



# *Lightweight Backpack Food Planning and Preparation*

*Class will begin at 6:30PM*

*Please mute your sound and turn off  
your video*



# *Lightweight Backpack Food Planning and Preparation*



## **This class is about:**

- How to plan a lightweight backpacking menu that provides the calories you need, with less pack weight and foods that you love to eat.
  - Including easy to use planning tools and resources
- A variety of backpacking meal ideas and styles, and how to prepare them
  - including how to dehydrate favorite home comfort-food meals
- Showing you a food prep system that reduces your fuel use, kitchen gear and trash...(and no pot scrubbing!)



# It's a total system!!

1. Plan ahead to ensure the calories, nutrition and sustained energy you need to succeed on your trip, with the minimum weight and bulk.
2. Choose a menu with the best balance of calories, weight and convenience for YOU – in food you know you enjoy eating.

If you can reduce the water content of your food, you are then able to:

3. Eliminate cooking – just boil water. ➔ Minimize fuel use, Simplify and lighten your 'camp kitchen'.
4. Significantly reduce your trash and 'footprint'.

# Food Planning Fundamentals: Eat Enough!!

***??How much food do I need to bring??***

***Think of food as the fuel to power your trip. Plan for enough to accomplish your goal!***

- Depends on terrain, pace, total pack weight, conditions (elevation, temperature) and your size and metabolism
- 300 to 500 calories per hour of vigorous walking with a pack is a good rule of thumb (2500-4500 cals for an 8 hour day)
  - more for bigger people, very strenuous, cold, high altitude trips, less for smaller people, less strenuous trips

***Everyone is different! Work out your own calorie needs for easier and more strenuous trips!***

# Food Planning Fundamentals: Eat Enough!!

Close calorie planning isn't as essential IF

- Your trip is short and you can 'load up' before and after
- You can resupply every 3-4 days during a longer trip.



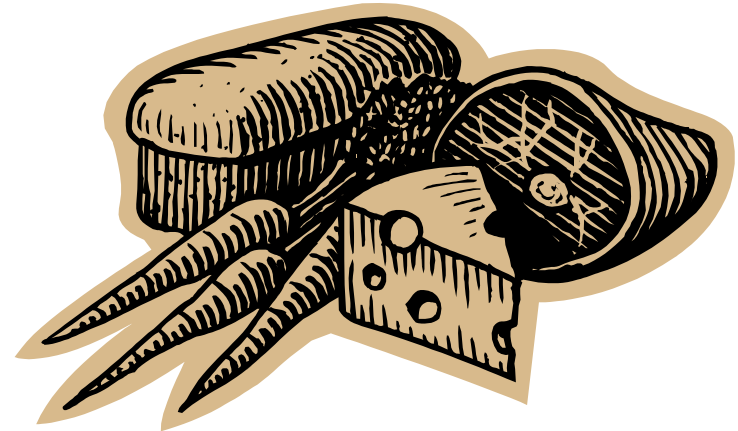
## ***However...***

- On strenuous trips > 4 days, big deficits could seriously impact your trip success!
- For trips >4 days, it's increasingly important to get your calories with the least weight!
- Even on more shorter and/or less strenuous trips, you need to provide your body with fuel for steady energy through the day.

# Food Planning Fundamentals: Nutrition

***The kind of calories you choose matters!***

- Simple carbs/sugar
- Complex carbs
- Fiber
- Fats
- Protein



- ➔ **Impacts your energy level and muscle performance over an extended trip**
- ➔ **Drives energy (calorie) contribution of your food menu per unit of weight**

# Food Planning Fundamentals - Nutrition

- Simple sugars deliver a quick energy ‘punch’ – but watch out for energy ‘crash’.
- Complex carbs convert to energy a bit more slowly → maintain steady insulin levels and energy flow.
  - But only last about 45 minutes - need to eat them regularly thru the day. Keep snacks handy to eat often!
- Fats are your body’s “go-to” energy supply for long-term exertion.
  - Twice the energy per gram as carbs, proteins - but burn more slowly
  - Require oxygen to burn → not accessible for quick ‘anaerobic’ bursts.
  - Steady burn means no spikes – won’t drive mood or energy swings

# Food Planning Fundamentals: Nutrition

**Protein is important to maintain & repair strained or depleted muscles.**

- 1.2 to 2.0 grams of protein per kg of body weight per day is a general recommendation for athletic activity
  - 70-120 grams/day for a 130 lb person, 100-170g/day for a 180-lb person
  - 10-20% of your total food weight as a general guide
- Eating high-quality protein (meat, fish, eggs, dairy or soy) within 1-2 hours after exercise enhances muscle repair and growth.



# Food Planning Fundamentals: Nutrition

## **Fiber adds bulk and weight but provides no energy**

- Helps maintain steady blood sugar and “regularity”
- Plenty of fiber in most trail foods – don’t need to add extra

## **Electrolytes are essential for healthy muscle function.**

- Start your trip in good balance.
- Electrolyte powders or tablets in your water, or ShotBlok chews or potassium pills if particularly hot, windy, cold or if symptoms develop.

## **Sodium-rich foods can be a plus in hot/sweaty conditions – but watch for unexpectedly large quantities in some foods!**

- Mountain House spaghetti sauce: 1500 mg/2C serving, vs. homemade pasta sauce with 1tsp sea salt: 250-500mg/2C serving.

# Food Planning Fundamentals: Calorie Density

How to get enough calories and still keep your pack light?

➔ *Eat high calorie-density food!*

“**Calorie density**” = Calories in a food serving divided by the weight of the serving

➤ *By packing calorie-dense foods, you can get your target daily calories with much less weight and bulk in your pack!!*

# Food Planning Fundamentals: Calorie Density

## *Drivers of high calorie density in food?*

- **Fat:** 9 cals/gram;
- **Carbs, protein:** 4 cals/gram.
- **Fiber:** No energy contribution for the weight.
- **Water:** Fresh foods average >60% water, and water adds significant weight (2.2 lbs/L) without any energy!



# Food Planning Fundamentals: Calorie Density

**Which of these foods do you think has the highest calorie-density? The lowest?**

- Justin's Almond butter pack
- Tuna packet (in water)
- Bag of Fritos
- Cured sausage stick (Landjaeger)
- Block of Dubliner cheddar cheese
- Handful of Macadamia nuts
- Instant cream of chicken soup
- Raisins

# Food Planning Fundamentals: Calorie Density

• Handful of macadamia nuts	7.3
• Bag of Fritos corn chips	5.7
• Justin's Almond Butter pack	5.6
• Cured sausage stick (Landjaeger)	4.2
• Block of Dubliner cheddar cheese	4
• Instant Cream of Chicken Soup	4
• Raisins	3.2
• Tuna packet (in water)	1.2



# How to Choose Calorie-Dense Trail Foods

## Check product labels for :

- Calories per gram  $> 4.5$  – target for 2000 cals/pound
- High % of grams in fats
- Lower % of grams in fiber

# Example – Chunky Peanut Butter

## Nutrition Facts

Serving Size 2 tbsp (32.0 g)

### Amount Per Serving

**Calories** 188 Calories from Fat 144

% Daily Value\*

**Total Fat** 16.0g **25%**

Saturated Fat 2.6g **13%**

Polyunsaturated Fat 4.7g

Monounsaturated Fat 7.9g

**Cholesterol** 0mg **0%**

**Sodium** 156mg **6%**

**Total Carbohydrates** 6.9g **2%**

Dietary Fiber 2.6g **10%**

Sugars 2.7g

**Protein** 7.7g

➤ Calorie density:  $188/32 = 5.9$  cals/gm

➤ % wgt in fat =  $16g/32g = 50\%$

# Example – Instant maple-brown sugar oats

## Nutrition Facts

Serving Size 1 Packet, dry (43 g)

Per Serving

**Calories** 170

- Calories from Fat 18

**Total Fat** 2g

- Saturated Fat 0.3g
- Polyunsaturated Fat
- Monounsaturated Fat

**Cholesterol** 0mg

**Sodium** 190mg

**Potassium** 110.94mg

**Carbohydrates** 34g

- Dietary Fiber 3g
- Sugars 14g

**Protein** 4g

- **Calorie density** =  $170/43 = 3.95$  cals/gm
- **% wgt in fat** =  $2/43 = 4.6\%$
- **(Hint: Add 1/8C or 14gms walnuts and you get 80 more calories – boost calorie density to 4.4!)**

# Example – Primal Island Toasted Coconut Granola

Nutrition Facts	
Serving Size	100 g
Amount Per Serving	
<b>Calories</b>	<b>559</b>
% Daily Value *	
<b>Total Fat</b> 47g	<b>60 %</b>
Saturated Fat 24g	<b>120 %</b>
<b>Sodium</b> 15mg	<b>1 %</b>
<b>Total Carbohydrate</b> 32g	<b>12 %</b>
Dietary Fiber 12g	<b>43 %</b>
Sugar 18g	
<b>Protein</b> 8.8g	<b>18 %</b>
Vitamin D mcg	N/A
Calcium 118.00mg	9 %
Iron 3.18mg	18 %
Potassium mg	N/A
* The % Daily Value (DV) tells you how much a nutrient in a serving of food contribute to a daily diet. 2,000 calories a day is used for general nutrition advice.	

- Calorie density =  $559/100 = 5.6$  cals/gm
- % wgt in fat =  $47/100 = 47\%$

# Example – Cooked Tuna in a Pouch

Nutrition Facts	
Serving size: 100g	
Amount Per Serving	
<b>Calories</b>	100
Calories from Fat	5
Amount Per Serving and/or % Daily Value*	
<b>Total Fat</b>	0.5g (1%)
Saturated Fat	0g (0%)
Trans Fat	0g
<b>Cholesterol</b>	60mg (20%)
<b>Sodium</b>	370mg (15%)
<b>Total Carbohydrate</b>	1g (0%)
Dietary Fiber	1g (4%)
Sugars	0g
<b>Protein</b>	22g

- Calorie density?
- % wgt in fat?
- How might you boost the calorie density of this food?



# Examples of Calorie-Dense Trail Foods

- **Flavored olive oil** – 9 cal/gram, 100% fat
- **Macadamias** – 7.3 cal/gram, 86% fat
- **Trailtopia Egg Scramble** – 6.6 cal/gram, 49% fat
- **Almond butter** – 6.5 cal/gram, 59% fat
- **Peanut M&Ms** – 5.8 cal/gram, 37% fat
- **Banana chips** – 5.1 cal/gram, 39% fat
- **Whole powdered milk** – 4.8 cal/gram, 31% fat

# Examples of Less Calorie Dense Trail Foods

- **Tuna or chicken in pouch** – 1.2 cal/gram, 14% fat
- **Full-fat tortillas** – 2.8 cal/gram, 14% fat
- **Teriyaki beef jerky** – 2.9 cal/gram, 5% fat
- **Dried blueberries** – 2.9 cal/gram, 4% fat
- **Black Cherry Almond Clif Bar** – 3.5 cal/gram, 9% fat

★ **These foods aren't "bad"!! Just less efficient in energy for their weight. Remove the water, or 'boost' with more calorie-dense foods.**

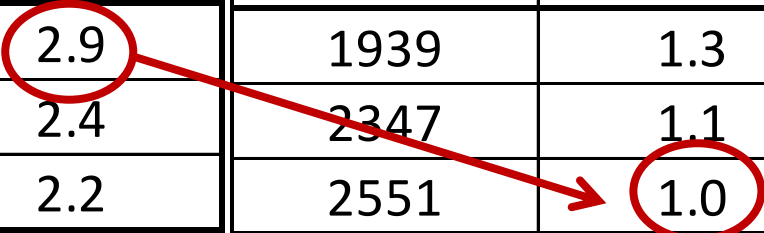
# Food Planning Fundamentals

Check out the handy [calorie density lookup tables](#) in your food class resources!

# Food Planning Fundamentals: Calorie Density

★ With an efficient carb-fat-protein ratio AND a low water content, *you can pack your target daily calories in less than half the weight!!*

	At 60% water content		At 10% water content	
If the carb-fat-protein ratio in your menu is	Cals/pound	Pounds for 2500 cals	Cals/pound	Pounds for 2500 cals
70:15:15	862	2.9	1939	1.3
50:35:15	1043	2.4	2347	1.1
40:45:15	1134	2.2	2551	1.0



# Food Planning Fundamentals

## *What is a good daily food weight target?*

**By averaging 4.5 cal/gram, you can achieve 2000 calories per pound of food weight.**

- 1.5-2 lbs/day for a strenuous itinerary.
- 1-1.5 lbs/day for shorter, lower-intensity trips.





# Food Planning Fundamentals

***Q&A – Calorie needs, nutrition and calorie density***

# Food Planning Fundamentals

## *How to get started with a menu plan?*

- ✧ Make a list of foods that you'd enjoy eating for each meal (we'll share some ideas for you shortly!)
  - *Add special yummy toppings, spices or additives to boost fat content and enjoyment*
- ✧ Estimate a serving weight of each food that you're likely to eat
- ✧ Estimate the calories for each serving on your day's menu
- ✧ Add up the total calories for a full day's menu – is it enough?
- ✧ Divide your daily total calories by your daily total food weight to work out your average calorie density for the day's menu
- ✧ ***Adjust total servings and/or servings of calorie-dense items to meet your daily calorie need with the least weight.***

# Making your food plan

## Example –Breakfast

Food	Serving (gms)	Calories	Cals/gram
Via packet	1	0	0
Cocoa mix + Hazelnut creamer (3tsp)	37	180	4.9
Granola with toasted coconut & walnuts (3/4C)	93	433	4.7
Dried maple-brown sugar oats with dried blueberries and walnuts	100	375	3.8
Whole milk powder (1/4C)	30	144	4.8
<b>OVERALL - with granola &amp; milk</b>	<b>161</b>	<b>757</b>	<b>4.7</b>
<b>OVERALL - with oatmeal</b>	<b>138</b>	<b>555</b>	<b>4.0</b>

# Making your food plan - example

## Example – Lunch and snacks

Food	Serving (gms)	Calories	Cals/gram
Almond butter (2T packet)	31	201	6.5
Jelly packet	10	35	3.5
Hard cheese (2 oz)	56	218	3.9
Oroweat English Muffin (2 halves)	59	134	2.3
Mustard and mayo packet	18	90	5.0
Macadamia nuts (2 oz)	34	253	7.4
Peanut/Almond M&Ms (15 pcs)	36	203	5.6
<b>OVERALL - almond butter &amp; jelly</b>	<b>170</b>	<b>826</b>	<b>4.9</b>
<b>OVERALL - cheese, mayo, mustard</b>	<b>203</b>	<b>898</b>	<b>4.4</b>

# Making your food plan - example

## Example – Dinner and dessert

Food	Serving (gms)	Calories	Cals/gram
Instant cream soup mix (1 pkt)	25	90	3.6
Packaged strawberry harvest salad with dressing (1C)	100	170	1.7
Dehydrated dinner (1 C dry)	100	455	4.6
Stonefire Garlic Naan (1/2)	98	380	3.9
Almond Roca 3-pack	36	200	5.6
<b>OVERALL - with soup</b>	<b>259</b>	<b>1125</b>	<b>4.3</b>
<b>OVERALL - with salad</b>	<b>334</b>	<b>1205</b>	<b>3.6</b>



# Making your food plan

## Put it all together for a day....

Food	Serving (gms)	Calories	Cals/gram
Via packet	1	0	0
Cocoa mix + Hazelnut creamer (3tsp)	37	180	4.9
Granola with toasted coconut & walnuts (3/4C)	93	433	4.7
Whole milk powder (1/4C)	30	144	4.8
Almond butter (2T packet)	31	201	6.5
Jelly packet	10	35	3.5
Oroweat English Muffin (2 halves)	59	134	2.3
Mustard and mayo packet	18	90	5.0
Macadamia nuts (2 oz)	34	253	7.4
Peanut/Almond M&Ms (15 pcs)	36	203	5.6
Instant cream soup mix (1 pkt)	25	90	3.6
Dehydrated dinner (1 C dry)	100	455	4.6
Stonefire Garlic Naan (1/2)	49	190	3.9
Almond Roca 3-pack	36	200	5.6
<b>OVERALL</b>	<b>559</b>	<b>2608</b>	<b>4.7</b>
<b>1.2 LBS FOR THE DAY</b>			

# Backpack Menu Planning Tools

- What if I don't have a package label to refer to and my favorite food isn't in the lookup table?

<https://www.nutritionix.com/database>, or <https://www.myfitnesspal.com/>

- How about home-made dishes?
  - Use the label info or nutritionix.com for the major components, or use MyFitnessPal
  - Doesn't have to be exact

# Making your food plan

Then expand to all the days on your trip:

[Link to Wind Rivers traverse food plan example](#)

***You can adapt this food plan template to your own trips and favorite foods!***

# Measure!



Once you have your plan:

Measuring and labeling your daily servings in individual bags when you pack helps you bring only what you need!

➤ *Take food out of its packaging and put into a single serving zip-loc to be sure it's the right amount for you (and minimize trash in your pack)!*

Adjust serving sizes after you come home from each trip if it's more or less than you wanted to eat.

# Backpack Food Planning

## Why bother with all this?

- For multi-day trips, food weight can make a BIG difference in total pack weight
- Up front planning helps ensure that you'll carry enough calories to keep you energized throughout your trip (while not bringing extra home).
- Planning allows you to manage the total weight of your food while including menu items that you will **look forward to eating**.
- Once you build a plan for one trip you can duplicate it on future trips without redoing the plan.

# Backpack Food Planning

## Q&A – Food Planning

# Food Planning Fundamentals

***What are some food options you might like for each meal?***

- Video to demonstrate some [options for breakfast and lunch on the trail](#), followed by a Q&A
- Video to demonstrate some [options for dinners on the trail](#) followed by a Q&A
- These videos and a sheet with all the foods that we show in the videos are in the class resources!

***\* MANY more possibilities – use your imagination!! \****

# Food Planning Fundamentals

## ***What foods will be safe to eat without refrigeration?***

- ✓ Aged drier cheeses, cream cheese, Laughing Cow will last a week or more (longer if in sealed packs).
- ✓ Shelf-stable cured meats, vacuum-sealed meats
- ✓ Freeze dried foods will last indefinitely if left sealed
- ✓ Tortillas, naan bread will last a week or more
- ✓ Powdered dairy
- ✓ Sturdy salad components, vegies will last a couple of days
- X ***Items containing raw egg, including mayonnaise, are not safe (unless in sealed shelf-stable packs, freeze-dried or dehydrated)***
- X ***Meats that are not freeze-dried, dehydrated or listed as shelf stable can deteriorate quickly unless vacuum sealed – even jerky***



# Which backpacking meal strategies fit your shopping, food prep and backpacking style?

- Ready to eat off-the-shelf or homemade foods – eat cold
- Instant foods (soups, ramen, mashed potatoes, couscous) – add hot water at camp
- Commercial freeze-dried meals, rehydrate at camp with hot water
- Commercial noodle, grain or rice mixes with sauce – boil on your stove
- Freeze-dried, instant or dehydrated components with sauce mix and spices - mix at home and rehydrate at camp
- Dehydrate your own favorite comfort meals at home, rehydrate at camp!
- Leave stove and fuel at home and cold-soak my instant, freeze dried or home-dehydrated meals

***Which of these appeal to you?***

# A note on cold-food backpacking....

- ✧ Many ultra-light backpackers go this way to save stove, fuel & pot weight (1-1.5 lbs), and to reduce food-prep time at camp.
- ✧ Lots of tasty options are available:
  - Cold-brew coffee packs
  - Ready-made deli sandwiches, wraps, pizza, burritos, pre-packaged salads
  - Meal bars
  - Peanut butter or cheese in a tortilla or muffin
  - Dried hummus or bean powders or instant mashed potatoes rehydrated in cold water, with tasty additives
  - You can “COLD SOAK” most freeze dried or dehydrated items – just takes 1-2 hours (and a light container with a secure lid – Such as a Talenti gelato jar!)

***Experiment on a short trip to see if you like it!***

# Want a wider range of options for backpacking meals?

- Special dietary restrictions, or just want more control over nutrition?
- Don't like most of the commercial freeze dried meals you've tried, and hate the 'trial and error'?
- Want to eat your favorite home-cooked meals on the trail?

# Dehydrating home comfort foods for the trail

***Lots of options – and doesn't require a lot of time or cooking prowess!***

- Frozen or deli-counter casseroles, restaurant leftovers
- Pre-cooked grains, pasta, canned meats, beans, veggies and fruits → dehydrate them to mix into meals (test in advance!)
- Make a favorite recipe to eat at home and dehydrate the leftovers!

***→ You control the flavor, nutrition and variety – choose only foods that you already know you love to eat!***

# Dehydrating home comfort-foods for the trail

## Foods that work well in the dehydrator:

- Casseroles, stews, soup bases, thick sauces
- Grains, beans, pasta, mixtures (but test them to be sure they rehydrate in a timely way)
- Vegetable mixtures (fine dice) – freezer packs are great! Otherwise need to blanch before dehydrating
- Fruit (some need to be treated before drying)
- Thin-sliced marinated meats or meat substitutes → jerky

***Key is uniform consistency, small pieces or purees.***

# Example of an Economical Home Dehydrator



Nesco Snackmaster FD 75-A



Expandable Rack set



Mesh Trays



Solid Plastic Trays  
(for liquids)

# Tips for successful dehydrated meals

- Prepare the food as you would to eat at home. Make sure all components are fully cooked to 200°F or more.
- Chop or puree to uniform small size
- Drain/rinse off excess surface oil or reduce fats in the recipe
  - Add olive oil and other high fat goodies at camp.

# Tips for successful dehydrated meals

- Measure the food into servings before you put it in the dehydrator
- Spread the food thinly & uniformly over the dehydrator trays – key for fast, thorough drying.
  - Use solid plastic tray or parchment paper for runny sauces, mesh tray for drier recipes



# Tips for successful dehydrated meals

- The optimum temperature range for dehydrating is 140°F (vegies, fruits) to 160°F (meats, eggs)
- Don't scrimp on drying time (overnight or longer).
  - Food should be crisp-brittle, no moisture to the touch, after cooling. (jerky, fruit will be hard but pliable. High sugar foods may be sticky.)
- May want to re-chop sauces or stews in food processor after most of the liquid has evaporated.
  - The closer you can get sauces to a powder consistency, the richer the and smoother the sauce will taste when rehydrated.
  - The smaller the pieces, the faster it will rehydrate.

# Tips for successful dehydrated meals

- After the food is fully dry, let cool, then chop, process or crumble, place in a zip-loc freezer bag or other storage bag, and store it in a cool, secure place until time to pack.
- Use sturdy bags with a very secure seal.
  - Particularly useful if you plan to rehydrate and eat out of the bag at camp.
  - No harmful chemicals to leach out into your food.
- Put a tag into the bag with name of the food, # servings and date it was packed.

# Alternatives for carrying your trail meals

- Platinum-silicone “Stasher bags”



- Mylar bags with zip seal



- Light plastic containers with secure screw-on lids (great for “cold soak” or for leftovers!) – Talenti gelato jars, or repurposed plastic peanut butter jars, hummus tubs
- Wash and re-use your sturdy Ziploc freezer bags!

# Tips for successful dehydrated meals

- Here is [a video](#) showing you how to dehydrate a home comfort food meal or a casserole from the grocery freezer case!
- Check out my Trail-Tested Recipes for the Dehydrator in your class resources!
- Join the Dehydrating Your Own Backpacking Food facebook group for ideas and support!

# Safe Storage of Dehydrated Foods

- The dehydrated product should be crispy, brittle dry after cooling. Cool down fully before packaging.
- Keep the food from re-absorbing moisture or contaminants during storage.
  - Package in single serving bags – don't dip out of larger bag.
- If fully dried, not necessary to freezer-store
  - Can safely store most foods for 4-6 months or longer if kept dry.
- Vacuum-sealing, storing in the freezer, and/or adding an oxygen absorber packet may add some length to storage

# Freeze-Dried vs. Dehydrated Foods?

Freeze-drying "locks in" the composition and structure of a material by removing the water without applying heat.

- Preserves the original shape of many foods
- Freeze-dried foods are lighter than dehydrated, can store nearly indefinitely, and rehydrate quickly.
- However freeze-drying is an industrial process – can't do it yourself, the variety is somewhat limited, and the products are expensive!

*\*\*I often add purchased freeze dried components to my dehydrated meals to replace foods that don't rehydrate well.\*\**

- *Many meats, some kinds of beans*

# Why go to the trouble?

- Control over your own diet and nutrition
- Can bring your own favorite 'comfort foods' on the trail
- Meal variety is only limited by your imagination!
- Much cheaper than purchasing freeze-dried meals
- Can be a fun hobby!

*There are plenty of alternatives if this path doesn't interest you.*

# Preparing Your Meal At Camp

- If you want to boil food in your pot at camp – choose a stove with good heat control, and be ready for more pot scrubbing and fuel use.
- With instant, freeze dried and dehydrated foods: Rehydrate at camp:
  - Here is a video demonstrating [how to rehydrate](#) your dehydrated or freeze-dried food at camp!
- PRO TIP: The better you can hold the heat in your food container while rehydrating, the more quickly the food will be ready.
  - Use a cozy or foil, keep in insulated mug, or continue to apply heat.
- Heat a little extra water for rinsing the bag, pot or mug



# My camp kitchen



**\*\*** And now I don't even bring the cozy! I rehydrate in my mug.

## **“Boosting” Your Food At Camp**

- Boost the flavors and calorie density at camp!
  - Spices/seasonings, condiments and dressing packs, or sauce, gravy mix powders
  - Packets of coconut oil, flavor-infused olive oil
  - Whole milk or coconut cream powder
  - Nuts, dried fruit, fresh onions and peppers, dried tomatoes, wasabi peas, parmesan, French fried onions
- Warm up some tortillas, naan or good artisan bread in the cozy or on top of the pot lid.
- Don't forget dessert! Instant pudding, chocolate, cookies, candy bar

## Meal Consumption and Cleanup

- ✧ Eat right out of the bag, pot or mug (long-handled spoon).
- ✧ Rinse your mug, pot or bag with leftover hot water (or use a piece of scrubber-sponge), and spread the 'grey water' away from camp.
- ✧ Fold the used zip-loc bag small and bring home to reuse later.
- ✧ ***NEVER burn your trash, never throw leftovers or wash water/soap in the stream or near your camp!***
  - ***Share with hungry friends, eat the leftovers, or carry them out.***

## Minimize your trash and trail 'footprint'...

- *By buying your food from bulk bins where you can*
- *By removing foods from packaging before the trip and putting them in re-usable bags*
- *By washing-reusing your bags afterwards!*
- ***By being efficient in your use of fuel***

# Get the most out of your stove and fuel

**Plan your fuel supply for the # of hot meals/drinks you will prepare.**

- ~1/4 oz of canister gas will heat 2C of water. (vs. 0.4 oz of alcohol or white gas)
  - ➔ *4oz of canister gas ➔ ~32C of near-boiling water*
  - ➔ *You can calculate how many oz you need based on your hot water usage per day (I typically use ~5C/day)*
- More fuel required with a less efficient stove, at cold temps, high altitudes, in windy conditions, or if you plan to boil your food for several minutes.

# Get the most out of your stove and fuel

## Extra fuel means extra weight! Be efficient!

- Use a windscreen (can use heavy-duty foil) – but *never enclose a fuel container!!*
- Use a lid on your pot (can also be heavy-duty foil!)
- Get pan ready before lighting the stove
- Ask yourself if you really need to boil the water (not needed if you plan to filter or treat it first)



## Tip for dealing with those partial canisters....

- How much is left in my partial canister?

- “8 oz canister” = 8 oz gas + 5 oz canister.

- “4 oz canister” = 4 oz gas + 3.4 oz canister.

Weigh your canisters after use or before a trip. Subtract the canister weight

- the difference is how much fuel you have left.

- It's easy to top-up your partial containers!

- Bi-valve attachment – one example at [this link!](#)

- Get the receiving can very cold

- Check regularly with a scale as you go so that you don't overfill!





## Tip for dealing with those partial canisters....

- BEFORE DISPOSING OF CANISTERS:  
Use a Crunchit tool to empty the remaining gas and puncture the canister – then recycle the canister at the Mountaineers HQ!





# Organizing your food for the trail

- Separate out individual meals for each day into individual bags at home
  - *Can label each bag with the day you plan to eat it, or leave it flexible!*

Then...

- Pack each meal type in its own color-coded or labelled bag
- OR pack all the meals for each day in its own color-coded or labelled bag

# Food Packing Tips - Bear cans and UrSacks

- Main considerations:
  - Space is constrained –choose calorie-dense and compact foods!
  - Loose squishable bags and small items can fill the space more efficiently than hard blocks. Fragile items may get crushed.
  - Things that can mold to the side of the can or sack are great!
  - Leave room for your toiletries, cold-soak containers and trash to go in at night
- Remember- you can carry your first day's food outside of the can or sack.
- Share if you aren't going to fill a can or UrSack by yourself!

# Planning, recipes and food supply resources

## **Planning and Recipes**

- <https://www.trail.recipes/>
- [www.onepanwonders.com/](http://www.onepanwonders.com/)
- [www.trailcooking.com/](http://www.trailcooking.com/)
- <http://thru-hiker.com>
- <http://sectionhiker.com>
- [www.adventurealan.com/food\\_general.htm](http://www.adventurealan.com/food_general.htm)
- On gluten free backpacking:
  - <https://www.freshoffthegrid.com/gluten-free-backpacking-food/>
- On vegan backpacking:
  - <https://www.freshoffthegrid.com/vegan-backpacking-food/>
- On Low-carb and Paleo backpacking:
  - <https://wildzora.com/collections/all> (Paleo)
- On Ketogenic backpacking : <https://ketogenicbackpacking.com/>

# Planning, recipes and food supply resources

## **Backpack Food Suppliers**

- [www.packitgourmet.com](http://www.packitgourmet.com)
- <https://www.harmonyhousefoods.com/shop.html>
- <https://motherearthproducts.com/>
- <https://backpackerspantry.com/>
- <https://peakrefuel.com/>
- <https://goodto-go.com/collections/food>
- <https://www.heatherschoice.com/>
- <https://www.mountainhouse.com>
- Vegetarian and Vegan:
  - [www.maryjanesfarm.org](http://www.maryjanesfarm.org)
  - <http://outdoorherbivore.com/>
- Paleo – <https://wildzora.com/collections/paleo-meals-to-go>
- Gluten Free – <https://www.freshoffthegrid.com/gluten-free-backpacking-food/>
- Ketogenic – [Next Mile Meals](#)

# Light & Healthy Backpack Food Made Simple

