



Outdoor kitchens are fraught with potential danger (really). Typically not life-threatening danger but definitely trip ending danger from cuts, burns, and diarrheal illnesses (gastroenteritis). Aside from sunburn, most burns on outdoor trips happen in or near the kitchen with the vast majority of those due to hot water; the rest tend to involve alcohol and camp fires. Deep cuts occur on a hand when someone holds a bagel or cheese in one hand and wields a knife with the other. Poor hygiene leads to diarrhea.

When you think about it, it's pretty silly to have to leave a trip because of a cut, burn, or an intestinal illness that requires advanced care, especially with a little forethought and planning these type of injuries can be easily avoided. What follows is a summary of good management techniques for outdoor and camp kitchens that focuses on avoidance.

- First up: make sure your stove is in good condition, you know how to light it safely, and trouble shoot problems. If you use a cooking fire or coals, make sure you know how to safely light them, monitor them, and put them out.
- Many hand burns are the result of someone holding out their mug and someone else attempting to fill it with a hot drink or water (coffee, tea, hot chocolate, etc.). This is easy to avoid by sitting the mug on a flat surface on or near the ground before pouring.
- Quite a few hot water burns are also the result of poor stove and/or platform stability. This can occur from too big a pot on too small a stove, poor stove design/choice, a pot placed on snow or ice that melts during cooking, a stove placed on shifting sand, an backpacking stove placed on a rickety picnic table with the cook sitting in front of it, or a combination of all of the above. Setting a backpacking stove on a rock or table rather than the ground can result in upper body and leg burns if accidentally knocked over (or other people suddenly sit down causing the picnic table to rock). You'll notice that all stoves designed for car camping—cooking on tailgates and picnic tables—are big, boxy, and quite stable compared to their backpacking cousins. The solutions here are also pretty easy. Buy a backpacking stove with stability in mind, place it on flat ground when in use, size the pot to the stove, and keep your cooking area, especially the stove(s) out of the camp traffic patterns. If cooking on a picnic table, use a stove designed for that purpose and place it at the end of the table so the cooks have to stand; it's easy to move out of the way when standing. Better yet, place appetizers and h'orderves on a separate table away from the cooks and stove. Keep water levels in pots well below the top of the pot.
- Another common source of hot water burns is poor handles on cooking pots that

bend or twist when the pot or pan is lifted. The problem is exacerbated by overfull pots. The solution: make sure the pots you purchase have sturdy handles.

- People often receive a small but uncomfortable burn when they pick up a pot without protection (glove, pot holder, etc.) Unfortunately this is all too common in the backcountry where pot handles typically fall to one side of the pot or the other and heat up quickly (but look cool).
- Swinging the coffee pot in a large circle over your head to settle the grounds “cowboy style” looks cool and can be impressive, and is often yet another source of hot water burns that typically involve the head, neck, and back and are therefore more serious. Ouch!
- Going barefoot or wearing sandals rather than wearing boots or shoes in the kitchen can result in rather nasty foot burns if your spaghetti water—with or without the spaghetti—ends up on them. As you might expect this tends to happen on warm-weather sea kayaking, river trips, and beach parties.
- Then there are the uninformed who pour water onto a hot greasy pan to clean it. The resulting “explosion” throws hot grease and/or water everywhere.
- Cooking over fires present additional opportunities for burns. While it’s best to cook over coals, many people don’t. Smoke makes it challenging to see what you are doing and easy to make a mistake. Popping embers and snapping flames around the coffee pot encourage quick movement...and spills. A bed of coals can make an unstable platform for Dutch Ovens. And, coals removed from the fire for use with Dutch Ovens need to be returned to the fire after use, not left in the open for unsuspecting feet to tromp on. If possible, try and keep cooking fires/coals separate from aesthetic ones.
- Finally there are those that drink and insist on playing fire games...or simply fall drunk into the fire after everyone else has gone to bed. Historically hunters and river runners are rather famous for these type of incidents; fortunately, the number of burns attributed to this type of foolishness has declined rapidly in the last few decades.

To Summarize:

- Check your stove and connections before and after each use. Store fuel in a separate location outside the kitchen.
- Make sure the cooks are familiar with stove use. If you are instructing students in how to cook, place yourself out of the way in a place where you can monitor everything in the kitchen and intervene to prevent an accident. Be vigilant!
- Place your kitchen away from the camp traffic patterns. If your organization caters to young children, run a bright, flagged rope (or lightweight plastic fencing) around the kitchen at waist height.
- Assign cooks and keep everyone else out of the kitchen. If you have dogs with you, tie them up far from the kitchen. Keep young children out of the kitchen unless they are a cook-in-training and closely supervised. Make and set appetizers and h’orderves in a prearranged eating place separate from the kitchen to encourage trip members to stay out of the kitchen.

- Choose a stove with solid supports for the type of trip you are taking: backpacking, river trips with raft support, car camping, etc.
- Choose your cookware with your stove and party size in mind. Size your pots to your stove(s). Make sure the handles of your pots and pans won't bend or twist when the pot is full (don't over fill). Bring heavy leather gloves or pot mitts for handling hot pots and handles.
- Fill cups and mugs when they are sitting on a table or other flat surface, NOT when someone is holding them.
- Avoid sitting in front of a stove; stand or squat so you can quickly move out of the way if necessary.
- Place stoves at the end of picnic tables (rather than on the side) and stand to operate them. Wear shoes. NO bare feet or sandals.
- If cooking on a fire or with charcoal, separate the cooking fire from an aesthetic one. Do not place coals or Dutch Ovens in the path of camp traffic.
- Limit the amount of alcohol consumed at any one time.
- Make sure all pots have cooled before cleaning them.
- Carry and use a cutting board. Remember to bring a small one for lunch

Kitchen Hygiene

- Wash hands before cooking or eating. Maintain hand washing stations in the kitchen and field toilet.
- Avoid sharing water bottles.
- Avoid reaching directly into snack bags. Instead, pour snacks into clean hands.
- Keep cutting boards, cooking pots, dishes, utensils and food preparation areas clean by washing them with soap and water and allowing them to dry thoroughly.
- Thoroughly cook meats and seafood. Cooking to a temperature of 180°F (82°C) will kill disease-causing organisms. Use a meat thermometer when cooking roasts or whole turkeys in a Dutch Oven to be sure food is cooked to a safe temperature.
- Keep raw food away from cooked food. Avoid cross-contamination by using separate plates for the cooked and the raw food.
- Drink purified water and, if possible, use purified water for washing hands and cleaning food preparation areas.
- Don't let cooked food sit at a warm temperature; to slow bacterial growth, promptly pack in shallow containers and cool at or below 4°C/40°F. If you cannot safely store cooked food, throw it out.
- Thoroughly wash raw vegetables (carrots, lettuce, tomatoes, etc.) and soak in vinegar or Grapefruit Seed Extract for 30 minutes to kill bacteria.
- Wash melons and similar fruits and vegetables to avoid transferring any dirt or contamination from the rind or skin to the inside of the fruit during cutting or peeling.
- Do not eat spoiled food, or any food that has an unpleasant smell or taste. When in doubt, throw it out.