



Expedition Food Guidelines

A day in the hills demands energy and that energy is predominantly aerobic. For example a flat walk at 4km/h, male, weighing 11 stone will expend 3.7 calories a minute. One hour walking will use 220 calories.

Carrying a 7kg rucksack, walking a faster pace and uphill will increase energy output to 9.7 cal per minute = 580 cal an hour. At that pace you can burn off a Mars Bar in 35 minutes!

Example

165 mins uphill x 9.2 cal per minute = 1518 cal.

This is additional energy required to perform the task throughout the day.

Energy is stored in the body in three ways: carbohydrates are stored in the liver and muscles as glycogen; protein is stored in the muscles and fat is stored in the adipose tissue.

When exercising, the body uses a mixture of fat and glycogen as fuel for energy. At low intensity the body uses mostly fat; high intensity exercise, glycogen is used. Glycogen stores can be kept full by eating lots of carbohydrates ready for the demands of exercise and the normal daily activity.

So the more carbohydrate foods we eat the more energy we can produce and the more we exercise, the more glycogen we spend - fat will be the last thing to burn and you will get little energy from protein.

Novice walkers underestimate the amount of energy they will need when walking all day, if they are not used to walking for such long periods of time.

Whilst walking, food is essential throughout the day in small amounts, keeping the energy on an even plane and prevents the experience of dips in energy, which can affect performance.

So the food range you select is important and must reflect on the energy output. Along with selecting food you enjoy and easy to cook, ensure your appropriate packaging choices that will not weigh too heavy or be awkward to pack in your rucksack.

What needs to be taken into account?

1. Distance walked and route chosen i.e. hills.
2. Weather conditions – colder, more food required.
3. Gender – more calories for male v. female.
4. How heavy is the weight being carried on the back?
5. Speed of walk – use more calories the faster you walk.

What to consider when choosing foods?

6. What foods are easy to cook? i.e. dried food is quick.
7. What foods give more energy? i.e. carbohydrates.
8. What foods are enjoyable to the individual? i.e. taste, texture and special dietary needs like vegetarian food.
9. What foods are light and easy to carry (four days food can be heavy).
10. Is the food choice balanced in nutrients?
11. Where do they sit in your rucksack?
12. Emergency food is extra.

One of the things we ignore is the signal our bodies tell us when we are hungry and when we are full. But most importantly, often, when walking you are not hungry or at least do not feel hungry. But if you have not eaten for at least 2-3 hours and continuously walking, your energy levels are going to drop and performance will be affected. Symptoms of feeling tired, down, not able to walk on, not talking to your team (although this could be dehydration also).





Also if the weather is bad and someone is coming down with hypothermia, food is essential to get that person warm and enough energy to feel better.

Look at types of food – balance is essential:

- a. **Carbohydrates:** for energy, carbs that release energy slowly is ideal, i.e. brown bread, dried fruit, cereal bars, rice. That way you prevent sugar rushes that can make you feel tired by the end of the day.
- b. **Protein:** for repairing muscles, i.e. nuts.
- c. **Fat:** for warmth and comfort (fat takes longer to leave the stomach), i.e. nuts/seeds, porridge/oats, peanut butter, dried fruit, pasta/noodles.

Overall content would be as follows:

Carbohydrates	60-65%
Protein	10-15%
Fat	25-30%

Daily breakdown of:

Breakfast	20%
During the day	50%
Evening meal	30%

Tips

Try not to eat sweets all day; this will lower energy levels throughout the day.

Encourage snacking throughout the day or agree at all the checkpoints some food is eaten.

Store the food in the easy access pockets in the rucksack so they can get to it.

Remember where food items are packed so a friend can reach for them, (often young people do not know they need food but a leader should recognise the signs).

Put snacks in jacket pockets at the front of their clothing so can get to it without taking the rucksack off, they are more likely to eat more.

Food suggestions for menu planning

Breakfast

- Oats and water or dried milk
- Porridge and fruit/nuts with powdered milk
- Pancakes and honey or fruit
- Bagels and jam or peanut butter
- Croissants and jam
- Dried fruit and bio yoghurt

First day of expedition

- Bacon, eggs and sausages
- Cereal with UHT milk

Lunch

- Bagels with all fillings
- Rolls with cream cheese out of a tube
- Flapjacks
- Dried fruit with nuts or seeds
- Crisps or Pretzels
- Cheese straws
- Pita bread





Evening meal

Curry and rice - pre-cooked
Stews – pre-cooked
Soups – packet or pre-cooked
Pasta with sauces
Cous Cous with dried tomatoes and sauce
Fajitas
Rice with pre-cooked vegetables

Desserts

Custard and muffins
Chocolate Roll and sweet sauce
Sweet pancakes and sauce
Fruit flapjacks and custard
Rice pudding with chopped fruit

Scooby snacks

Cereal bars	Peanuts
Chocolate bars	Dried fruit
Flap jacks	Sweets of choice
Pretzels	

Hot drinks

Chocolate	Fruit squash
Tea/coffee	Flavoured teas

