

University of Alaska, Fairbanks
Winter Camping Nutrition, Food Planning, Prep. and Cooking
Outdoor Skills 1204

Read: Chapter 7, Food and Nutrition, in Gorman

NUTRITION

Calories provide the energy you need for travel and warmth in the winter environment; your body's caloric needs are much higher in a winter camp environment, 3600-6000 calories per day! This amount translates to 2 _ lbs or more of food per person. Factors that influence caloric intake include weather, body size, weight activity level, etc.

- Carbohydrates (50-60% of caloric intake)
 - Starches and sugars are metabolized easily and provide quick energy. These simple sugars provide for nearly immediate energy release. A good example is a Snickers bar or a sweet warm drink, like warm tang or instant apple cider.
 - Complex carbs (pasta, grains) are a little slower to metabolize, therefore releasing energy more slowly than the simple carbs.
- Fats (25-30% of caloric intake)
 - Complex molecules requiring the longest time for metabolizing, and therefore provide long term energy; 2X the calories/pound than carbs or proteins.
 - Obtain from oil, margarine, butter, nuts, cheese, meat fat, *etc.*
- Proteins (20% of caloric intake)
 - Essential part of any diet—the building blocks of tissue (cell construction and repair).
 - Complex molecules metabolize slowly, holds off hunger.
 - Think of some "easy" meats that will provide protein and/or fat, e.g. jerky or meat sticks for lunch, precooked bacon sprinkled into a one-pot, pre-cooked chicken for a one-pot "chicken hotdish"...

Although not a food type, a reminder of the importance of WATER for healthy winter travel:

Winter is a low humidity environment. You must replace body fluids lost due to respiration and evaporation, perspiration and excrement. Depending upon body size, you must replace 2-4 quarts of water per day. Drink often; drink a lot, (even if not thirsty!). Don't let your water bottle empty. If you do not have a running source of water once you get to camp, then the stove should constantly be melting water to fill bottles. Note campers take turns monitoring the stove and keeping the warm water flowing. *Watch any sign of dehydration in each other. Patrol leaders remind their patrol-mates to drink.*

Signs of dehydration include:

- Decreased urine volume
- Increase in urine color and *strong or unusual* odor
- Lack of perspiration
- Headache
- Dizziness
- Weight Loss
- *Slurred speech, foggy thinking*
- *"drunken" gait*
- *Unconsciousness*
- *Death*

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Menu Planning Questions/Considerations:

- How long will you be on the trail?
 - Plentiful food without huge excess (you have to carry or pull it!).
- Ease of preparation
 - One-**two** pot meals.
 - Pre-made foods, e.g. fry up some hamburger, onion and garlic for your one-pot hot dish; the crumbled, cooked hamburger will freeze on the trail—but will easily thaw in the pot.
 - Plan food, in part, based on number of stoves and pots—keep in mind the endless need for a stove to melt water.
 - Seek instant foods when possible e.g. the above already cooked hamburger mixed with quick cooking instant rice, cheese cubes, spices (crush some garlic at home) and sun-dried tomato chunks would be yummy, easy and calorie-rich.
- Packaging
 - Pack efficiently—organize meals together
 - Precut foods, salami, cheese, veggies—you want to limit your hand exposure time; make it easy on yourself in the field.
 - Repack boxes and other poorly packaged food into double bagged Ziplocs.
 - No cans and no glass bottles **if possible— remember** Leave No Trace!
- Fresh foods
 - OK to bring precut meats **and vegetables**.
 - Veggies and fruits have a high water content, **can** freeze and are weighty.
- Dietary Concerns
 - Communicate with your group any dietary concerns that you may have, such as vegetarian diet, vegan diet, food allergies, kosher diet...
- Serving Sizes
 - Everyone eats!
 - See ration sheet from Outward Bound. **Factor in additional 30% for below zero.**
 - Don't trust box portions—small for winter camping appetites
 - If in error, err on the side of extra food.

Other Health Concerns

- Try to keep snot from dripping into the one-pot meal!
- Pack a hand sanitizer or 3 and keep readily available for use in the kitchen, after going to the bathroom or if suffering from cold symptoms...
- **Be extra cautious around food after handling dogs and equipment. Not a good habit to hold ropes mittens or other equipment in your teeth.**

MENU

- Each group is responsible for planning a Sat. lunch, Sat. dinner, trail snacks and a Sunday b-fast.
- Saturday
 - Eat a HEARTY b-fast prior to departure.
 - Lunch—plan easy with stoves in use for warm drinks, **pizzadillas** or soup only.
 - Snacks—lots! Think about snacks providing the quick energy of simple carbs while also providing longer term resources (nuts).

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- Dinner—more cooking, be creative yet not too elaborate, plan a dessert.
- Warm beverages for dinner/snacks
- Bed—everyone to bed with **some nuts, scones or** a chocolate bar/quick energy source for a mid-night stoke of the furnace if needed.
- Sunday
 - Easy, quick and filling.
 - Warm beverage
 - Snacks for the trip out.

OTHER cooking tips:

- Dinner should be cooked before dark!
- You can cook over a fire—but, be sure to soap the outside of the pots.
- Don't rely on a fire, each group will have a stove/stoves.
- Lids, lids, lids. Save cooking time.
- Stoves should be supported in the snow, e.g. use a fry pan or large lid to create a level stove surface. A square of ensolite wrapped in duct tape will also work. **Cookie sheets are excellent to use.**
- You need grips, bandanas, pliers, etc. for holding gripping warm/hot pots. Leather choppers are good for the warm grab too.
- Wind breaks around stoves to expedite cook time.
- Start each meal cook with a full tank of gas.
- Extreme caution when filling tanks—white gas or alcohol fuel does not freeze and becomes super cooled in cold weather, with the potential to cause frostbite. Don't pick up a cold fuel bottle with a bare, sweaty hand—and definitely don't put your tongue on the outside of the fuel bottle.
- Snow is a great cleaning abrasive.
- Don't allow food to freeze in pots **if possible.**
- Don't burn the snow—use some water from a water bottle to get your melt going.
- Do not cook in a tent **or in snow caves or quinces.**
- Take turns as the stove manager when stoves are in use—the stove manager keeps the kitchen safe and the snow melting.
- **Plastic water bottles preferred to metal. Leak proof a must.**
- **Keep personal water from freezing by keeping under your jacket during day and in your sleeping bag at night.**
- **Avoid laying items flat on the snow when unattended as a light snow will cover them quickly.**

Compiled from notes (2005):

UMD HPER—Pam Nason. Ken Gilbertson, Tom Beery
Audubon Center of the Northwoods—Craig Prudhomme
<http://www.uaf.edu/files/acep/GalenaNuclear.M.Yoder%5B1%5D.pdf>
Edited and expanded by Nicholas Matulich, Troop 260, Jan 2016
http://www.troop260.com/forms/winter_cmpg_nutrition.pdf