

# Trail food Dehydration 101

When you want to reduce sodium  
and the hit on your pocketbook...

# THE Options

**SELF PREPARED TRAIL PAK including meal, seasoning, drink & dessert**



**PRE-PACKAGED TRAIL FOOD...which is the same size as one self made trail pak**





# TOOLS TO GET There

## DEHYDRATOR



## VACUUM SEALER



# FOOD DEHYDRATOR



# Vacuum sealer



# Caloric Intake and Rules of Thumb

Adult Caloric Calculation during Backpacking Activities (three season conditions)

Note: During winter backpacking and camping increase the caloric intake by an additional 1/3 to 1/2 more of the base calculation.

- 20-25kcal/ 1 lb of body weight
- Body Weight                      Kcal/Lbs                      Daily Caloric Minimum
- 125 lbs                              20/1                              2,500 calories
- 150 lbs                              21/1                              3,150 calories
- 175 lbs                              22/1                              3,850 calories
- 200 lbs                              23/1                              4,600 calories
- 225 lbs                              24/1                              5,400 calories

Children Caloric Calculation

- 79-81 lbs; Boy                      2,279 calories
- 79-81 lbs; Girl                      2,071 calories
- Highly active children may require up to 2,400 calories per day

# Nutrition ratio and calorie loading

## Nutrition Ratio

- 50-55% calories from Carbs | 15-20% calories from Protein | 30% calories from Fats
- 125 – 130 calories per ounce of food stuff
- 1.7 pounds of foodstuff per day of backpacking; minimum
- You enter a caloric deficiency when you burn more calories than you take in.
- Do not under-estimate the need to drink 3-4 liters of water a day on the trail...if you become dehydrated you are less likely to feel well and will feel less inclined to eat or drink, leading to big trouble and poor decision making.

## Burn Calorie Load : Weight Ratio (at moderate pace over reasonably flat ground)

- 180 pound person = 570 calories/ hour @ average of 6 hours = 3,420 total calories burned
- 180 pound person with a 30 pound pack @ average of 6 hours = 4,000 total calories burned
- 120 pound person with a 25 pound pack @ average of 6 hours = 2,500 total calories burned

## Food Types to achieve caloric needs

- Fresh – PB&J, Lunch Meat, Fruit, Nuts and Veggies
- Packaged – “Wet” packaged products, ramen noodles types and energy bars
- Freeze Dried – Backpacking meals and specialty grocery products
- Dehydrated – Homemade meals, jerky and snacks



# What can be dehydrated? How?

Fruits and Vegetables should be ripe and firm, but at the peak of maturity

- Fruits with a higher sugar content dry well, but need to be dried slowly so that a thick casing of leathery material does not form over the outside.
- Ripe Vegetables are more flavorful than under ripe ones, and are less tough than over mature.
- Herbs and Spices are best dried before the plant begins to flower.

Remove any damaged or bruised parts. Trim or cut to a uniform size to promote even drying

Vegetables should be blanched (by steam or water) before drying

Meats (Beef, Turkey, Salmon, etc) should be low in fat and well-trimmed

Drying is complete when...the item is tough, leathery, and pliable and does not have a moist center when cut. However, it should not be brittle unless you are making fruit/veggie chips.

Allow 30 minutes to one-hour of cooling time to prevent condensation. However, do not leave it out too long so that moisture is allowed back into the item.

Jerky must be stored in the freezer due to the residual fat content in the meat. However, storing all dehydrated goods in the freezer will extend their shelf life.

# My daily backpacking menu

## VACUUM SEALED BAG ONE

### BREAKFAST

- Oatmeal with Granola
- Coffee & Emergen-C

### SNACKS

- Trail Mix
- Japanese Rice Crackers
- Jerky & Baybel Cheese Rounds
- Annie's Fruit Gummies
- Fiber One Bars
- Whole Foods Pro Bar

## VACUUM SEALED BAG TWO

### APPETIZERS

- Hummus
- Spinach & Bean Tacos

### DINNER

- Rehydrated Meal; Spaghetti, Mac-N-Cheese, Beef Stew, Mashed Potatoes
- Flatbread Round with Butter
- Baybel Cheese Rounds
- Reese Peanut Butter Cups
- Tea, Emergen-C

# Oatmeal with hatch's granola

Your favorite oatmeal takes on new dimensions with some dry milk and granola



## Hatch's Granola – Qty 6lb/ ~\$2.50/pound

- ½ cup flax seed
- 1 ¼ cup rye flakes
- 1 ¼ cup wheat flakes
- 7 cups thick rolled oats
- 1 ½ cup soy nuts
- 2 ½ cup shredded coconut
- 1 ¼ cup sunflower seeds
- 1 cup sesame seeds
- 1 ¼ cups whole raw almonds
- 1 cup safflower oil
- 1 cup honey
- 2 cups diced, dry granny smith apple pieces
- 1 ¼ cup golden raisins
- 1 ¼ cup diced, dry apricots
- 1 1/4 cup blueberries
- 1 ¼ cup dry currants

# Trail snacks

Asian crackers and snacks make a savory snack while on the trail & are light weight



Trail mix...make it interesting to eat and change up the variety often



# Meatless pemmican

**Pemmican Bars...all that Cliff Bars wanted to be, but aren't**



## **Pemmican – Qty 7-9 rounds**

- ½ cup golden raisins
- ½ cup whole raw almonds
- ½ cup sunflower seeds
- ½ cup diced, dry granny smith pieces
- ¼ cup dry blueberries
- ¼ cup dry currants
- ¼ cup dancing deer pumpkin pancake mix
- ¼ cup chocolate whey powder
- ½ cup cornmeal
- 1/3 cup maple syrup

# Beef jerky

**3lbs of top round beef will make one gallon freezer bag of dry jerky**

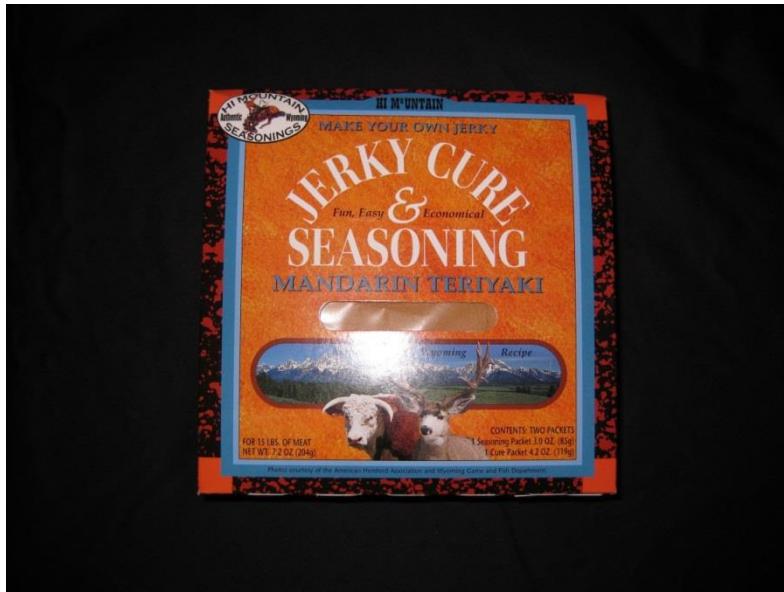


## **Round Steak Beef Jerky**

- 3 lbs Round Steak Beef
- Cut 1/8<sup>th</sup> to 1/16<sup>th</sup> inch thick; cut with the grain of the meat
- The meat for jerky typically needs to be special ordered from a good butcher. To get the thin cut it must be slightly frozen and then cut.
- If you receive jerky meat that is 1/2-inch or more, it will be too thick to dry properly and can go rancid on the trail in hot weather.

# Jerky cure and seasoning

Jerky cure and seasoning can be either wet or dry depending on preference.



- Jerky meat should never be cured and marinated in metal bowls. Always use a glass bowl or container for this process.
- Marinating requires a minimum of 24-hours before you can begin the dehydration process.

## GENERAL DEHYDRATION INFO:

- 1/16<sup>th</sup> inch jerky = 4 trays; 5-hours
- 1/8<sup>th</sup> inch jerky = 4 trays; 10 hours
- 3 pounds wet jerky meat = 1 gallon ziplock bag dry

# Hummus

**Hummus is easy to make and dehydrates well as long as you do not use too much oil**



## **Lemon Hummus**

- 1 can 15-oz chickpeas
- 3 tbsp tahini
- 1 clove garlic
- ¼ cup lemon juice
- ½ tsp kosher salt
- ¼ tsp Cumin and Paprika
- 1/8 tsp cayenne pepper
- ¼ cup water (add in small batches)
- 1 tbsp extra virgin olive oil (add when re-hydrating, not during preparation)

### **GENERAL DEHYDRATION INFO:**

- Let sit overnight; dry in 1/3 cup portions
- 4 cups wet hummus = 2 ½ cups dry; 16 hours



# Spinach and white beans

**Spinach and Beans are a welcome “green hit” on the trail**



## **Oswegatchie Spinach & Bean Taco**

- 1 large onion
- 2 cloves garlic
- 2 tsp lemon juice
- ½ tsp pepper
- ½ tsp salt
- 1 pinch spices; cumin, cilantro, chili powder
- 1 bag spinach
- ½ can cannellini beans

### **GENERAL DEHYDRATION INFO:**

- 2 lbs wet spinach mix = 4 cups dry; 8 hours
- Rehydrate and spread on tacos with hummus!

# Spaghetti

Spaghetti is dehydrated with the sauce on so it is a complete meal when finished



## Santanoni Spaghetti

- 1 pound angel hair pasta
- 12 fresh mushrooms
- 3 cloves garlic
- 1 large onion
- 1 can diced black olives
- 1 can red beans
- 1 or 2 jars spaghetti sauce
- 1 pinch spices; crushed red pepper, salt, pepper
- ½ cup fresh grated parmesan cheese

### GENERAL DEHYDRATION INFO:

- Combine everything and let sit overnight
- 1 lb wet spaghetti = 1 gallon ziplock; 12 hours

# Spaghetti meat add-ins

**Meat and sliced ham can be added to any meal for some extra protein and flavor**



## GROUND MEAT

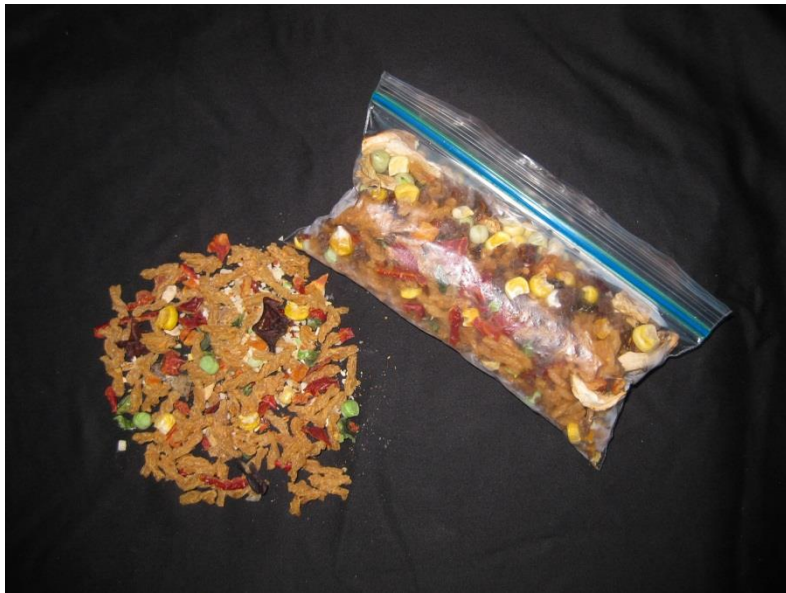
- Choose lean buffalo, beef or turkey with a fat content of 15% or less. Add bread crumbs to the ground meat to improve rehydration.
- 1 lb grd buffalo = 2 cups dry; 5 hours

## DELI MEAT

- Choose lean ham, turkey, roast beef or chicken with a fat content less than 10%. Meat shall be around 1/16<sup>th</sup> inch thick
- 1 lb ham = 1 ½ cup dry; 6 hours

# Mac & cheese

**A blend of box mac & cheese with veggie and spice additions makes a flavorful meal.**



## **Spicy Veggie Mac-n-Cheese**

- 3 cups cooked Macaroni (Back to Nature; Mac-n-Cheese Spirals)
- 1 packet dry cheese powder
- 1 1/2 tsp butter
- RE-DEHYDRATE PASTA MIX FIRST; then add
- 4 tbsp powdered milk
- 1 tbsp taco seasoning
- 1 cup dry tomato slices
- 1 cup dry pepper, onions and mushrooms (or freeze dry veggie mix)
- 1 pinch dry red pepper flakes

### **GENERAL DEHYDRATION INFO:**

- 3 cups dry pasta = 3 cups dry; 4-5 hours

# Beef stew

Add veggies and meat to a beef stew base, along with Chinese mushrooms.



You can cheat a bit and use a pre-packaged meal as your base.



# Add-ins

Spices, Red Pepper, Olive Oil and Taco Seasoning add flavor and interest



Tomato Soup and similar spices create a rich and tasty tomato base to meals



# Add-ins

Onion is better purchased dry since it can take a long time to dehydrate and is strong smelling



Chinese mushrooms are very economical and have a long shelf-life, plus they give a meaty texture



# Add-ins

Freeze dried tofu from the Asian Market is a great protein source



Freeze dried veggies are a great tool and hold up well in the dehydration paks.





# Add-ins

Instant Potato Mixes are a great meal with chicken or tuna added

Tuna paks can be used as is, or you can dehydrate the tuna to save weight



# Clean water

The Aquamira System is light weight, safe and efficient for purifying your water



A Katadyn filter is a reliable tool, but takes up more pack space and weight.



# Re-hydration system

Hefty Freezer Bags are great and can be used more than once on a trip

Add the food to the bag and fill with hot water to cover



# Re-hydration system

**Use a FedEx Bubble Pak envelope as your re-hydration cozy**

**Modify the size and seal up with duct tape.**  
**This cozy is 4 years old and still going!**



# Preserving your efforts

Keep the silica paks that you get in pre-packaged foods and add them to yours

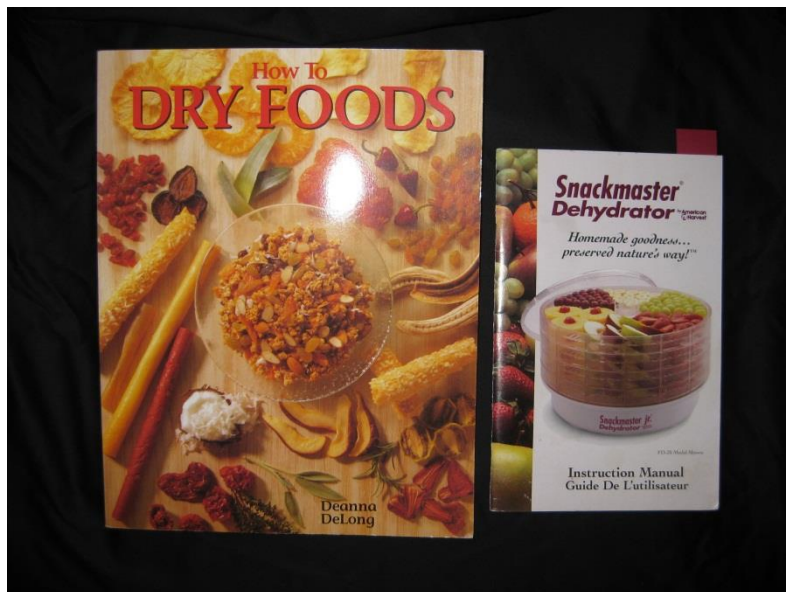


Keep your dehydrated foods in the freezer until needed.



# resources

## Dehydration guides and your notes



## Websites

BackpackingChef.com

**Your Best Backpacking Recipes**

Share your best backpacking recipes with the readers of BackpackingChef.com.

I will publish your recipes and index them on this page with credit to you as my Guest Chef.

Submit breakfast, lunch, supper, or dessert recipes. Let's see your best creations.

Thanks to everyone below for submitting your backpacking recipes. They look great!

Follow this link to the Recipe Submission Form:  
[Submit your best backpacking recipes.](#)

**Recently Submitted Best Backpacking Recipes**

[Beef & Bean Burrito](#)  
A hardy Mexican-style chili served in tortilla wraps. Submitted by PasnThru.

[Apple Cobbler](#)  
Hot Apple Cobbler baked in an Outback Oven or reflector oven. Submitted by Shelley Lauzon.

[Cinnamon Biscuits](#)  
Canned biscuits with sugar and cinnamon cooked in foil over the campfire. Submitted by Mark S. Leathers.


**Supper or Lunch Backpacking Recipes**

[Chicken Cacciatore](#)  
Classic Italian Chicken Cacciatore over noodles. Submitted by Chris Tarricone.

[Chicken Carbonara](#)  
Chicken Carbonara is an Italian cream sauce based dish which includes pasta, pancetta(bacon), a creamy Alfredo sauce and chicken. Submitted by RollingStone.

[Jamaican Jerk Chicken](#)

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# The goal...

**100-mile Wilderness Backpack  
Food Prep 11 days; 18.7-  
pounds of food**

**Kootenay Rockwall Backpack  
Food Prep 6 days; 10.2-  
pounds of food**



# General dehydration times

Item	Weight	Thickness	Hours to Dry	Amount Produced
• Jerky	3 lbs wet	1/8 <sup>th</sup> thick	10 hours	1 gallon bag
• Ground Buffalo	1 lb wet		5 hours	2 cups dry
• Deli Ham	1 lb wet	1/16" thick	6 hours	1 ½ cup dry
• Tuna	2 cans		2.5 hours	2 cups dry
• Spaghetti	1 lb dry pasta		12 hours	1 gallon bag
• Mac-n-Cheese	6 cups dry pasta		8 hours	6 cups dry
• Spinach & Beans	2 lbs wet		8 hours	4 cups
• Hummus	4 cups wet		16 hours	2 ½ cups dry
• Scallions	6 stems	1/8" thick	3 hours	½ cup
• Mushrooms	1 pint	1/8" thick	7 hours	½ cup
• Tomatoes	1 pint	1/8" thick	7 hours	½ cup
• Peppers	4 peppers	½" square	10 hours	½ cup
• Green Apples	6 apples	½" rings	12 hours	1 pint bag