



Tips for car camping or bushwalking

Food poisoning is no fun at the best of times, but it can be a major problem if you are camping or bushwalking and away from the convenience of toilets, hand basins and medical help. It is more prevalent in warm weather but can happen at any time of the year. Prevention is always better than cure and you can minimise the risk of getting food poisoning by being especially cautious about choosing the food you bring along, storing it at the correct temperature and being particular about how you handle it.

Choosing food to bring with you

The foods you choose for your camping or bushwalking trip will depend on the type of food storage you have available, how much you can carry and whether safe water is available to add to foods.

Recommended foods:

- Dry, UHT and canned products. Bushwalkers usually rely on dried or freeze-dried foods which are safe and have the advantage of low weight and bulk. If you are bushwalking, pack your dried foods so they won't get wet if it rains.
- Canned food is safe to keep at room temperature but it tends to be too heavy to carry in any quantity when bushwalking.
- Hard cheeses can be taken without refrigeration, or in an insulated cooler, but avoid taking fresh, unmatured soft cheeses unless you have access to refrigeration.
- Fresh fruit and vegetables can be taken, but in warm weather some will deteriorate quickly so you may need some extra dried or canned varieties for later use. Most foods in cans or jars cannot be stored out of refrigeration once opened. Make sure that you buy containers small enough so that all the food is used up in one meal.

Foods you can safely take with you

Dried foods	Canned and packaged foods	Other foods (limited shelf life)
Rice	Canned vegetables & fruit	Bread
Pasta	Canned or packet soups	Cake
Powdered milk	Canned or packet meals	Fresh fruit
Dried fruit and vegetables	Baked and other canned beans	Fresh vegetables
Nuts	Spaghetti	Eggs

Breakfast cereals	Pasta and other sauces	Butter and margarine
Biscuits/crackers	Pickles and relishes	Hard cheese
Freeze dried foods	Canned meats and spreads	
Instant noodles	Canned fish	
Flour	Honey and jam	
Fruit bars	Long life milk, cream and custard	
Tea, coffee and other powdered drinks	Long life stocks and soups	
Custard powder	Long life fruit juices	
Packet meals	Processed cheese	
Confectionary		
Stock cubes, herbs and spices		
Tubes of condensed milk		
Jerky and other dried meats		

Extra precautions:

- Perishable foods such as raw and cooked meats, poultry, chilled ready to eat foods, dairy foods and cooked eggs are generally unsuitable for camping holidays unless you have access to a refrigerator. If you have a cooler that depends on ice or ice bricks for cooling, you should not keep such foods, for more than one day unless the cooler is able to hold the temperature of the food at or below 5 degrees Celsius.
- If you are relying on dried food, make sure that you have access to enough safe water to rehydrate any food that will not be thoroughly cooked before consumption. Remember, water, even in remote and pristine wilderness is not necessarily safe and can be contaminated by animal faeces and naturally occurring parasites like *Giardia*. Unless you are sure that the water is safe, you should boil all water for at least one minute (a little longer if you are at high altitudes), or disinfect it in some way before drinking it or using it in powdered drinks or other uncooked foods.
- Avoid creating leftovers: discard them unless you can store them at or below 5 degrees Celsius until they are eaten.
- If you are going bushwalking overnight, you can take a frozen pre-prepared meal (eg stew or casserole) or frozen raw meat for cooking, provided that you eat it on the first night. Package the raw meat well so that the juices do not contaminate the rest of your food and bury the package deep in your backpack for extra insulation. Cook or reheat well.
- Always defrost any frozen food in a cooler or refrigerator when camping.

Using coolers and eskies

- Insulation properties and ease of cleaning are the two most important factors in choosing a cooler.

- Don't pack food if it has just been cooked or is still warm. Coolers cannot cool food enough to prevent bacteria growing.
- Meat and chicken juices can easily leak onto other food in a cooler – make sure you package any raw meat and chicken in leak proof containers and place them on the bottom of the cooler and away from ready to eat food.
- To keep foods cool use freezer bricks, frozen gel packs or containers with frozen water (a brine solution of 5 parts water to one part of salt freezes at a lower temperature than water). Many campgrounds have fridges in camp kitchens where you can refreeze bricks and gel packs. Do not use loose ice unless foods are stored in water proof containers. This will prevent ice contaminating foods in the cooler as well as wetting the food. Periodically you should pour out the water formed and replace it with fresh ice.
- Pack as much as you can in the frozen state – e.g. milk, juices etc. These will help keep the other foods cool but remember, unless you have refrigeration they will need to be eaten as they thaw out.
- Organise your food in the cooler to limit the times the cooler is opened. Consider using separate coolers for food and drinks if the cooler will constantly be opened for drinks.
- If possible, fill any excess space in your cooler with frozen drinking water. The fuller the cooler, the longer it will hold its temperature.
- When you have chosen your camping site, get your cooler out of the car into the shade as soon as possible. Keep it out of the sun. Take a hint from our ancestors and cover the cooler with a wet-bag to promote evaporative cooling.

Car fridges and electric coolers

Portable fridges and electric coolers are also now available and may be useful if you are travelling by car. A 'Choice' magazine study of 'car fridges' found that, in some models, setting the temperature and maintaining it was difficult when the environment temperature changed. Food could, therefore, freeze or become too warm. (See www.choice.com.au)

- Electric coolers are not refrigerators and have a limited cooling capability (usually about 30 degrees C below the environment temperature). Therefore, they can only be used for short periods of storage in hot weather.
- It's a good idea to have a fridge thermometer in your cooler or portable fridge to check on the temperature.
- Make sure the power supply is constant. When camping, you might need to find an alternate power supply so your car battery isn't drained.

Cooking and reheating

- Always cook chicken, stuffed meats, sausages, liver and minced meat such as hamburger so that the juices run clear – there should be no hint of pink in the centre. Steaks, chops and whole pieces of meat can be cooked to preference.
- Use a clean plate and clean utensils for cooked meat. Never re-use the same ones you used for the raw meat without washing them.
- When reheating food, make sure that you heat it to steaming hot.

Drinking water and water for rehydrating food to be eaten without further cooking

Boil Water vigorously for at least one minute (a little longer if you are at high altitudes). Boiling water is the most efficient method of disinfection, chemical methods may not kill some parasitic organisms (giardia amoeba, and cryptosporidium).

You can also use:

Chlorine and iodine water disinfection tablets purchased from pharmacies, camping and sports stores. Use in accordance with the manufacturers' directions.

Tincture of iodine can be used by adding 5 drops of 2% Tincture of Iodine to 1 litre of clear water. If the water is cloudy, add 10 drops. Let the solution stand for 30minutes before drinking. If you know that parasites may be present in the area, allow the water to sit for 15 hours before drinking eg over night. If iodine-disinfected water is the only water available, it should only be used for a few weeks.

Portable water filters using reverse osmosis can be used but may be too large or expensive to take camping or hiking. Follow manufacturers' instructions on appropriate use.

Camp Hygiene

- Keep utensils used for preparing raw foods well away from ready-to-eat foods. Wash them thoroughly in between use and remember to wash your hands prior to handling food.
- Always wash hands and dry them thoroughly after going to the toilet as it is just as important when you are camping as it is when you are at home. Use disposable wipes if necessary. Don't forget to take this rubbish back out with you when you leave.
- Cover food and store food off the ground to protect it from insects, animals and dust.
- Keep your campsite clean. Birds and animals can be a source of food poisoning bacteria so don't leave food, dirty utensils, food scraps and rubbish lying about to attract them. Food scraps and rubbish should be kept in a bin or bag that can be sealed. Keep utensils, cutlery and cooking equipment clean to help prevent birds and animal from being interested in your campsite.
- You need to dispose of rubbish and waste water carefully because they can attract pests and contaminate food and water. All rubbish should be but in bags and kept away from food. Tip wash-up and other waste water in any designated site or at least well away from water sources such as lakes and rivers.

List of Useful Food Safety Supplies for Car Camping and Backpacking

Food Safety Equipment	Purpose
Cooler, Car fridge, Electric cooler, Esky, cooler bag	To keep perishable foods at a safe temperature
Fridge Thermometer	To check temperature of cooler, car fridge, electric cooler or esky if you are unsure if it is working properly
Food Storage Containers	To pack and store food safely preventing leakage and pests from accessing food
Disposable plates and utensils	If items can't be washed in between uses
Disposable wipes or antibacterial hand gels	For use if water is not available for hand washing
Soap, dish washing detergent, paper towels	For washing and drying hands and food preparing equipment
Chlorine or iodine water disinfection tablets, tincture of iodine, or portable water filter	To disinfect water for drinking or for use in food preparation
Adequate rubbish bin/bags that can be sealed	To store food scraps and rubbish., preventing birds and animals from scavenging around camp site

When choosing your site:

In remote locations -	In caravan parks and camping grounds -
Select a latrine site carefully, at least 50m from campsites and any water source. Bury waste a minimum of 300mm below the ground surface	Use the camper's kitchen sink for cleaning food utensils and cutlery. Use hot water and bring a supply of detergent and a universal plug
Use disposable wipes or antibacterial hand gels or lotions to wash your hands if water is unavailable	Bring your own supply of soap, detergent, laundry powder and paper towels
Carry all rubbish until it can be disposed of at an appropriate location	Place all rubbish and waste food in bins