

Food Safety
Advice for

Packed Meals



Packing meals to schools and workplaces is a common practice for us to enjoy homemade dishes conveniently. However, these meals may be stored or transported at unsafe temperatures for some time before consumption, making them susceptible to contamination and harmful bacterial growth. If these meals are not stored properly, disease-causing bacteria can multiply to dangerous levels or produce toxins, leading to food poisoning.

However, certain venues such as schools may not have access to refrigeration or reheating devices. Therefore, it is important to implement appropriate measures based on the setting where the meal is consumed to ensure food safety.

1 General Advice

Adhere to the “Five Keys to Food Safety” in the course of meal preparation and during transportation:



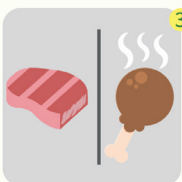
Choose

Choose safe raw materials



Clean

Keep hands and utensils clean



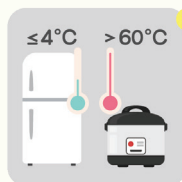
Separate

Separate raw and cooked food



Cook

Cook thoroughly



Safe temperature

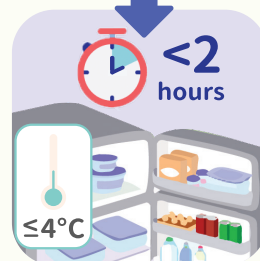
Keep food at safe temperature

In addition, please observe the following advice:

- Susceptible populations including **the elderly, pregnant women, people with weakened immunity, infants and young children** should avoid consuming raw or undercooked foods.
- For **individuals with food allergies**, watch out for allergens when selecting food ingredients by carefully reading the ingredient lists on prepackaged food products.
- Keep prepared food **away from dangerous temperatures between 4°C and 60°C**, where most bacteria that cause diseases grow and multiply quickly.

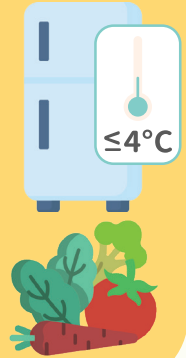
2 Preparation

- Cook food thoroughly with core temperatures reaching at least 75°C.
- If chilling is required, cool cooked food promptly, pack it in a clean, insulated container and store it in the refrigerator at 4°C or below within 2 hours.
- If only part of a pre-cooked meal (e.g. dinner a night before) is used for packing, it is preferable to transfer and cool that portion of food in a separate container before the meal to avoid contamination on the table.



Nitrite in Pre-cooked Vegetables Stored Overnight – Should I Be Concerned?

Vegetables are an essential component of a healthy diet. There have been concerns about the potential health risks (e.g. nitrite produced by bacteria) associated with consuming pre-cooked vegetables left overnight. The Centre for Food Safety conducted a risk assessment study on the nitrite levels in cooked vegetables. The study found that no nitrite was detected in the cooked vegetables that were stored at refrigerated temperatures (0 to 4°C) overnight, whereas the nitrite level increased in cooked vegetables left at room temperature. Therefore, if packing pre-cooked vegetables, **proper storage at safe temperatures** is the key to inhibiting bacterial growth and subsequent nitrite formation in cooked vegetables.



3 Packing, Transportation and Storage

- Pack meals right before leaving home.
- Keep packed meals at a safe temperature when commuting:

Hot foods

- For hot foods such as cooked or reheated meals, they should be kept at or above 60°C in appropriate insulated containers.
- Cook or reheat food thoroughly with core temperatures reaching at least 75°C before packing it into an insulated container.



Tips for Using Insulated Containers

Insulated containers such as insulated bottles and meal boxes help to maintain food at a safe temperature. In general:

- Fill the insulated container with boiling water, wait a few minutes, then drain the hot water.
- Transfer thoroughly cooked, piping hot food to the pre-heated container immediately after preparation.
- Seal the container tightly and avoid opening it until mealtime to avoid heat loss.
- Follow the manufacturer's instructions for optimum hot-holding effect.



Cold foods

- For cold foods such as chilled pre-cooked meals, ham sandwiches, salads and other cold perishable foods, they should be kept at or below 4°C in an insulated meal box or bag combined with at least two cold sources, such as frozen gel packs or a frozen gel pack along with a frozen boxed beverage or frozen bottle of water, to keep food cold and safe until mealtime. Place the cold sources on the top and bottom of the perishable food items inside the insulated bag.
- Put the cold food into a refrigerator if available at the venue upon arrival.
- Otherwise, avoid packing cold perishable foods if cold-holding before mealtime is not possible.

Some examples of shelf-stable foods that you can consider for packed meals:

- Biscuits
 - Cereal, nuts, cereal bars
 - Bakery products (without fillings)
 - Whole and dried fruits
 - Unopened cans of meat and fish
 - UHT-treated beverages
- Make sure all cutleries, containers, utensils and food bags are clean before use.

4 Consumption

- Once the food is exposed to room temperature for some time, finish the food as soon as possible. Discard any food that has been left at room temperature for more than 4 hours, and do not refrigerate or consume it.
- If reheating is required, ensure that the food is thoroughly reheated until steaming hot. If a food thermometer is available, check the core temperature of the food to ensure that it has reached at least 75°C before consumption. **Do not reheat the food more than once.**
- If a microwave oven is used for reheating, stir the food about halfway through to facilitate even heat distribution. Cook frozen convenience meals as directed on the packaging.
- Maintain proper hand hygiene (e.g. hand washing) before eating.
- Discard any leftover food that has been in the meal box for too long and has not been kept at a safe temperature into rubbish bins with covered lids.
- Clean all reusable cutleries, utensils, containers and food bags with hot, soapy water after the meal.

