BACKCOUNTRY FOOD PLANNING

BACKPACKINGLIGHT®

MEMBERS Q&A

1 • KEYNOTE: an overview of food planning

2 • Q&A: food planning

3 • Q&A: open

CALORIC DENSITY

THE BACKCOUNTRY FOOD PLANNING NORTH STAR KPI

CALORIES (Cal) PER OUNCE

dried apples ~ 20 Cal/oz

oats ~ 100 Cal/oz

nuts ~ 170 Cal/oz

CALORIC DENSITY
THE BACKCOUNTRY FOOD PLANNING NORTH STAR KPI

WHAT'S THE IMPACT OF CALORIC DENSITY FOR A BACKPACKER?

80 Cal/oz	125 Cal/oz
3,000 Cal/day	3,000 Cal/day
7 days	7 days
16.4 lbs	**10.5 lbs**

CALORIC DENSITY
THE BACKCOUNTRY FOOD PLANNING NORTH STAR KPI

HOW DO WE INCREASE CALORIC DENSITY?

CALORIC DENSITY

THE BACKCOUNTRY FOOD PLANNING NORTH STAR KPI

INCREASE % OF CALORIES AS FAT

CALORIC DENSITY

THE BACKCOUNTRY FOOD PLANNING NORTH STAR KPI

DEHYDRATION AND FREEZE-DRYING

freeze-dried

~ 110 Cal/oz

~ 20 Cal/oz

dehydrated

~ 80 Cal/oz

BUT IT'S NOT ALL ABOUT THE CALORIES

WHAT'S THE REAL GOAL OF BACKPACKING FOOD?

SUSTENANCE • ENERGY • RECOVERY • NUTRITION • JOY

CALORIC DENSITY VS. NUTRITIONAL DIVERSITY

THE ROLE OF MACRONUTRIENTS

CARBOHYDRATES ENERGY

PROTEIN RECOVERY

FATS CALORIES

NUTRITIONAL DEFICIENCES IN LONG-DISTANCE ATHLETES

injury, inflammation, gastrointestinal disturbances, suppression of appetite, lack of time to prep meals, limiting food intake, food pack weight, dehydration, fluid overload, extreme environmental conditions, intense physical exertion, limited sleep, rationing of food

Ca, vitD (bone repair / stress fracture resilience)

B12, folate (muscle repair)

iron (oxygen transport)

Zn (muscle repair, immune function, energy metabolism)

Mg (cardiovascular, nervous - sweating/urination)

antioxidant homeostasis (oxidative stress - cardio, inflammation)

protein (muscle repair and regeneration)

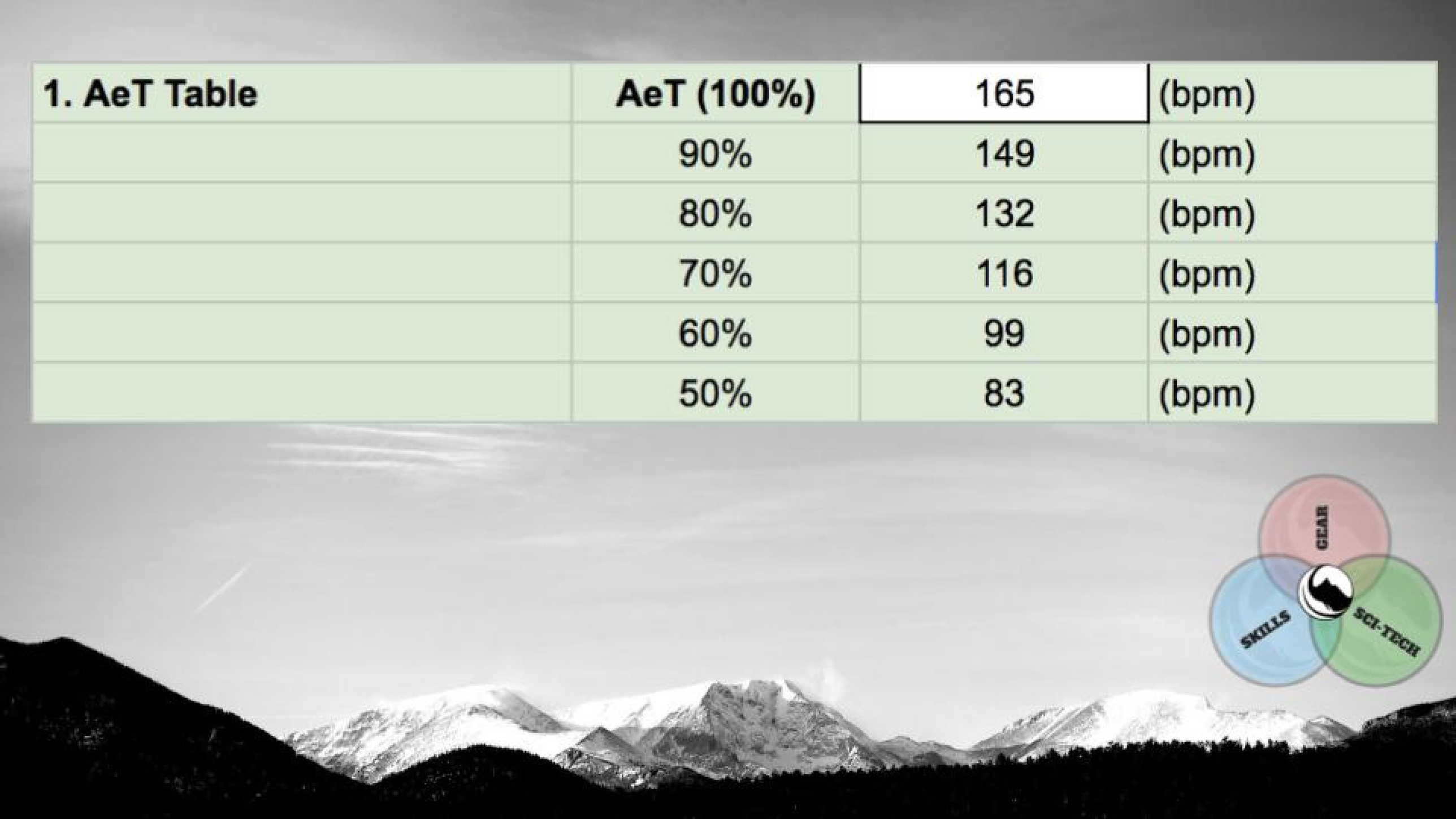
Williamson, E. Nutritional implications for ultra-endurance walking and running events. Extrem Physiol Med 5, 13 (2016). https://doi.org/10.1186/s13728-016-0054-0

PREDICTING CALORIC CONSUMPTION WITH ENERGY-MILE THEORY

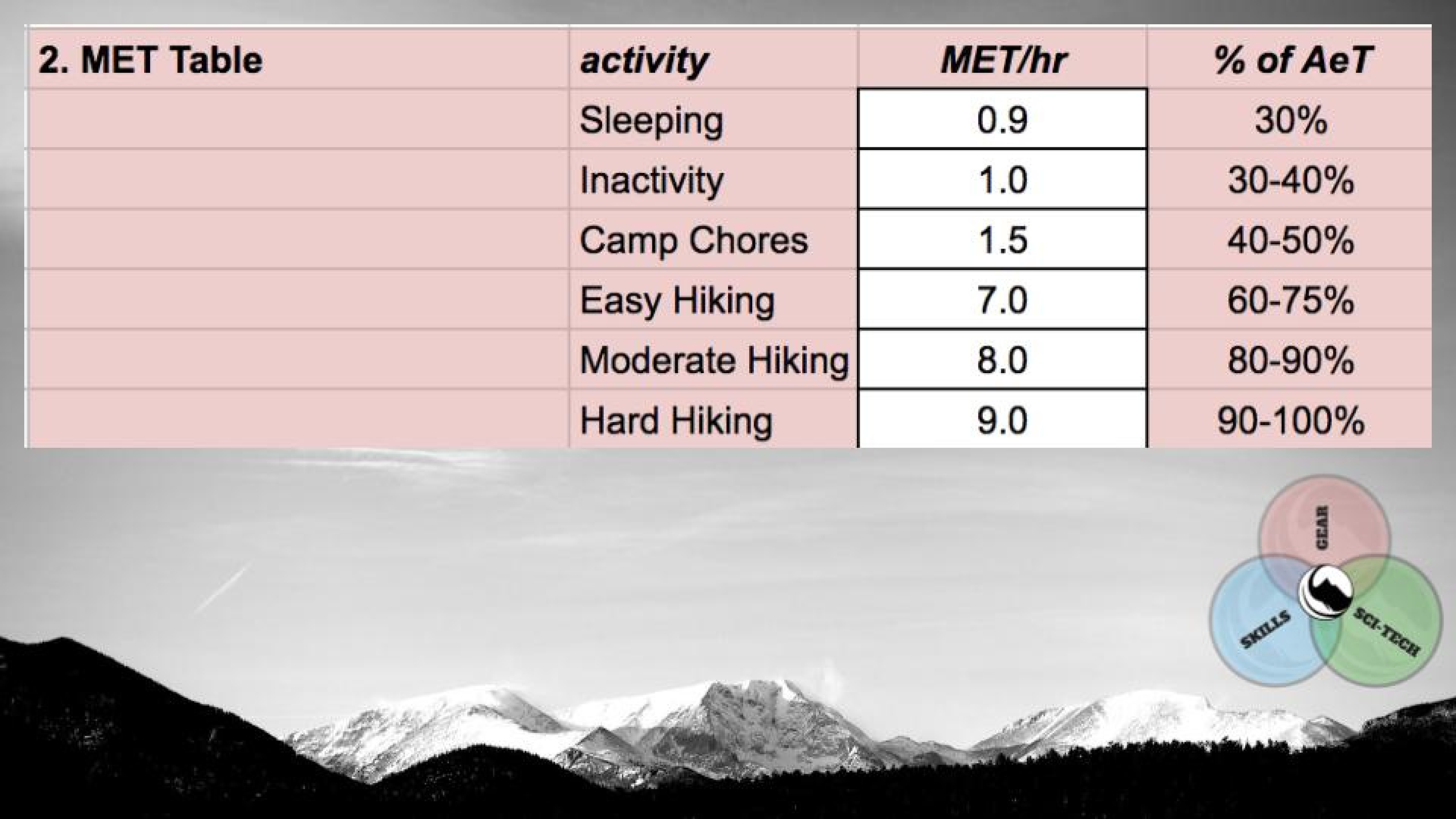
HOW TO PREDICT CALORIC NEEDS

1. Define your Aerobic Threshold (AeT).
2. Create a MET table unique to you.
3. Calculate your Basal Metabolic Rate (BMR).
4. Create your activity schedule.
5. Let the math predict your caloric needs.

1. AeT Table	AeT (100%)	165	(bpm)
	90%	149	(bpm)
	80%	132	(bpm)
	70%	116	(bpm)
	60%	99	(bpm)
	50%	83	(bpm)



2. MET Table	*activity*	*MET/hr*	*% of AeT*
	Sleeping	0.9	30%
	Inactivity	1.0	30-40%
	Camp Chores	1.5	40-50%
	Easy Hiking	7.0	60-75%
	Moderate Hiking	8.0	80-90%
	Hard Hiking	9.0	90-100%



3. Basal Metabolic Rate	Weight (lb)	155.0
	Height (in)	67.0
	Age (yr)	48.0
	BMR (Cal/day)	1553
	BMR (Cal/hr)	65

Harris-Benedict Equation:

BMR calculation for men (metric)	BMR = 66.5 + (13.75 × weight in kg) + (5.003 × height in cm) – (6.755 × age in years)
BMR calculation for men (imperial)	BMR = 66 + (6.2 × weight in pounds) + (12.7 × height in inches) – (6.76 × age in years)
BMR calculation for women (metric)	BMR = 655.1 + (9.563 × weight in kg) + (1.850 × height in cm) – (4.676 × age in years)
BMR calculation for women (imperial)	BMR = 655.1 + (4.35 × weight in pounds) + (4.7 × height in inches) - (4.7 × age in years)

Wind River Glacier Traverse

5. Data Summary	Total Calorie Requirements	6026
	Actual Calories / Day Packed	3500
	Caloric Deficit / Day	2526
	Fat Loss/Day in lb (3500 Cal/lb)	0.72
	Trip Duration (days)	12
	Total body fat lost during trip, lb	8.7

FUEL CONSUMPTION VS. STOVE TYPE

SAVING FUEL WEIGHT

TURN YOUR STOVE DOWN

FAST-COOK FOODS

HOT SOAKING

COLD SOAKING

PRE-TREATMENT OF WATER

FEATURED RECIPE

THE FORMULA (4.5 oz / 500 Cal)

FAST CARB - 2 oz (60 g)
SLOW CARB - 1 oz (30 g)
PROTEIN - 0.5 oz (15 g)
FUN (CRISPY FATS) - 0.5 oz (15 g)

Boosters:

- Calories - 0.5 oz (15 g) of oil, seeds, or nuts
- Volume/satiation - add fast carb
- Protein - foil packets of fish or chicken


365
WHOLE FOODS MARKET
Organic
GLUTEN FREE
Crispy Onion
Salted Pieces
Certified
GF
ORGANIC
TRUROOTS
KNOW YOUR ROOTS
SPROUTED
LENTIL BLEND
RightRice
RIDE FROM VEGETABLES
garlic herb
PLANT BOSS
Organic
Plant Taco
Mild
Meatless Crumbles
REPLACES 1 lb ground meat
Prepare it fresh – sooo easy!
NET WT 3.35 OZ (95g)

MORE RESOURCES

PODCAST

WEBINAR

MASTERCLASSES

ARTICLE LINKS

Q&A