Food

The most important energy resource

Sheet
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(where sold)

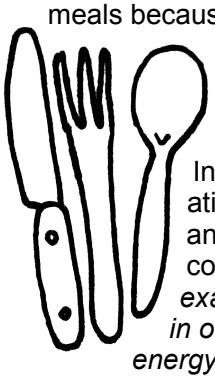
If you want to keep walking or cycling then you need the right fuel. Traditionally camp food has been viewed as basic – beans and sausages, or reconstituted dried food from a packet. The fact is that you can carry and cook many of the types of food that you might eat at home, and in this way the restricted scope of camping can be a great tutor for cooking more efficiently in the home.

Food is the most important energy source

We might talk about oil or gas or coal, but the only essential energy resource for the human species is food. One of the reasons why we have so many ecological problem today, such as climate change, is that we're using such large amounts of resources to produce our food. In fact we get less energy out of the modern human food system than we put in, and it's a basic fact of ecological systems that any species which uses more energy to find its food than it receives from it is doomed to fail – *at some time*.

One of the simplest ways we can reduce our dependence upon high energy, intensively grown and processed food is to cook more meals at home from raw, fresh, seasonal ingredients. Unfortunately the last fifty years of consumerism has de-skilled many people to the point where they find it difficult not only to cook food, but to understand whether the food they buying is fresh and edible. Likewise people have lost the idea of creating flavours using traditional ingredients and seasonings, opting instead for ready-made sauces or themed spice mixes.

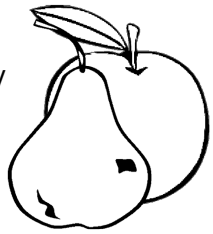
Going camping is a way that we can learn to cook efficiently. It's not just that you must cook all your meals because you can't pop down to the local pizza parlour. Cooking outdoors enforces a minimal set of tools to cook with, and a restricted supply of energy/heat to prepare the food. Instead we have to rely on our creativity to make up for the lack of tools and energy, and learn to prepare and cook food more simply; *but these are exactly the skills people need to learn in order to cope with the problems of energy depletion.*



Why food is important

When we look at camping shops food seems to be the missing element of the pack – certainly the need to cook good food is something that seems far less exciting in your local camping store than having the right tent or the right sleeping bag. In reality having the right food can get you through more rough times than a lot of snazzy equipment; it can give you the energy to carry on, warm you when you are cold, and lift your spirits when they're feeling a little soggy.

The average person burns up about 2,250 calories per day (albeit some nutritionists think that figure is on the high side because of our modern, sedentary lifestyle). A person walking in the hills, covering about 15 miles per day with a few steep climbs, will burn up *4,000 calories per day* or more. Forget your calorie-controlled diet – at this rate you're going to consume about 25% more food than usual. If you're not ascending steep hills or cycling long climbs then you're not going to be burning quite as much energy, but even on the steeper sections of the most easily accessible countryside you're still going to be burning up 500 to 600 calories per hour – that's a sugar lump every 80 seconds (by comparison, that's as much energy as your body uses in 1 hour when at rest!). The time of year can also have an impact – living outdoors in cold weather will also cause you to burn more calories.



If you are walking long distances carrying weight then you'll still use up a lot more energy, and your body will tell you pretty quickly whether you're eating enough food or not. If you start to get a headache or 'thick head', feel a little sick or dizzy, or your limbs start to feel heavy, then you need to be getting more food – but not just sugar! In fact, one of the best things to eat if you are feeling tired is fresh fruit (especially apples, pears or oranges) as these contain fruit sugars that are more easily metabolised by your body to give you a far more healthy sugar rush than eating a snack bar (refined sugar *requires* energy to digest the complex sugars it is made up from before it begins to release it contains).

Ideally your food intake needs to be about 15% protein, 25% fat, and the rest carbohydrates. Getting that balance of protein, carbohydrates and fats is actually not quite as easy to organise at it sounds, so planning of meals is important (see the section on planning your meals later).

Think nutrition, not just bulk

You also have to ensure that you look after your intake of micro-nutrients. To what extent you do this depends upon what you're doing. Your body can store enough essential vitamins and minerals to last you for a couple of days, so if you're going out for just a night or two's camping the composition of your food isn't critical (enjoy yourself!). But if you're going to be walking or cycling over a number of days then

it's important that you organise your food intake in order to get the right balance of nutrients to keep your body working well.

When walking for a number of days, especially if pushing yourself in the hills, you need to watch your intake of iron and B vitamins (because your blood cells will take a pounding with all that aerobic exercise), vitamin C (because it's required to metabolise the iron), and if you are sweating a lot, salt – but rather than raw salt you need a balance of sodium, potassium and other micro-nutrients, so, as well as ordinary salt eating fruit (especially bananas) and nuts will provide the other essential trace elements that your body needs.

Forget health foods and vitamin supplements – fresh food is far better for you as it contains the other complex enzymes and essential fatty acids that your body needs. Of course, when travelling outdoors you have the opportunity to collect fresh wild foods in order to provide your need for nutrients. For example, nettles have high levels of vitamins A and C and contain, by weight, about 2% iron and 5% protein. Also, food collected a few minutes before you eat it can contain almost twice as much of these valuable nutrients compared to the food that's a few days old which you buy in shops – so just a small contribution of wild food can make a big difference to your diet (see the section on wild foods later).

Plan your meals

The only way you're going to be able to feed yourself properly is to plan your meals. You don't need to be meticulously detailed, but you need to to plan roughly what different types of food you're going to eat to make sure that you get the right balance of protein (eggs, meat, cheese, cereals, pulses, beans and nuts), fats (cheese, dairy products, cooking oil, nuts) and carbohydrates (bread, biscuits, potatoes, rice, pasta and sugary snacks).

Planning should begin before you get to the shop, not when you get there looking at the aisles. It's not just getting the right balance of foods – your selection of food has implications for the weight that you'll have to carry. Before you pack you need to sit down and work out how many breakfasts, lunches and dinners you'll need for the days that you'll be travelling and then estimate how much food that comprises.

The average person consumes up to 3 pounds, or about 1.3 kilos, of food per day – but with all the extra effort you might need 20% more to provide the calories that you need. Even opting for dried foods (e.g. pasta or rice rather than potatoes), and avoiding the expensive and over-packaged freeze-dried foods, to get that level of food intake you'll still have to carry about two pounds, or just under a kilo, of food for each day. A heavy pack is around 23kg or 50lbs, of which a quarter (about six litres, or roughly one to two days supply) will be taken-up with water. Taking enough food for a few days is therefore a significant addition to the weight on your back.

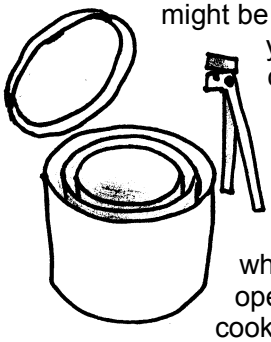
If you plan your meals you can measure out precisely what you need, and calculate the weight before-hand. In fact, if you carry out this operation for the meals that you ordinarily cook at home, and keep notes, when you come to plan your camping trip you can very quickly put together the right ingredients and keep an eye on the weight at the same time. What you take is up to your own tastes – the important thing is to make sure that you get enough of it without adding too much weight.

Basic tools and methods

As noted at the beginning, we need to re-learn the skills of our grandparents in order to reduce our energy and resource use, and cooking is one of the most important areas that we need to concentrate upon. Learning to cook well outdoors requires us to take the methods that we might use in the home and replicate them using simpler tools. The outcome should be the same, it just that it takes a little more time and effort to get there.

The simplest tool for cooking outdoors is a *billy can* – most army surplus shop will sell you a good billy can with a handle and lid for just a few pounds. The billy can can be hung from a string or chain above a fire, or rested on top of a camping stove, and is a general purpose way of heating food and water. In short, simple, versatile, reliable – which is why the army use them.

If you go to a camping shop then you'll probably get a nested set of saucepans with a detachable handle, and usually the lid of the largest saucepan doubles up as a frying pan. A nest of saucepans might be slightly heavier, but because you have more than one cooking vessels you can construct more elaborate meals. However, to save on weight the saucepans will be made of a very thin aluminium alloy and so they are not as robust when you try and use them on an open camp fire. If you want to cook mainly on open fires then you need to shop around for something heavier.



The basic saucepan can be used for boiling or, with the right insert, steaming (steaming is preferable to boiling for green/leafy vegetables as it preserves more of the nutrients inside rather than leaching them into the water). You can also fry food in a saucepan or its lid. These techniques are very simple because you carry out these operations in precisely the same ways in your home – you suspend the saucepan over your heat source and then leave it to boil/steam for as long as is necessary. The problems begin to arise when you want to do more complex operations than this – for example, baking or roasting. Most 'Dutch oven'-style pans, suitable for baking, are made of cast iron and weight 15kg or more! In these situations we need to improvise with what nature provides.

If you're static camping for a few days it's relatively

easy to make an earth oven (we won't go into the details here – there are plenty of examples available on the Internet). If travelling the simplest options for roasting and baking are to use an open fire:

To bake using an open fire just requires a large metal container that you place over the fire – on a grid or hanging by a chain. You then put your food on a stand (e.g., a small flat saucepan lid) inside the container, put the lid on top, and keep the fire going to maintain the heat until it's done. But, as noted above in relation to Dutch ovens, the container you use needs to be of a heavier gauge metal than a usual camping saucepan in order to hold the heat.

The other option for baking, if you don't have a heavy gauge saucepan, is to bury the container in the embers of the fire. This can be a little hit and miss, and takes practice to master, in order to get a level of control over the heat inside the container.

The simplest method to use with an open fire is roasting. You can throw root vegetables, and even meat, directly onto the embers of a fire, but with things like potatoes this is problematic because much of the outside of the potato will burn away before the middle is cooked.

To roast most effectively we need to remove the oxygen from around the food in order to stop it catching fire. The best way to do that is to bury the food under the embers – if possible wrapped around with fresh leaves (such as nettles) and a little clay to prevent the outside of the food charring. Again, as with baking in the embers, this takes practice in order to make a fire with a good amount of embers, and to keep the fire smouldering for up to two hours to keep the food roasting (as a general rule, when roasting in the embers double the cooking time compared to roasting in a conventional oven).

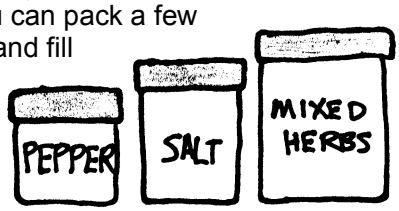
If you want to go the whole way down the 'aboriginal' cooking experience then make yourself a 'pit oven'. You make a large fire and heat rocks in it and then put the rocks into a shallow pit. Put your food on top of the rocks (again, it helps if packed in leaves to stop it charring) and then cover the top of the hole with sticks, leaves, and then top off with the soil from the hole in order to seal the heat in. Again, this method requires at least twice the length of time that you would normally take with a conventional oven.

The importance of flavour

Food is nutrition – it's a collection of chemical compounds that provide energy and keep you healthy. *Cooking is culture* – it's a set of preparation methods and ingredients that create a set of meals, flavours and smells that are distinct to a particular ethnic group. Understanding this difference allows you to make the transition from simply cooking food to creating a meal (indoors, or outdoors).

It doesn't matter if you're at home or in a field, a potato is a potato. What makes a potato a luscious feast is the herbs or seasoning that you add to it. When planning what food to take with you it's important to find room for at least the basic seasoning's – pepper, salt and herbs – if you can take a number of different herbs and spices you can make the food you cook really special.

Rather than take a lot of large containers – given you're unlikely to use all the contents in a few days – the simplest option is to get a set of very small plastic food containers – ideally with a volume of about 75ml to 150ml each so you can pack a few into a small space – and fill them with your favourite herbs and spices. If you can get hold of some very small paper bags you can also put different herbs and spices in bags and then pack into a single container – although you risk the flavours becoming a little mixed if you leave them in the container for a long period.

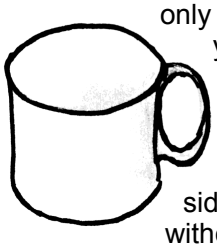


Also, don't forget the flavours that don't need to be packaged – onions, garlic, and dried chillies will just pack into your food box. You can buy small tubs of stock or bouillon powder, just for a little quick and easy flavouring, and they also make good, flavourful hot drinks in cold weather.

Packing a collection of herbs and spices takes a little effort, as does cooking with them, but it makes a great deal of difference to your spirits. It could be best summed up as follows: *even on a cold and dour day, there's nothing like a good curry when you reach the top of a mountain!*

A few camp cooking tricks

For most people the biggest restriction on cooking outdoors is the fact that the average camping stove only has one burner – whilst at home you probably use two to four burners to cook a meal. An open fire doesn't have the same problem as you can hang pots above it, or stand them side-by-side on a grid over the fire. But even without an open fire to cook with, there are a few ways around the one-burner problem:



Firstly, *don't cook*. Much of the veg that we routinely cook in this country – peas, carrots, cabbage, etc. – can be eaten raw, and in fact it's more nutritious if eaten raw.

Secondly, *you plan the cooking process so that only one burner is required*. The simplest way to do this is to get a large saucepan with a lid, put your “carbs” (potatoes, rice, pasta or other veg) inside and bring it to the boil. Then take the saucepan off the burner, wrap it in a mat of dried grass or a few coats and jumpers and then give it twice as long to cook as you would normally give it had it been cooking on the burner. Even after three-quarters of an hour, provided that you wrap enough insulation around the saucepan, it will still be hot enough to eat. This method is very similar to hay box cooking, albeit that using coats and jumpers takes less effort and doesn't require you to carry additional materials.

Finally, *just make stews or soups*. Rather than cooking a traditional meal you stew up all your food in one large pot and then eat it, perhaps with some bread to pad out the meal.

Also, if you cook your own bread then you can make “travelling bread” – take a basic bread dough and add mixed fruit, nuts, seeds and a few herbs (even nettles) in order to make it really nutritious. If you bake it as a flat bread rather than in a tin you can then cut or break bits off as you want them, either as you travel or when you pitch camp. Note that, even without these nutritious additions to the mix, taking your own-made bread provides far better nutrition for the weight/space taken up in your pack than the mass produced goods sold in supermarkets (see the forthcoming *Bake Your Own* guide in the Free Range food series sheets for details of making your own bread).

Wild food

We can't talk about cooking outdoors without looking at 'wild food' – foods that you can collect from the land as you travel. What you can collect varies from season to season, and even over the space of a few miles changes in the soils and underlying rocks can mean that a type of food available in one place will not be available in another. For these reasons food foraging takes a period of practice to master, and so you must begin practising these skills before you go off for a camping trip.

The simplest wild food, available for a large part of the year, are nettles. Once dipped in boiling water, or held over a fire until they wilt, they lose their stings and are incredibly nutritious. The only problem is that as the nettles age they become more and more fibrous, and once they're more than 30cm/a foot high the best option is to boil them in a little water, mash them to separate the pulp from the fibres, and then add the pulp to something else that you're cooking (e.g. soups/stews).

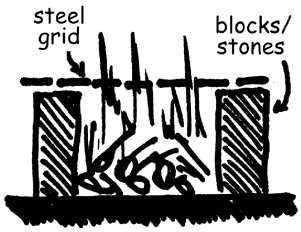
The whole issue of wild food is dealt with in the Free Range Network's *Wild Food* sheet. This also lists some of the best books that are available to help you learn about wild foods, identifying plants and preparing them. However, the key points related to collecting wild foods are:

- Don't strip the food resource bare – only pick a small amount from each stand in order to preserve the plant;
- Don't pick from protected areas such as wildlife reserves, sites of special scientific interest (SSSI) etc. – some of the endangered species that are protected on that site may be dependent upon the same food plants that you pick!;
- Yanking stalks from plants can damage them and encourage disease – use a knife to cut the stems;
- If you can't clearly and unequivocally identify something, ***don't eat it*** – there are a number of edible plants that look similar to inedible or toxic species;
- Always consider potential hazards, not just physical (e.g. falling in a ditch/river or cuts from thorns) but also pollution – this is especially true in urban areas where historic land uses and more recent fly tipping can contaminate land, but even in rural areas agricultural run-off, road run-off and waste dumping can give rise to toxic contamination.

Finally, when thinking about wild foods, don't just think about food. Many wild plants, from dog rose petals to yarrow, make very good teas as well.

Start small, think big

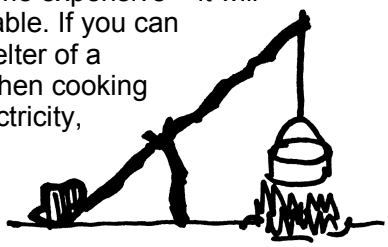
Finally, cooking outdoors is a skill and like any other skill it takes a little practice to get good at it. Of course you can learn to cook at home, but, if the first experience you have of cooking outdoors is your first night camping in the back of beyond, any unforeseen problems that you have using your camp stove, using your tools, or deciding what you can cook is more likely to leave you cold and hungry. For this reason don't start cooking outdoors when you camp, *start before*.



Cooking outdoors is something that you can do on a day out, not just when you camp. You needn't be walking either – it's something that you can do when travelling by car, and at far less cost than going to a service station. All you have to do is carry the cooking kit in a box in the boot and when you have the opportunity, take it.

After some practice, when you are sure that you can produce decent food with the tools available, that's the time to test your skills by going on a longer expedition. If possible, before going on an expedition, you could also experiment using open fires rather than just a gas or Primus stove – after all, could you still cook a meal if you were to run out of gas or petrol?

Even when you get 'good' at cooking outdoors, don't forget the most important aspect of the skills that you are learning as part of this process – cooking food using a very simple set of tools and using less energy resources than the 'modern' way of cooking. These are exactly the skills you will need to make it through the coming problems we will experience with our energy supply over the next couple of decades. It's not just that fuel might be in short supply, or might become expensive – it will also become less reliable. If you can cook a meal in the shelter of a hedgerow in the rain then cooking at home when the electricity, gas and water fail will become a far simpler exercise.



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