME FREQUENTLY ASKED FREEZING QUESTIONS

Does freezing improve the quality of food?

Freezing does not improve the quality of the product. Frozen food is only as good as the quality of the fresh food. So, select only high quality products at optimum maturity and freshness.

Will food spoil if it stays frozen longer than the recommended storage time?

No. The recommended storage time is the time in which food should be used to insure maximum quality. Food stored longer than recommended time is safe but flavor, color and texture will continue to deteriorate.



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SOME FREQUENTLY ASKED FREEZING QUESTIONS

What is blanching?

Heating or scalding the vegetables in boiling water or steam for a short period of time.

Is it recommended to blanch vegetables before freezing?

Yes. Blanching slows or stops the action of enzymes which cause loss of flavor, color and texture. Blanching cleanses the surface of dirt and organisms, brightens the color and helps retard loss of vitamins.



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SOME FREQUENTLY ASKED FREEZING QUESTIONS

Are frozen vegetables safe to eat if they are not blanched?

Yes. They are safe to eat, but the quality (color, flavor and texture) will be poorer than that of vegetables which have been blanched.

Should frozen vegetables be thawed before cooking?

For most vegetables, no. You get a fresher tasting product if it has not been thawed.



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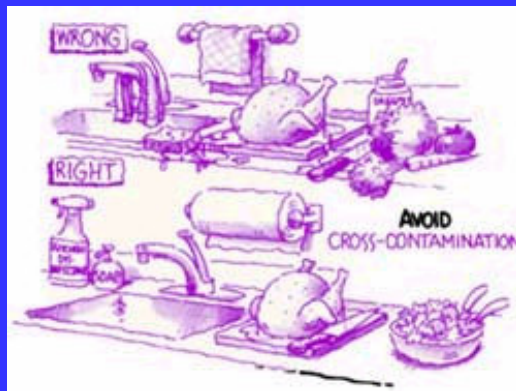


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SEPARATE



Cross-contamination is how bacteria spreads from one food product to another. This is especially true for raw meat, poultry and seafood. Experts caution to keep these foods and their juices away from ready-to-eat foods.



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SEPARATE

How can we avoid **Cross-contamination**?

- **Separate** raw meat, poultry and seafood from other food in the grocery shopping cart.
- Store raw meat, poultry and seafood on the **bottom shelf** of the refrigerator so juices don't drip onto other foods

SEPARATE

How can we avoid **Cross-contamination**?

If possible, use one **cutting board** for raw meat products and another for salads and other foods which are ready to be eaten.

SEPARATE

How can we avoid **Cross-contamination**?

- Always **wash** cutting boards, knives and other utensils with hot soapy water after they come in contact with raw meat, poultry and seafood.
- Never place cooked food on a plate which previously held raw meat, poultry or seafood.

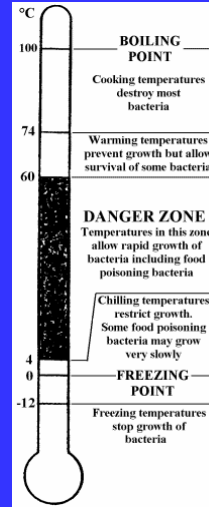
COOKING

Cooking is the thermal heating of foods at sufficient **temperature** over **time** to kill microorganisms in the food.

Cooking requirements are based on the **biology of pathogens**. Different species of microorganisms have different susceptibilities to heat.

Recommended Internal Cooking Temperatures

| Product | Degrees Fahrenheit |
|--|--------------------|
| Eggs & Egg Dishes | |
| Eggs | 160° |
| Egg Dishes | 160° |
| Ground Meat and Poultry Mixtures | |
| Turkey, chicken (including patties) | 165° |
| Veal, beef, lamb, pork (including patties) | 160° |
| Fresh Beef | 170° |
| Fresh Lamb | 170° |
| Fresh Pork | 170° |
| Poultry | |
| Chicken, whole | 180° |
| Turkey, whole | 180° |
| Poultry breasts, roasts | 170° |
| Poultry thighs, wings | 180° |
| Stuffing | 165° |
| Ham | |
| Fresh (raw) | 160° |
| Pre-cooked (to reheat) | 140° |
| Fish | 155° |



COOKING

Food characteristics also contribute to the lethality of cooking temperatures. Heat penetrates different foods at different rates. High fat content reduces the lethality of heat. High humidity in the cooking container or the moisture content of the food aid the lethality of heat.

To effectively eliminate pathogens, there are a number of factors to consider: the level of pathogens in the raw product and the initial temperature of the food and the bulk of the food. Another factor to consider to kill the pathogenic organisms in food: cooking must heat all parts of the food to the required temperatures.

COOKING

- If a thermometer is not available, do not eat ground beef that is still **pink** inside



- Cook eggs until the yolk and white are **firm**, not runny. Don't use recipes in which eggs remain raw or only partially cooked

- Cook fish until it is **opaque** and flakes easily with a fork

COOKING

- Make sure there are **no cold spots** in food (where bacteria can survive) when cooking in a microwave oven. For best results, cover food, stir and rotate for even cooking. If there is no turntable, rotate the dish by hand once or twice during cooking.

- Bring sauces and soups to a **boil** when reheating. Heat other leftovers thoroughly to 75 °C

HOT HOLDING

Once a food is heated or cooked, the food must be **maintained** at a temperature to limit the growth of bacteria. The correct hot holding temperature is **60°C**

The potential for growth of pathogenic bacteria increases once a food is reheated than the potential in raw foods. The **spoilage organisms** that may be present in raw foods inhibit the growth of pathogenic organisms by competition. Once a food is cooked these spoilage organisms are reduced

GOOD HYGIENICAL HANDLING PRACTICES

Food handler

any person who directly handles package or unpackaged food, food equipment and utensils, or food contact surfaces and is therefore expected to comply with food hygiene requirements

Codex Alimentarius

GOOD HYGIENICAL HANDLING PRACTICES



GOOD HYGIENICAL HANDLING PRACTICES

Often people who harvest, handle, store, transport, process or prepare foods are responsible for their contamination or they are able to minimize or to reduce the food contamination

Contamination may be avoided and minimization obtained through:

- adequate personal **hygiene**
- improved **behavior** and handling with the adequate training.

GOOD HYGIENICAL HANDLING PRACTICES

- Food handlers should maintain a high degree of personal **cleanliness** and, where appropriate, wear suitable protective **clothing**, head covering and footwear
- **hair** should be clean
- It's recommended that food handlers not use **beards** or **moustaches**
- **Nails** should be short and clean to avoid the presence of pathogenic microorganisms underneath them

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GOOD HYGIENICAL HANDLING PRACTICES

Food handlers must...

- not **smoke** or spit in the food handling area
- not **eat** or drink whilst handling food (it is acceptable to taste dishes during their preparation)
- cover **wounds** likely to cause risk of contamination of foods.
- avoid **sneezing** over food



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GOOD HYGIENICAL HANDLING PRACTICES

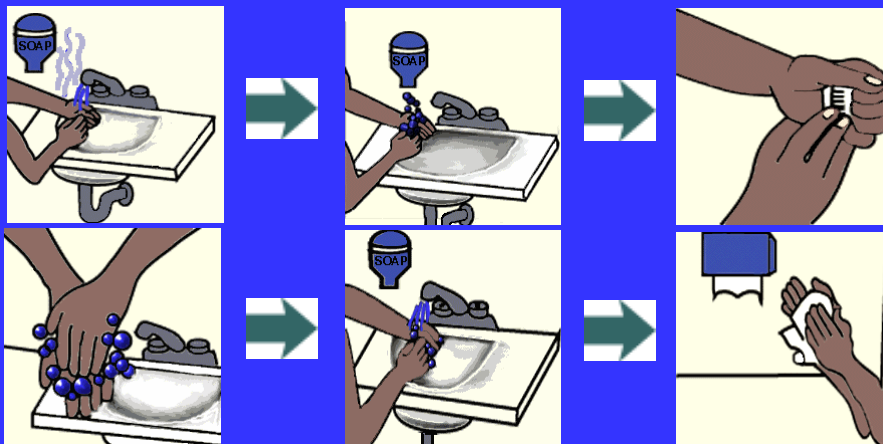
Hand washing

- Is an efficient means of eliminating dirt by physical removal.
- A combination of the **emulsifying** action of **soap** on lipids and other oils and fats, and the **abrasive** action of the **rubbing** and the **water** will disseminate and remove particles containing microorganisms.
- Hands should be washed under **warm** water flow, soaped and vigorously rubbed during at least 15 seconds.



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GOOD HYGIENICAL HANDLING PRACTICES

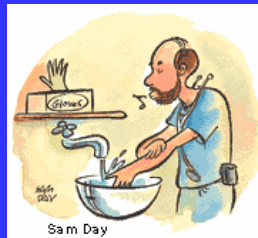


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GOOD HYGIENICAL HANDLING PRACTICES

Hand washing

- The hands should be rinsed with warm water and dried in white paper towel . (Under hot air is not recommended)



GOOD HYGIENICAL HANDLING PRACTICES

Hand washing

- Food handlers must **wash their hands** regularly and especially;
 - at **start** of food handling activities
 - immediately after visiting the **toilet**
 - after handling **raw** food or any contaminated material when this could result in contamination of other food items

GOOD HYGIENICAL HANDLING PRACTICES

Hand washing

- Food handlers must wash their hands regularly and especially:
 - after handling waste or rubbish
 - after handling cleaning chemicals
 - after eating, smoking, coughing or nose blowing



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BEFORE HANDWASHING

AFTER HANDWASHING



Photo 1 before



Photo 3 before



Photo 2 before

VISITING TOILET

HANDLING RAW MEAT

USING AN OLD KITCHEN DISHCLOTH



Photo 1 after



Photo 1 after



Photo 2 after



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THE PURPOSE OF CLEANING

Unless the equipment that comes in contact with foods is adequately cleaned and sanitised, it may be a serious source of food contamination from germs

The reasons for cleaning:

- to remove the stuff on which bacteria could grow, and so reduce the risk of food poisoning and food spoilage
- to disinfect special equipment and surfaces
- to remove waste which would encourage insects or rats and mice
- to reduce the risk of contamination

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THE CLEANING PROCEDURE

- **pre-cleaning**: removing excess dirt by sweeping, wiping or prerinsing
- **main clean**: loosening of the surface grease and dirt using a detergent
- **rinse**: removal of loose dirt and detergent
- **disinfection/sanitising**: killing germs using, for example, bleach or scalding hot water
- **final rinse**: removal of any chemical disinfectant such as bleach
- **drying**: allowing hot things to air dry is best

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GOOD HYGIENICAL HANDLING PRACTICES**Surfaces and utensils cleaning**

Wash cutting boards, knives, utensils and counter tops in **hot soapy water** after preparing each food item and before going on to the next one.



Consider using **paper towels** to clean up kitchen surfaces. Or, if using cloth towels, consumers should wash them often in the hot cycle of the washing machine.

**GOOD HYGIENICAL HANDLING PRACTICES****Pets**

Pets as well as wild animals carry harmful germs on their bodies and in their bowels. Also dirt can be placed onto food from their feet. Hairs and feathers may end up in the food.

Pets must always be kept out of food rooms.



GOOD HYGIENICAL HANDLING PRACTICES

Rubbish must be quickly removed from the kitchen. Care must be taken to avoid contamination of food from waste either directly or indirectly.

Use good quality bins with tight fitting lids for food wastes.

Using bin liners will make the job of emptying easier and reduce the amount of cleaning.

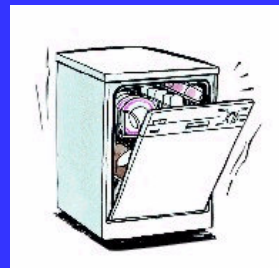


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DISH AND GLASS WASHING MACHINES

The machine must work properly so that the scalding rinse water temperature makes sure that not only the utensils are virtually sterile but also they are hot enough to air dry therefore avoiding use of drying clothes which can recontaminate them.



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MYTH NO. 1

"If it tastes okay, it's safe to eat."

Fact: If you trust your taste buds to detect unsafe food, you may be in trouble.

Many consumers believe a food is safe to eat if it tastes, smells, or looks all right. Taking even a tiny bite to test the safety of a questionable food can be dangerous



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MYTH NO. 2

"We've always handled our food this way and nothing has ever happened."

Fact: If you use past experiences to predict whether a food is safe, you may have a foodborne illness in your future.

Many incidents of foodborne illness went undetected in the past. In the past, the chicken served at night might have been walking around the backyard that afternoon! Today, your food may travel halfway around the world before it arrives at your table. Food often passes from producer to processor to retailer before it reaches you. The opportunities for mishandling are higher.

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MYTH NO. 3

"I sampled it a couple of hours ago and never got sick, so it should be safe to eat."

Although you may feel all right a few hours after eating a food, the food may still be unsafe for you and others to consume. A foodborne illness may develop within a half hour to a few days. If sickness occurs 24 hours or longer after a food is eaten--which is often the case--it is frequently blamed on other causes.

Another consideration: While you might safely eat a food, someone with a weaker immune system could be more susceptible to a foodborne illness.



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AND FOR THOSE WHO STILL BELIEVE IN FOOD SAFETY MYTHS

Many people will not change their minds about food safety misconceptions until they--or a family member--become sick. This is somewhat like saying "I'll buy insurance after my house burns down." You only need an extra minute or two to wash hands, clean a cutting board, cook a food to a recommended temperature, and so on. This is a small price to pay to help ensure that you, family members, and friends avoid food-borne illness!



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Fresh fruits and vegetables

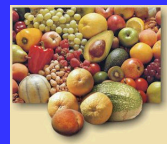
- Often, foodborne illnesses are due to fresh fruits and vegetables, because of:
 - **origin** (ground, irrigation water, pesticides, etc.)
 - consumption without **heat** treatment



Fresh fruits and vegetables

Some advices:

- Buy fresh products (brigh color, without brown edges, ...)
- Absence of ground particles or other residues
- Store them at the lower side of the fridge (particular consideration of bananas, etc.)
- Avoid putting them in plastic bags
- Low temperatures reduce loss of vitamins (specially C vit)



Fresh fruits and vegetables

Some advices about washing:

- Under clean, running water, **rub** fruits and vegetables briskly with your hands to remove dirt and surface microorg.
- Wash produce **just before** serving - not before storing, as washing will cause produce to spoil faster
- Better wash them in **big** pieces (before cutting)
- Produce with a firm skin or hard rind like carrots, potatoes, or melons may be scrubbed with a vegetable brush and water.



Fresh fruits and vegetables

Some advices about washing:

- Discard the outer leaves of leafy vegetables such as lettuce and cabbage before washing.
- Always wash squash and melons, even if you don't eat the rind or skin because when cut, dirt or bacteria that is on the outer surface can be transferred to the inner flesh



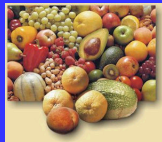
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Fresh fruits and vegetables

Some advices about washing:



- **DO NOT** wash produce with detergent or bleach solutions. Fruits and vegetables are porous and can absorb the detergent or bleach, which is not intended for use on foods and consuming them on fruits and vegetables have the potential to make you sick.



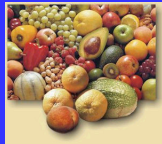
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Fresh fruits and vegetables

- Better peeling fruits to avoid pesticides consumption



Meat

Chemical risks:

- Growth promoters, even antibiotics (develop resistences)
- Micotoxins in fodders

Microbiological risks:

- Asintomatic animals
- Control specially Salmonella and Campylobacter



Meat

- Make sure meat and poultry products, whether raw or pre-packaged, are **refrigerated** when purchased.
- At home, refrigerate or freeze meat and poultry immediately
- **Avoid interrupted cooking.** Never refrigerate partially cooked products to later finish cooking on the grill or in the oven. Meat and poultry products must be cooked thoroughly the first time and then they may be refrigerated and safely reheated later.



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Meat

- Fresh meat should be consumed within **2-4 days**.
- Be care with minced meat!
- Firm consistence, typical meat color (red, not brown), fat must be white and not yellowish



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Seafood

Chemical risks:

- Biotoxins (histamine: time/temp excess)
- Toxins in molluscs (generated by alga; thermoresistant)
- Environmental residues (mercury, lead, dioxins, polychlorinated biphenyls, nitrosamines)

Microbiological risks:

- Clostridium botulinum, Vibrio, Listeria (may be found in just captured fish)
- Salmonella, Shigella, E. Coli, Staphylococcus aureus from handling



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Seafood

Viruses:

- Specially related with raw mollusc consumption
- Hepatitis A, Norwalk virus
- 90°C treatment during 1,5 min.

Parasites:

- Anisakis and Diphyllobothrium latum
- Larva is ingested when raw or undercooked fish is eaten.
- 55°C cooking during 1 min or -20°C freezing during 1 day will kill them (anyway allergic reaction caused by dead parasites could affect some people).



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Seafood

Generally, seafood is very safe to eat, but raw or undercooked seafood can be unsafe

- Always **wash** hands, cutting boards, dishes, and utensils with hot, soapy water before and after they come in contact with seafood.
- **Separate** seafood from other foods in your grocery-shopping cart, refrigerator, and while preparing and handling foods at home.



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Seafood

- If possible, use one **cutting board** for raw meat and seafood products and another one for fresh fruits and vegetables.
- Place cooked food on a **clean plate**. If you put cooked food on an unwashed plate that previously held seafood, bacteria from the raw food could contaminate the cooked food.
- Don't use sauce that was used to marinate seafood on cooked foods, unless it is boiled before applying.



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Seafood

- Buy only **fresh** seafood that is refrigerated or properly iced.
- Always **cook fish thoroughly**. Cooking fish until it's opaque and flaky helps destroy any existing pathogenic bacteria that may be present.
- All consumers should avoid eating **raw** oysters or shellfish. People with liver disorders or weakened immune systems are especially at risk for getting sick



Seafood

How can I tell if fish is fresh?

*Perfectly fresh fish and shellfish have virtually **no odor**. It's only when seafood starts to decompose that it takes on a "fishy" aroma. Fresh fish will have these signs:*

- *The eyes are clean and bulge a little.*
- *Whole fish and fillets have firm and shiny flesh and bright, red gills free from slime.*

Seafood

Fresh fish will have these signs (cont.):

- *The flesh springs back when pressed.*
- *There is no darkening around the edges or brown or yellowish discoloration.*
- *The fish smells fresh and mild, not "fishy" or ammonia-like*



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Milk and Dairy products

Unpasteurized milk and dairy products may contain harmful pathogens and are not safe to eat, drink, or use in making foods. Today, milk and other dairy products sold in interstate commerce are pasteurized (heat-processed to kill pathogenic bacteria).



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Milk and Dairy products

Chemical risks:

- Pesticides
- Policlorated biphenils
- Antibiotics and other animal medicins
- Micotoxins
- Metals

Microbiological risks:

- Salmonella spp.
- Mycobacterium tuberculosis, Brucella, Staphilococcus au.



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Milk and Dairy products

Don't drink any beverages or eat any foods that contain **unpasteurized milk**. Read the labels to make sure the drink or food has been pasteurized.

Pasteurization kills pathogenic bacteria found in milk, but it may not kill all the spoilage bacteria. To prevent the growth of bacteria, **keep milk and milk products refrigerated**.

Milk that's processed using the Ultra High Temperature (UHT) method (shelf-stable milk) can be stored at room temperature for the time period indicated on the label. After opening, the product must be refrigerated



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Eggs

- Nutrients that make eggs a high-quality food for humans are also a good growth medium for bacteria
- In the rare event that an egg contains bacteria, you can reduce the risk by proper chilling and eliminate it by proper cooking

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Eggs

- Other types of microorganisms could be deposited along with dirt on the **outside** of an egg
- You can further protect yourself and your family by discarding eggs that are **unclean, cracked, broken** or **leaking**
- Do not wash eggs before storing them

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Eggs

- **Wash** hands, utensils, food preparation areas, and equipment with hot, soapy water *before* and *after* they come in contact with raw eggs and egg-containing foods.

To kill any bacteria that may be present, **cook** eggs until the yolks and whites are firm. Cook fried eggs for 2 to 3 minutes on each side. Cook scrambled eggs until they're firm throughout. Boil eggs for 7 minutes.

When preparing cakes, pies, or homemade cookies, **don't taste the batter, filling, or raw cookie dough** if it contains raw, unpasteurized eggs.



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1. Choose foods processed for safety

While many foods, such as fruits and vegetables, are best in their natural state, others simply are not safe unless they have been processed. For example, always buy pasteurized as opposed to raw milk and, if you have the choice, select fresh or frozen poultry treated with ionizing radiation. When shopping, keep in mind that food processing was invented to improve safety as well as to prolong shelf-life. Certain foods eaten raw, such as lettuce, need thorough washing.



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2. Cook food thoroughly

Many raw foods, most notable poultry, meats, eggs and unpasteurized milk, may be contaminated with disease-causing organisms. Thorough cooking will kill the pathogens, but remember that the temperature of all parts of the food must reach at least 70 °C. If cooked chicken is still raw near the bone, put it back in the oven until it's done - all the way through. Frozen meat, fish, and poultry, must be thoroughly thawed before cooking.



3. Eat Cooked foods immediately

When cooked foods cool to room temperature, microbes begin to proliferate. The longer the wait, the greater the risk. To be on the safe side, eat cooked foods just as soon as they come off the heat.



4. Store cooked foods carefully

If you must prepare foods in advance or want to keep leftovers, be sure to store them under either hot (near or above 60 °C) or cool (near or below 10 °C) conditions. This rule is of vital importance if you plan to store foods for more than four or five hours. Foods for infants should preferably not be stored at all. A common error, responsible for countless cases of foodborne disease, is putting too large a quantity of warm food in the refrigerator. In an overburdened refrigerator, cooked foods cannot cool to the core as quickly as they must. When the centre of food remains warm (above 10 °C) for too long, microbes thrive, quickly proliferating to disease-causing levels.



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5. Reheat cooked foods thoroughly

This is your best protection against microbes that may have developed during storage (proper storage slows down microbial growth but does not kill the organisms). Once again, thorough reheating means that all parts of the food must reach at least 70 °C.



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6. Avoid contact between raw foods and cooked foods

Safely cooked food can become contaminated through even the slightest contact with raw food. This cross-contamination can be direct, as when raw poultry meat comes into contact with cooked foods. It can also be more subtle. For example, don't prepare a raw chicken and then use the same unwashed cutting board and knife to carve the cooked bird. Doing so can reintroduce the disease-causing organisms.



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7. Wash hands repeatedly

Wash hands thoroughly before you start preparing food and after every interruption - especially if you have to change the baby or have been to the toilet. After preparing raw foods such as fish, meat, or poultry, wash again before you start handling other foods. And if you have an infection on your hand, be sure to bandage or cover it before preparing food. Remember, too, that household pets - dogs, cats, birds, and especially turtles - often harbour dangerous pathogens that can pass from your hands into food.



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8. Keep all kitchen surfaces meticulously clean

Since foods are so easily contaminated, any surface used for food preparation must be kept absolutely clean. Think of every food scrap, crumb or spot as a potential reservoir of germs. Cloths that come into contact with dishes and utensils should be changed frequently and boiled before re-use. Separate cloths for cleaning the floors also require frequent washing.



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9. Protect foods from insects, rodents, and other animals

Animals frequently carry pathogenic microorganisms which cause foodborne disease. Storing foods in closed containers is your best protection.



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10. Use safe water

Safe water is just as important for food preparation as for drinking. If you have any doubts about the water supply, boil water before adding it to food or making ice for drinks. Be especially careful with any water used to prepare an infant's meal.



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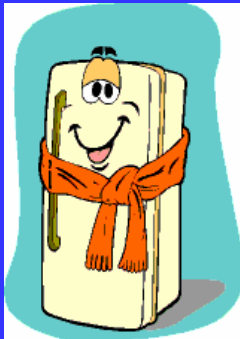
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STEP ONE: YOUR REFRIGERATOR

Keep your refrigerator at 4 °C or less



A temperature of 4 °C or less is important because it slows the growth of most bacteria. The fewer bacteria there are, the less likely you are to get sick from them.



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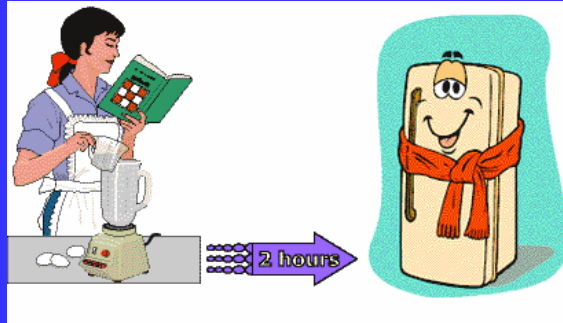
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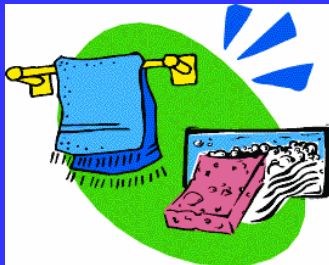
STEP TWO: PERISHABLE FOODS

Refrigerate cooked, perishable food as soon as possible within two hours after cooking



STEP THREE: KITCHEN DISHCLOTHS AND SPONGES

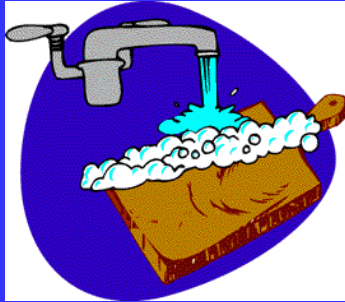
Sanitize your kitchen dishcloths and sponges regularly



A contaminated dishcloth can house millions of bacteria after a few hours. Consider using paper towels to clean up and then throw them away immediately. Wash hands carefully after handling raw meat.

STEP FOUR: CUTTING BOARDS

Wash your cutting board with soap and hot water after each use



Never allow raw meat, poultry, and fish to come in contact with other foods. Washing with only a damp cloth will not remove bacteria. Periodically washing in a bleach solution is the best way to prevent bacteria from remaining on your cutting board.

STEP FIVE: COOKING MEATS

Cook ground beef, red meats and poultry products to a safe internal temperature. Use a meat thermometer



Cooking food, including ground meat patties, to an internal temperature of at least 72°C usually protects against foodborne illness.

When cooking meat, don't rely on the internal color of the meat to be sure it is safe to eat (some ground meat may turn prematurely brown before a safe internal temperature 72°C is reached)

STEP SIX: MIXES CONTAINING EGG

Don't eat raw or lightly cooked eggs



Many cookbooks have recipes for ice cream, mayonnaise and some desserts that call for raw eggs. These recipes are no longer recommended because of the risk of *Salmonella*. The commercial versions of these products are made with pasteurized eggs (eggs that have been sufficiently heated to kill bacteria) and are not a food hazard.

Remember--this means no sampling of cake batters and cookie dough before they are **baked!**



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STEP SEVEN: KITCHEN COUNTERS

Clean kitchen counters and other surfaces that come in contact with food with hot water and detergent or a solution of bleach and water



Bleach and commercial cleaning agents are best for getting rid of pathogens. Hot water and detergent do a good job, too, but may not kill all strains of bacteria. Keep sponges and disclothes clean because, when wet, these materials harbor bacteria and may encourage their growth

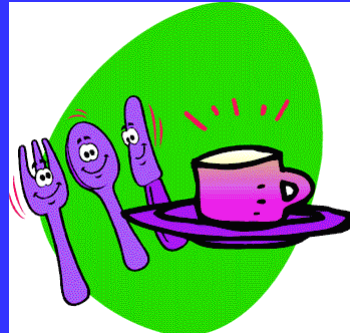


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STEP EIGHT: WASHING DISHES BY HAND

Allow dishes and utensils to air-dry in order to eliminate re-contamination from hands or towels

When washing dishes by hand, it's best to wash them all within two hours-- before bacteria can begin to form.



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STEP NINE: WASHING HANDS

Wash hands with soap and warm water immediately after handling raw meat, poultry, or fish

Wash for at least 20 seconds before and after handling food, especially raw meat. If you have an infection or cut on your hands, wear rubber or plastic gloves



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STEP TEN: DEFROSTING MEATS

Defrost meat, poultry and fish products in the refrigerator, microwave oven, or cold water that is changed every 30 minutes

Cook microwave-defrosted food immediately after thawing.

Changing water every 30 minutes when thawing foods in cold water ensures that the food is kept cold, an important factor for slowing bacterial growth on the outside while inner areas are still thawing.

