BACKCOUNTRY MEAL PLANNING

MINDFUL HUNTER

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THE 7 SIMPLE RULES

1. Bring 3,000–4,000 calories per day.
2. The longer the hunt, the less food you bring.
3. Macro split 40% fat, 40% carbs, 20% protein.
4. Time your carb intake before high-energy activities and your fat/protein intake before low-energy activities.
5. Bring adequate ELECTROLYTES, OMEGA-3, CURCUMIN, PROBIOTICS, MULTI-VITAMINS, GREENS and FIBRE SUPPLEMENTS.
6. The food for each day goes in a 1-gallon *Ziploc* bag and then all those bags go in an ultralight dry bag.
7. Daily intake is structured around three main meals, with snacks and drinks as activity requires.

This guide is meant to clear up any confusion you may have around how to design an effective backcountry meal plan. These guidelines apply to beginners and advanced backcountry hunters alike. I have seen a lot of **misinformation regarding appropriate macronutrient ratios**, and I rarely see anyone talking about the **role micronutrients play in backcountry meal prep.**

We will start at the beginning. Macronutrients are fats, carbohydrates and proteins. The primary purpose of fats is to provide energy storage; carbs supply active energy delivery and protein delivers raw material to build and repair cells. What most people do not realize is that, depending on the circumstances and the demands placed on the body, these three **macronutrients are interchangeable**—with the exception that protein is the only macro that can be used to build and repair cells.

Let me give you an example: when you are fat adapted or in a state of ketosis, your body can use ketones generated directly from fat as an active energy source. Also, in that same state, if you deliver a large dose of protein in one sitting, those proteins will undergo glucogenesis and provide glycogen to your body to be used as an active energy source, the same way carbohydrates do. Now, this is the important part: **just because the macros *can* be interchanged does not mean they *should* be.** Each macro has a very specific main purpose and is particularly effective and efficient at that main purpose. When you ask a macro to do something it was not initially meant to do you, are *always* going to experience a compromise or a reduction in the efficiency of the system.

At this point I think it is important to address being in a state of ketosis—or being "keto," as the kids like to say. There is a severe amount of misinformation regarding ketosis on the Internet and I would urge you to do a lot of research on this topic before exploring it as a way of life. I have experimented extensively with keto, to the point where I was checking my blood levels multiple times a day to ensure I had the proper ketone millimolar levels *(which are between 1.0 and 3.0)*.

I am speaking from experience in this domain. For the purposes of this guide, I am going to keep it short and simple.

> *If you are not fully fat adapted and currently living your day-to-day life in a state of ketosis **do not make plans to go into the backcountry on a diet that consists primarily of fats.***

It takes the average person weeks to become fully fat adapted, and the interim is an uncomfortable, lethargic state often referred to as keto flu. I will say it again: keto can be a very efficient dietary system,

but if you are not already in full-blown keto, it is a very bad idea to think you can jump in cold turkey for a hunt in the backcountry.

To that end, this guide is focused exclusively on a more traditional diet, with adequate representation from all the macros and, from this point forward, I will be discussing how the metabolisms of people on those diets operate. If there is enough demand in the future, I may write a keto-specific guide.

With all that said, there is still a key role for fats to play in our meal-planning system and, the reason I have designated this guide as 2.0, is that I specifically want to address **macronutrient timing** and how we can exploit that to take advantage of the severe weight discrepancy between fats and carbohydrates.

MACRONUTRIENT STRUCTURE

Let's look at the differences between fats and carbs and their ability to deliver energy to the body. The first thing we need to understand is that **fats possess 9 calories per gram while carbs only possess 4 calories per gram *(proteins 4cals/gram)***. This is the reason that everyone is so obsessed with fat-based diets for the backcountry. You can essentially cut the weight of your food in half and still deliver the same number of calories. What some people are missing, though, is that these calories are not equally useful, depending on the circumstances.

The primary method fats use to deliver energy is a multi-stage process called **fatty acid oxidation**. There are two key things we need to note about this process. Firstly, this process takes a long time compared to metabolizing carbohydrates into glycogen. Secondly, it requires access to oxygenated blood.

This means that we can only utilize fatty acid oxidation during periods of aerobic activity which are defined as activities where we can deliver sufficient oxygen to our blood system.

Carbohydrates, or more specifically glycogen, is the only fuel source we can access when in an anaerobic state. Examples of anaerobic activities are high-intensity interval training, heavy weightlifting, plyometrics and sprinting.

I would like to add to this list extremely intense backcountry hiking with a heavy pack across severe terrain. If you're having a hard time catching your breath there's a high likelihood, you're in an anaerobic state.

MACRONUTRIENT TIMING

Now you can see where the intelligent design of our meal system comes into play.

Our days are not created equal, so the fuel we feed ourselves should not be created equal either.

If we know that we are going to be sitting around or engaging in light activity we should use that as an opportunity to load up on macros that take longer to digest and metabolize, like fats and proteins. If we are right in the middle of, or about to engage in, strenuous activity, we should focus on carbohydrate intake as our primary fuel source. Utilizing this methodology, we can still exploit the weight advantages of fat without exposing ourselves to the vulnerabilities of only having access to fatty acid oxidization as our primary fuel system.

Ultimately, we are looking to optimize our performance in the backcountry. My goal with the combination of my training and food is to **never be in a situation where I allow my physical state to dictate my choices.**

I never want to hear a bugle mid-September and say to myself I am just too damn tired to go chase that right now.

That is unacceptable to me, and it should be to you, too! With proper pre-hunt training and meal planning we never have to feel like that.

MICRONUTRIENTS

Before we dive into specific meal plans, we need to examine the role that micronutrients play in our meal system. I am going to break these into two broad categories. The first is vitamins/minerals and the second is electrolytes. These are the elements I see most often neglected in backcountry food planning. Let's dive into vitamins and minerals first. We need to appreciate that

without the appropriate micronutrient profile available in our bloodstream we cannot efficiently utilize the macros we intake.

Think of this like the engine oil of your body. You can put all the gas you want in your car but if you let the oil run dry that engine is going to seize. I will keep the discussion brief for the sake of this guide and just list the items I believe are worth bringing:

- A HIGH-DENSITY OMEGA 3 SUPPLEMENT, SUCH AS HIGH-QUALITY FISH OIL;
- A MULTI-VITAMIN;
- TURMERIC/CURCUMIN; AND
- A PROBIOTIC.

The list of electrolytes included in the body are sodium, potassium, calcium, bicarbonate, magnesium, chloride and phosphate.

Essentially, electrolytes conduct electricity when mixed with water and help hydrate the body, rebuild damaged tissue, regulate nerve and muscle function, and help balance blood pressure.

For our purposes we can focus primarily on **sodium, potassium** and **magnesium**. For now, it is only necessary that we understand the role a balanced micronutrient profile plays in our optimized meal-planning strategy.

There are multiple ways to address your electrolyte needs. Two of my favourites are the liquid squeeze bottles by *Mio* and the individual *Hydrate & Recover* packets by *Wilderness Athlete*. I will either add these directly to my water bladder in my backpack and sip throughout the day or hyper dose into my *Nalgene* and drink in one sitting if I am getting dehydrated from strenuous activity. Some other options include salt pills, *Nuun* tabs or a variety of other products available at backpacking stores and on *Amazon*. I just urge you to read the label and ensure they carry sufficient amounts of the three critical electrolytes I mentioned above.

I recommend approximately 100–300mg sodium, 100–150mg potassium and 25–50mg magnesium per serving. A note of caution with salt pills, while these have their place in balancing your sodium levels they do not address the other key electrolytes.

There are two final supplements that deserve an honorary mention: greens and a fibre supplement. I only recently started incorporating these into my meal plans and it has made a world of difference for my digestion and energy levels. My favourite options are chocolate-flavoured *Cytogreens* by *Allmax* and *Carbon Fiber* by *Advanced Genetics*.

One of the issues with **a diet consisting of such calorically dense foods that are either freeze-dried or chemically preserved is that it tends to introduce digestion and bowel-movement issues.** This is not only uncomfortable but also impedes nutrient uptake. I buy a variety of little *Ziploc* bags and a plastic funnel off *Amazon* and then just put daily servings of all my supplements including protein, electrolytes, greens and fibre right in each daily lunch bag.

When I am filling up my water I will add these both to my *Nalgene*, fill 1/3 with water and drink before filling my *Nalgene* with fresh water for the rest of the day.

CALORIE CALCULATOR

I am going to take an innovative and somewhat counterintuitive approach to estimating caloric requirements for a given trip. When planning a nutritional strategy, you are always trying to **balance the competing needs of energy and weight**.

The more energy you need, the more food you bring. The more food you bring, the more weight you need to carry.

Depending on the physical intensity and duration of a hunt, there are different ways to approach this problem. I am actually going to recommend taking slightly less food on longer hunts; even though that may seem illogical, the fact of the matter is that

going in too heavy on a long hunt can have deleterious consequences.

I would also argue that, though long hunts are still very physically demanding, there is also a greater likelihood of down days where you are hiking less, glassing more and generally burning fewer calories, and this allows you to shuffle some food around to where it is needed most.

Let's dive into some numbers. I am going to simplify things here again. Normally, if I was building a meal plan for a client, we would try to estimate their basal metabolic rate either through observation or the use of a number of formulas. I would then estimate the number of calories required for additional activity and place the daily caloric intake either slightly above or below this number depending on the goals of the individual. Here is the fact of the matter: **you are never going to be able to keep up with your caloric burn in the backcountry** anyways, so we're going to throw that method out and use something far more practical.

For an average individual around 180lbs we are going to keep your calories between 3,000 and 4,000 per day.

If you're a bigger person, add a few calories to the following recommendations; if you're smaller, subtract a few. We are going to estimate calories on length of trip and our ability to carry weight; as our food is what supplies our energy and, indirectly our motivation, we want to carry as much as we can without overdoing it. Our general macronutrient breakdown is going to be **40% fat, 40% carbs** and **20% protein.**

For an **archery elk bivy hunt** in the rut where you are going in for 2–4 days at a time, go between 3,800 and 4,000 calories per day. You will be busting your ass constantly and will only need to carry a few days of food at a time so you can load up.

For an **alpine mule deer hunt** of 6–7 days, aim for 3,400–3,600. Again, going longer we need to reduce weight slightly and will likely have a couple days solely devoted to glassing, which will reduce our caloric expenditure over the course of the whole trip.

For a 12-day **backcountry sheep hunt** we are going to aim for 3,000–3,200 calories a day. This is simply based on the extension of the principles I have already noted.

It is important to note that, if you have the option to pack-in food pre-hunt or get back to the strip mid-hunt and reload, then the rules go out the window and I recommend taking as much food as possible. Another issue to note is that, if you know you are highly food motivated and need more nutrition then look at your kit and decide what you want to sacrifice in order to fit more food. I am personally always carrying a full camera rig in addition to all my hunting gear so have to keep my estimates rather conservative to still stay mobile. I aim for a pack weight no more than 75lbs, but I am not always successful. For the average guy I would not suggest going this heavy. If there is enough interest, I can write an additional packing guide that will go into pack-weight strategies in more detail.

EXAMPLE MEAL PLANS

MEAL PLAN 01: 12-DAY SHEEP HUNT

For context, this is my actual meal plan for my 2021 sheep hunt. I am 6'1" 250lbs, so I started at the lower limit of the caloric recommendation of 3,000 and added 15% to account for my additional size. The goal was 3,450 cals/day.

This put me at 1.7lbs/day and 19.2lbs for the full 12 days. This helps illustrate how minor increases in daily food weight will add up quickly in your pack. If I had added an extra 0.3lbs per day I would have been almost 5lbs heavier at 24lbs for the week.

MEAL PLAN 01		WEIGHT / GRAMS	CALS / SERVING	DENSITY CALS / GRAM	FAT / GRAMS	CARBS / GRAMS	PROTEIN / GRAMS
Whey Isolate	1 scoop	30	120	4	1	1	27
Peak Refuel Berry Granola	1 pack	144	570	3.96	1.5	108	13
Starbucks VIA — Italian Roast	4 packs	14	0	0.00	0	0.00	0
Trail Mix	1 pack	55	250	4.55	7	28	7
Green Belly Meals Lunch	1 pack	155	660	4.26	26	95	17
Macadamia Nuts	1/4 cup	35	250	7.14	26	5	3
Clif Builder Protein Bars	1 bar	68	290	4.26	11	29	20
Peak Refuel Dinners	1 pack	140	870	6.21	48	54	53
MCT oil	1 pack	15	130	8.67	14	0	0
Sausage	1/2 sau	56	270	4.82	25	1	10
Greens	1 scoop	9	25	2.78	0	3	3
Fibre	1 scoop	5	0	0.00	0	0	0
Omega 3	3 pills	3	27	9.00	3	0	0
Vitamins	misc.	5	0	0.00	0	0	0
Mio/Electrolytes	1/3	18	0	0.00	0	0.00	0
	GR / DAY	752	3462	4.60	163	324	153
	OZ / DAY	26.86		CALS / DAY	1463	1296	612
	LBS / DAY	1.68		% / DAY	42%	37%	18%

EXAMPLE MEAL PLANS

MEAL PLAN 02: ARCHERY ELK BIVY HUNT

Now we are going to look at a hunt on the opposite end of the spectrum. Here, we are going to have a high caloric expenditure every day, but we can go back to the truck and refuel every 3-4 days. Therefore, we can bring more food with us. I have kept this to the upper limit recommendation of 4,000 cals or 1.96lbs/day, as I know I would not need any more food than this regardless of my size.

To be fair, this does look like a lot of food; the other nice thing about a bivy hunt is that you can always adjust on the fly when you get back to the truck. To keep things clear, I am going to use the same foods but alter some of the amounts and add in some more, so you can see how simple it is to adjust and hit a daily calorie/weight goal.

MEAL PLAN 02		WEIGHT / GRAMS	CALS / SERVING	DENSITY CALS / GRAM	FAT / GRAMS	CARBS / GRAMS	PROTEIN / GRAMS
Whey Isolate	2 scoop	60	240	4	2	2	54
Peak Refuel Berry Granola	1 pack	144	570	3.96	1.5	108	13
Starbucks VIA — Italian Roast	4 packs	14	0	0.00	0	0.00	0
Trail Mix	2 pack	110	500	4.55	14	56	14
Green Belly Meals Lunch	1 pack	155	660	4.26	26	95	17
Honey Stinger	1 pack	30	150	5.00	7	21	1
Macadamia Nuts	1/4 cup	35	250	7.14	26	5	3
Sprouted Sunflower Seeds	1/4 cup	28	180	6.43	16	6	5
Clif Builder Protein Bars	1 bar	68	290	4.26	11	29	20
Peak Refuel Dinners	1 pack	140	870	6.21	48	54	53
Sausage	1/2 sau	56	270	4.82	25	1	10
Greens	1 scoop	9	25	2.78	0	3	3
Fibre	1 scoop	5	0	0.00	0	0	0
Omega 3	3 pills	3	27	9.00	3	0	0
Vitamins	misc.	5	0	0.00	0	0	0
Mio/Electrolytes	1/3 pk	18	0	0.00	0	0.00	0
	GR / DAY	880	4032	4.58	179.5	380	193
	OZ / DAY	31.43		CALS / DAY	1616	1520	772
	LBS / DAY	1.96		% / DAY	40%	38%	19%

Since the two examples above represent the extreme ends of the spectrum, it is easy to extrapolate potential meal plans for a variety of other hunts. This is also why it is **important to keep notes and record what your caloric needs were.** I have done enough backcountry hunts now that I have a good idea of what I need and what I can get away with when I need to conserve weight. I have included a section below with a variety of food recommendations that you could substitute in place of my choices. You can either look on the package or use *Google* to get the macro breakdown and ensure you end up within the 40/40/20 split I recommend per day.

Finally, for packaging, I recommend 1-gallon *Ziploc* bags pre-packed for each day and then loaded into an ultralight drybag. For longer hunts I might use two dry bags. This not only makes it easier to pack in your backpack but also gives you the ability to cache half your food and not carry it with you if you are doing a long loop or know you are going to be back past a common location.

EXAMPLE FOODS

- Peak Refuel Meals
- Heather's Choice Meals
- Off-Grid Co Meals
- DIY Trail Mix
- Protein Bars
- Packaroons
- Snickers Bars
- Instant Oatmeal
- Jerky
- Honey Stinger Waffles
- Struppewaffles
- Clif Bloks
- Carb Gel Packs
- Green Belly Meals
- Smoked Salmon
- Dark Chocolate
- Hard Cheese
- Nut Butters
- Dried Fruit
- Protein Cookie
- Tuna
- Dried Noodles *(Top Ramen)*
- Sesame Snaps
- Corn Chips
- Nuts
- Seeds
- Candy

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