



▶ **FOOD SAFETY: CLEAN, SEPARATE, CHILL, AND COOK**



▶ **FOIL PACKET COOKING TIPS AND FOIL PACKET RECIPES**



▶ **DUTCH OVEN COOKING TIPS AND DUTCH OVEN RECIPES**

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## *Keep Your Food Safe While Enjoying the Great Outdoors*

With the cold winter we had this year, we are looking forward to getting back outdoors and enjoying the fresh air by camping, boating, or just walking around in the solitude and beauty of nature. While we enjoy nature with our family and friends, it is especially important to plan carefully to avoid food-and water-borne illness. One meal and some snacks might be all that's needed for a short hike, but planning meals for a longer hike or camping trip requires more thought. You want to choose foods that are light enough to carry yet keep at safe temperatures. However, whether you are in your kitchen or enjoying the great outdoors, there are food safety principles that never change.

### **KEEP HOT FOODS HOT AND COLD FOODS COLD**



The first principle is to keep foods either hot or cold. Since it is difficult to keep foods hot without a heat source, it is best to transport chilled foods. Refrigerate or freeze the food overnight. For a cold source, bring frozen gel-packs or freeze some box drinks. The drinks will thaw and keep your meal cold at the same time. If you are going on a hike for the day, just about anything will do as long as you can fit it in your backpack and keep it cold – sandwiches, fried chicken, bread & cheese, and even salads – or choose non-perishable foods.

If you are driving to your camp site, you don't have quite as many restrictions. First, you have the luxury of bringing a cooler. To keep foods cold, you'll need a cold source. A block of ice keeps longer than ice cubes. Before leaving home, freeze clean, empty milk cartons filled with water to make blocks of ice, or use frozen gel-packs. Fill the cooler with cold or frozen foods. Pack foods in reverse order. First foods packed should be the last foods used – with one exception: pack raw meat or poultry below ready-to-eat foods to prevent raw meat or poultry juices from dripping onto the other foods or keep them in a separate cooler.

Take foods in the smallest quantity needed (e.g., a small jar of mayonnaise). In the car, put the ice chest in the air-conditioned passenger section, not in the trunk. At the campsite, insulate the cooler with a blanket, tarp, or poncho. When the camping trip is over, discard all perishable foods if there is no longer ice in the cooler or if the gel-pack is no longer frozen.

Most bacteria do not grow rapidly at temperatures below 40°F or above 140°F. The temperature range in between is known as the "Danger Zone." Bacteria multiply rapidly at these temperatures and can reach dangerous levels after 2 hours (1 hour if 90°F or above).



## KEEP IT CLEAN

The second principle is to keep everything clean. Bacteria present on raw meat and poultry products can be easily spread to other foods by juices dripping from packages, hands, or utensils. This is called cross-contamination. When transporting raw meat or poultry, double wrap or place the packages in plastic bags to prevent juices from the raw product from dripping on other foods. Always wash your hands before and after handling food, and don't use the same platter and utensils for raw and cooked meat and poultry. Soap and water are essential to cleanliness, so if you are going some-where that will not have running water, bring fresh water with you. Even disposable wipes will do.

## DON'T FORGET CLEAN WATER

It is not a good idea to depend on fresh water from a lake or stream for drinking, no matter how clean it appears. Some pathogens thrive in remote mountain lakes or streams and there is no way to know what might have died and fallen into the water upstream. Bring bottled or tap water for drinking. Always start out with a full water bottle, and replenish your supply from tested public systems when possible. If you must use water from streams, lakes, & springs, be sure to purify it.

The surest way to make water safe is to boil it. Boiling will kill microorganisms. First, bring water to a rolling boil; continue boiling for 1 minute. Before heating, muddy water should be allowed to stand for a while to allow the silt to settle to the bottom. Dip the clear water off the top and boil. As an alternative to boiling water, you can also use water purification tablets and water filters. The purification tablets – which contain iodine, halazone, or chlorine – kill most waterborne bacteria, viruses, and some (but not all) parasites. Because some parasites & larger bacteria are not killed by purification tablets, you must also use a water filter. Over time purification tablets lose their potency, so keep your supply fresh. Water sanitizing tablets for washing dishes can also be purchased (just don't confuse the two).

## COOKING AT CAMP

First, decide your menu and how you will prepare the food. You'll want to take as few pots as possible (they're heavy!). You can get lightweight cooking gear that nest together, or you can use aluminum foil wrap and pans for cooking.

You need to decide in advance how you will cook. Will you bring a portable stove, or will you build a campfire? Many camping areas prohibit campfires, so check first or assume you will have to take a stove. If you are bringing a camp stove, practice putting it together and lighting it before you pack. If you build a campfire, carefully extinguish the fire and dispose of the ashes before breaking camp. Likewise, leftover food should be burned, not dumped. Be sure to bring soap for your hands and utensil washing. Pack garbage bags for disposing of any trash – and carry it out with you.

## WHAT FOODS TO BRING

If you are backpacking for more than a day, the food situation gets a little more complicated. You can still bring cold foods the first day, but you'll have to pack shelf-stable items for the next day. Canned goods are safe, but heavy, so plan your menu carefully. Advances in food technology have produced relatively lightweight staples that don't need refrigeration or careful packaging. For example: peanut butter in plastic jars; concentrated juice boxes; canned tuna, ham, chicken, and beef; dried noodles and soups; beef jerky and other dried meats; dehydrated foods; dried fruits and nuts; and powdered milk and fruit drinks.

## USE A FOOD THERMOMETER

Another important piece of camping equipment is a food thermometer. If you are cooking meat or poultry on a portable stove or over a fire, you'll need a way to determine when it is done & safe to eat.



Color is not a reliable indicator of doneness, and it can be especially tricky to tell the color of a food if you are cooking in a wooded area in the evening.

When cooking hamburger patties on a grill or portable stove, use a digital thermometer to measure the temperature. Digital thermometers register the temperature in the very tip of the probe, so the safety of thin foods – such as hamburger patties & boneless chicken breasts – as well as thicker foods can be determined. A dial thermometer determines the temperature of a food by averaging the temperature along the stem and, therefore, should be inserted 2 to 2 ½ inches into the food. If the food is thin, insert the probe sideways into the food.

It is critical to use a food thermometer when cooking hamburgers. Ground beef may be contaminated with E. coli 0157:H7, a particularly dangerous strain of bacteria. Illnesses have occurred even when ground beef patties were cooked until there was no visible pink. The only way to insure that ground beef patties are safely cooked is to use a thermometer, and cook the patty until it reaches 160°F.

- Cook all raw beef, pork, lamb and veal steaks, chops, and roasts to a minimum internal temperature of 145°F as measured with a food thermometer before removing meat from the heat source. For safety and quality, allow meat to rest for at least three minutes before carving or consuming. For reasons of personal preference, you may choose to cook meat to higher temperatures.
- Cook all raw ground beef, pork, lamb, and veal to an internal temperature of 160°F as measured with a food thermometer.
- Cook all poultry to a safe minimum internal temperature of 165°F as measured with a food thermometer.

Heat hot dogs to steaming hot, and reheat any leftover food to 165°F as measured with a food thermometer. Be sure to clean the thermometer between uses.

## FOOD SAFETY WHILE BOATING

Keeping food safe for a day on the boat may not be quite as challenging as for a hike, but when you are out on the water, the direct sunlight can be an even bigger food safety problem.



Remember the “Danger Zone”? It is true that bacteria multiply rapidly at warm temperatures, and food can become unsafe if held in the “Danger Zone” for over 2 hours. Above 90°F, food can become dangerous after only 1 hour. In direct sunlight, temperatures can climb even higher than that. So bring along plenty of ice, and keep the cooler shaded or covered with a blanket.

## CLEANUP

When washing hands, dishes and cookware, there are some rules to follow. Keep soapy used/unclean water out of rivers, lakes, streams, and springs, as it will pollute. If you use soap to clean your pots, wash the pots at the campsite, not at the water’s edge. Dump dirty water on dry ground, well away from fresh water. Some wilderness campers use baking soda to wash their utensils. Pack disposable wipes for hands and quick cleanups. You can also buy biodegradable camping soap in liquid & solid forms.



## FOIL PACKET COOKING TIPS

- Use heavy duty foil. You don’t want the foil to rip and have ashes get in your food and your dinner leak out. If your food is heavy and/or you plan to eat directly from the pack, it’s a good idea to double up even on the heavy-duty sheets.



- Spray the side of the foil on which you're going to place the food with cooking spray before adding your ingredients and seal.
- When placing your ingredients on the sheet of foil, always put the meat on the bottom as it takes the longest to cook.
- Cook your foil packet on the fire's coals, not in the fire itself. Ideally, you want the packet on a bed of coals about 2" thick.
- Hard, raw vegetables like carrots and potatoes take a long time to cook. If you don't want to wait, use canned.
- When cooking meat, throw in some high-moisture veggies like tomatoes & onions. This will keep the meat from drying out.
- When it's finished cooking, open your foil packet carefully, as it's full of hot steam!

THE FLAT PACK. The flat pack is best for foods like meat where you're looking for more browning than steaming.

Place the food in the middle of the sheet of foil. If you need to mix ingredients, do so in a separate bowl before transferring to the foil. Tear off a sheet of foil that is about twice as long as the food you'll be wrapping. Bring the long sides together in the center and crease them together, making tight folds until the foil is flat next to the food.

THE TENT PACK. The tent pack provides a pocket of air that allows for greater steaming and is best for foods you want steamed more than browned, like fruits, vegetables, and meat/veggie combos.

Tear off foil twice as long as the food again. Place the food in the middle of the foil. Bring the long sides together in the center and tightly fold them together towards the food. This time, stop folding a few inches before you get to the food, leaving a pocket of space and creating a "tent." Tightly roll up shorter sides, again leaving an inch or so of space between the end of the fold and the food.



## SAUSAGE AND EGGS

- 1 frozen hash brown patty
- 2 eggs, scrambled, uncooked
- 2 frozen sausage patties
- Spices and seasonings
- Cheese (optional)

Crimp the sides of your foil so that the eggs won't go anywhere when you add them. First place your hash brown patty on the foil. Place the eggs on top of the hash brown patty. Then place the sausage patties on top. Season with spices and condiments; wrap in a TENT PACK.

Place on hot coals and cook for 15 minutes. Add the cheese when it's ready.

## CATCH OF THE DAY

Fish you caught, filleted

¼ cup onions

1 tablespoon butter, melted

Lemon juice

Salt, pepper, parsley, dillweed, & paprika to taste

Mix the melted butter with a dash of lemon juice and the above spices to taste (except paprika). Place the onions on the foil sheet. Place the fish on top and sprinkle with paprika. Wrap the foil in a FLAT PACK.

Place on hot coals and scoop some hot coals on top of the packet. Cook for 15-20 minutes.

## MUSHROOM AND CORN QUESADILLAS

2 teaspoons oil

½ medium red onion, thinly sliced

10 button or cremini mushrooms, thinly sliced

½ cup corn

Salt and pepper to taste

4 flour tortillas

1 cup shredded pepper jack cheese

Lay out a piece of foil and center onion, mushrooms, and corn on the foil. Drizzle with oil and season with salt and pepper. Bring up the sides of the foil and double fold the ends to make a packet. Place on the grate and cook until veggies are tender. (NOTE: The

veggie mixture can be made a day or two ahead of time or cooked on a camp stove in a skillet.)

Lay out four pieces of foil and place a tortilla on top of each piece. Divide half the cheese among the tortillas, sprinkling it down the center of each. Divide the veggie mixture evenly among the tortillas, and then sprinkle the remaining cheese on top of the veggies. Fold the two sides of the tortilla toward the center and then wrap the quesadilla in a FLAT PACK, sealing the edges to make a packet.

Place the packets on the grate and cook for a few minutes on each side, until the cheese is melted and the tortilla crisp.

## APPLE DESSERT PACKETS

12 large apples

4 tablespoons sugar

¾ cup biscuit mix

Raisins

3 tablespoons cinnamon (or to taste)

Core & chop 1 apple in fairly large pieces, peeling if desired. Mix 1 teaspoon sugar, a few raisins and cinnamon to taste with 1 tablespoon biscuit mix; stir into chopped apple. Wrap in a piece of greased aluminum foil, in a TENT PACK, leaving sufficient space for steam. Cook in the embers approximately 30 to 45 minutes (the juice of the apple moistens the dough sufficiently). Makes 12 packets.

## CORN ON THE COB

1 bag of frozen corn on the cob

Butter

Salt, Pepper, & Creole seasoning to taste

Cut foil to fit around each piece of corn cob. Place a pat of butter, salt, pepper, and creole seasoning on the frozen corn on the cob and wrap it up, twisting at the ends (so it looks almost like candy wraps). Do this with each ear individually. Place on the grill or in open fire (if not blazing) and/or on hot rocks, 30 minutes or until kernel is tender.



## DUTCH OVEN COOKING

Prepare the fire. If you have a campfire going, move any large pieces of still-burning wood to the side and level out your hot coals to fit the size of the Dutch oven. If the campground doesn't allow wood fires, burn 50 charcoal briquettes until they're mostly gray, 10 to 15 minutes, and spread into an even layer the size of the Dutch oven.

Set up the oven. For many recipes, you just set the oven on top of the hot coals (bottom heat cooking). But there are times when you'll need to heat both the top and bottom of the oven. Just scrape about half the coals to the side and arrange the rest in a circle the size of the Dutch oven's outer edge. Set the oven on top of the circle of coals, then pile the rest of the coals on top of the lid.

Start cooking. Lift the lid occasionally to check the food and temperature. To decrease the heat, scrape away some fuel. To increase the heat, or to cook longer than 45 minutes, add 6 to 10 new briquettes or more wood embers (from that still-burning wood you moved to the side of your fire pit) every 30 minutes.

## BEEF & SUMMER VEGETABLES

6 garlic cloves, minced

2 tablespoons roughly chopped fresh rosemary leaves

2 tablespoons olive oil

About 1 teaspoon kosher or regular salt

About ½ teaspoon black pepper

1 boneless beef chuck roast (about 2 lbs.)

1 pint cherry tomatoes, stems removed

2 ears corn, cleaned and cut into thirds

1 onion, cut into 6 wedges

½ pound green beans, ends trimmed, cut in half

6 baby zucchini (½ lb. total), ends trimmed, or regular zucchini cut into chunks

¾ lb. thin-skinned potatoes, about 1-inch wide

2 tablespoons butter

About 3 cups chicken broth, divided

**AT HOME:** PREPARE BEEF: In a bowl, combine garlic, rosemary, oil, 1 tsp. salt and ½ tsp. pepper. Rub all over beef and pack in a resealable plastic bag. Chill up to 2 days, or freeze.

PREPARE VEGETABLES: Put tomatoes, corn, and onion in a resealable bag and green beans and zucchini in another; chill up to 2 days. Don't chill potatoes.

**IN CAMP:** Set up a fire for top and bottom Dutch-oven cooking. Put a 4- to 6-quart cast-iron camp Dutch oven in place, add butter and melt. Add beef; cook until browned on underside, about 10 minutes. Turn meat over, add 2 cups broth, cover, and arrange coals on top of pot. Add fuel now and every 30 minutes; cook for 1 hour.

Turn meat over, add 1 cup broth, vegetables with corn, and the potatoes; cook, covered 1 hour. Turn meat and corn, add beans and zucchini, add more broth if pot is getting dry; cook, covered, until meat is very tender, 15 to 30 minutes. Season with more salt and pepper to taste.

## MOUNTAIN MAN BREAKFAST

1 lb. mild pork sausage

1 onion, chopped

1 clove garlic, minced

1 red bell pepper, chopped

1 green bell pepper, chopped

1 (2 lb.) package frozen shredded hash brown potatoes

12 eggs, beaten

1 (16 oz.) package shredded cheddar cheese

Build a campfire and allow the fire to burn until it has accumulated a bed of coals.

Cook and stir the sausage, onion, and garlic in a 12-inch cast iron Dutch oven with lid, raised over the coals to medium-high heat, until the sausage is no longer pink and the onion is tender. Stir in

the red bell pepper, green bell pepper, and hash brown potatoes until evenly mixed. Cook, stirring occasionally, until the hash browns are hot and the peppers are tender, about 15 minutes.

Pour the beaten eggs evenly over the top of the potatoes, allowing them to sink into the potatoes. Cover the Dutch oven, and place 6 to 9 coals underneath and 12 to 18 on top. Allow to bake until the eggs are firm, about 40 minutes. Sprinkle with Cheddar cheese, cover, and continue cooking until the cheese has melted, about 5 minutes.

## CREAMY CHICKEN

8 boneless, skinless chicken breasts

8 slices bacon

1 pint sour cream

1 package (2.25 oz.) dried beef

3 oz. cream cheese

½ cup chicken broth

1 teaspoon cider vinegar

¼ teaspoon salt

⅛ teaspoon pepper

¼ teaspoon baking soda

1 can cream of mushroom soup

Fry bacon lightly in Dutch oven (so it is still flexible, but not greasy). Remove bacon and remove drippings. Shred dried beef and place in bottom of 14-inch Dutch oven. Roll chicken breasts and wrap with bacon strip secured in place with a toothpick. Lay rolled chicken breasts on dried beef. Combine sour cream, cream cheese, and mushroom soup. Mix thoroughly with a wire whip. Pour mixture over chicken breasts. Bake with 14 coals on top and 10 on the bottom for 30 minutes. Add broth and vinegar and cook for 20 minutes, or until meat thermometer reaches 165°F, with original amount of charcoal. Serve with rice or noodles.

## COBBLER DUMP

2 (14.5 oz. each) sliced peaches

1 (8 oz.) can crushed pineapple

½ cup instant tapioca



- 1 box yellow cake mix
- 1 box white cake mix
- 1 to 1¼ cup brown sugar
- 1 cup (2 sticks) butter

In a Dutch oven, put peaches (with juice), pineapple (with juice), and tapioca; mix well. Sprinkle cake mixes on top. Then sprinkle brown sugar on top and dot with butter.

Place Dutch oven over 9 lighted briquettes and arrange 15 briquettes on the lid. Do not stir while cooking, but use a spoon to check the bottom after about 15 minutes. If it feels sticky or looks burned, remove a couple of briquettes.

Bake until fruit is bubbly, slightly thickened, and cake mix is cooked through; approximately 25 to 30 more minutes. Makes 12 to 15 servings.



## MISCELLANEOUS CAMPFIRE COOKING

### SWEET BREADSTICKS

Cut strips of **refrigerated breadstick dough** in half crosswise; thread a piece lengthwise onto each skewer. Toast over a flame until golden. Brush with melted **butter**, then sprinkle with **confectioners' sugar** and **cinnamon**.

### MINI SALAMI SUBS

Split open an **Italian sub roll**; drizzle the inside with **olive oil** and fill with **sliced salami**, **provolone** and **fresh basil**. Cut into 2-inch pieces. Thread a **pickled pepper** and a sandwich piece onto each skewer; toast over a flame until the cheese melts.

### PIG ON A STICK

- 1 package fully-cooked sausage links
- 1 package refrigerated breadsticks

### Spices

Spear a sausage link on a stick or skewer. Lay out one breadstick dough strip and sprinkle desired spice on it. Wrap dough around sausage and pinch the end or poke it over the stick end. Cook over coals until the bread is browned.

NOTE: If you hold it too close to the coals, the outside will brown and the inside will be doughy. Take your time and keep rotating it.

### SLOPPY JOES

- 8 strips of bacon, chopped
- 2 lbs. ground beef
- Medium sized onion, chopped
- Small can tomato paste or purée
- Small can of tomato soup
- Small can of potatoes, sliced (optional)

Bell pepper, cleaned out & chopped

Brown bacon in a cast iron skillet over hot coals; drain grease. Add onions and brown. Add ground beef (crumbled) and brown. Pour in can of soup and can of tomato paste. Add potatoes and bell pepper. After all ingredients are cooking, set skillet on the edge of the fire to simmer. Stir as needed to keep ingredients from sticking to bottom of skillet. Serve on crackers or hamburger buns. Serves 8.

### ROASTED NEW POTATOES

- 2 lbs. small new potatoes (washed)
- Olive oil
- 2 tablespoons dried rosemary\*
- 2 tablespoons garlic powder
- 2 tablespoons paprika
- 1 teaspoon black pepper and salt

\*you can also use thyme and oregano

In plenty of salted water, par-boil the potatoes until the tip of a knife can be inserted easily (about 10 minutes). Drain then toss the potatoes in enough oil to just coat them, then toss with the rosemary, garlic powder, paprika, salt and pepper. On a campfire grill over direct heat, turn often, until browned and grill market, 10-15 minutes.

## SAUSAGE AND BEANS

- 1 medium-sized onion, thinly sliced
- 1 medium-sized green pepper, chopped
- 1 or 2 tablespoons vegetable oil
- 1 (15 oz.) can baked pork and beans
- 1 (15 oz.) can butter beans, drained
- 1 small can sliced mushrooms, drained
- 5 oz. ready-to-eat smoked sausage
- ½ cup catsup
- ¼ cup mustard
- ⅔ cup maple syrup
- 1 teaspoon oregano
- 5 whole cloves
- 2 small bay leaves

Heat the oil in a large saucepan over a low fire and gently sauté the onion slices and pepper squares until the onion is slightly transparent, about 3 to 4 minutes. Add baked beans, butter beans and sliced mushrooms; stir well. Cut the sausage into bite sized pieces and add to the beans, together with the catsup, mustard, maple syrup, oregano, cloves and bay leaves. Cook the beans, stirring occasionally, until all ingredients are piping hot. Serve immediately. Serves 4.

## GENERAL RULES SUMMARY

If you are planning to fish, check with your fish and game agency or state health department to see where you can fish safely, then follow these guidelines.

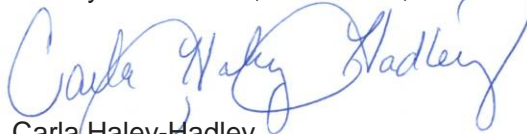
- Scale, gut, and clean fish as soon as they're caught.
- Live fish can be kept on stringers or in live wells, as long as they have enough water and enough room to move and breathe.
- Wrap fish, both whole and cleaned, in water-tight plastic and store on ice.
- Keep 3 to 4 inches of ice on the bottom of the cooler. Alternate layers of fish and ice.

- Store the cooler out of the sun and cover with a blanket.
- Once home, eat fresh fish within 1 to 2 days or freeze them. For top quality, use frozen fish within 3 to 6 months.

Plan ahead: decide what you are going to eat and how you are going to cook it; then plan what equipment you will need.

- Pack safely: use a cooler if car-camping or boating, or pack foods in the frozen state with a cold source if hiking or backpacking.
- Keep raw foods separate from other foods.
- Never bring meat or poultry products without a cold source to keep them safe.
- Bring disposable wipes or biodegradable soap for hands and dishwashing.
- Plan on carrying bottled water for drinking. Otherwise, boil water or use water purification tablets.
- Do not leave trash in the wild or throw it off your boat.
- If using a cooler, leftover food is safe only if the cooler still has ice in it. Otherwise, discard leftover food.
- Whether in the wild or on the high seas, protect yourself and your family by washing your hands before and after handling food.

If you have any questions about food safety, please feel free to call me at 870.779.3609, email [Chaley@uaex.edu](mailto:Chaley@uaex.edu), or visit Room 215 in the Miller County Courthouse, 400 Laurel, Texarkana, AR.



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