

FOOD FOR THE HILLS

HAZEL COUBROUGH

Area Dietitian, Grampian Health Board

Food appears to be of great interest to Cairngorm Club members. We peer into each other's lunchboxes with the unfeigned curiosity of six year-olds. Any assertion that a particular food has improved uphill speed/endurance/ability at altitude is discussed in great detail. New or unusual delicacies are passed around for trial and comment. This interest was tapped by handing out questionnaires at the barbecue in June 1984 and much of the ensuing information derives from the twenty four which were returned. Here then is the Good Hill Food Guide for day and weekend outings.

Start the day well with a breakfast, preferably with plenty of cereal bread or rolls. If travel sickness is a problem and/or you have to leave home very early, take a picnic breakfast to eat on arrival. Some members note that a large cooked breakfast, particularly if fried seems to slow them down. This is because foods which contain mainly fat and protein take a long time to pass through the stomach so are slow to be absorbed and thus available as energy.

DRINKS

Fluid balance is much more important than most of us realise. Normally we drink when we feel thirsty but the sensation of thirst diminishes during exertion, in cold conditions and at altitude. We can lose a lot of fluid by two main routes:—

Perspiration, which is greatest during ascent and in the unfit. Absence of damp on clothing does not mean that we are not perspiring. Sun and even a light wind quickly cause sweat to evaporate.

Expiry—the more we pant the more we lose as vapour. Anyone with a stuffed up nose will lose even more since they must keep their mouth open to breathe.

It is surprisingly easy to become dehydrated and once two to three litres of body fluids are lost, physical performance deteriorates. This can be prevented if we make a point of drinking little and often. Most mountain burns can be reckoned to be safe and some members drink water from each burn that they cross. In very hot conditions beware of drinking a lot of cold water at once or stomach cramps can develop. Stop for a few minutes and have a gap between mouthfuls so that it has a chance to warm up on the way to the stomach. After prolonged hot or freezing weather there may be no water on or near the tops, so accept the fact that you must bear the weight of carrying at least a litre of fluid on these occasions. If you have miscalculated and run out of fluid in freezing conditions, break off small chunks of ice and pop them

into the mouth to melt. Avoid touching the lips to prevent ice burn. Polar explorers are advised to put ice into their hot water bottles and place this next to the chest to melt—but I can't recall seeing any 'hotties' in club members' rucksacks! In winter it is best to carry hot drinks. These heat us up and so help to reduce the amount of energy used trying to keep ourselves warm. Hot drinks also have a reviving effect since we tend to slow down when body temperature drops. In very cold conditions it is a good idea to stop only long enough for the hot drink and to eat as you move along, as you may be dependent on the heat generated by movement to keep body temperature relatively stable.

Drinks favoured by club members are, in order of preference:—

Winter— Soup, tea, coffee, hot water with small containers of fruit squash, Ribena, teabags, coffee and instant soup mix, and hot orange squash.

Summer— Empty water bottles—to be filled when required. Some carry concentrated orange or apple juice, fruit juice crystals or fruit squash for variety. Milk, flavoured milks, unsweetened fruit juice and iced tea are enjoyed by others.

Only two occasionally take alcoholic drinks, lager and gluhwein. These may add to the enjoyment of a moderately active day but could adversely affect a very energetic one. Alcohol acts as a diuretic, so increasing the chance of dehydration.

FOOD

During energetic days in the hills most of us find it best to re-fuel little and often. Digestion is impaired to some extent since part of the blood flow is directed away from the internal organs towards the skin to assist temperature regulation. This can result in loss of appetite, but the experienced hillwalker will eat even if not hungry. Table I lists the most popular foods consumed and rates them as three star (excellent) down to no stars (poor) under the following headings:—

Instant Energy. These are the foods with a high sugar content. Sugar is digested and absorbed rapidly, causing the blood glucose level to rise and be available as energy. If sugary foods are eaten on their own then the blood glucose level can plummet within an hour or so causing tiredness, hunger and perhaps apathy. Thus foods which have three stars in this column should be eaten along with or quickly followed by those starred in the next column. Frequent nibbling of dried fruit, fudge or sweets may keep a flagging body in motion at the end of a hard day.

Sustained Energy. Foods which contain a lot of fat and protein, i.e. meat, pies, sausages and boiled eggs are theoretically good as they take a long time to be digested. In practice however they are top of the list of foods most disliked on the hills, probably due to the

body's reduced digestive ability during exertion. A few folk do tuck into pork pies, meat sandwiches and cold sausages, but most do not.

Wholegrain cereals are the best bet for sustained energy. They are easily digested over a long time, so releasing a regular supply of glucose over a prolonged period. Refined cereals such as white bread and tea biscuits do not have such a sustained effect. Most Club members do use wholemeal or wheatmeal bread or rolls for their sandwiches and the most popular fillings are shown in Table I. Thick oatcakes sandwiched together with spreading cheese and bound in cling film to prevent crumbling are also enjoyed. Most foods eaten on the hills should have at least two stars in this column.

Moist cakes containing dried fruit star in both these columns and are justifiably popular.

Weight. Foods with a high energy content in relation to their weight are given star rating. Pot noodles should perhaps not be listed here since they require hot water for reconstitution. Select brands which are ready in five minutes or less once the water has been added. Packaging of food can make a significant difference to the weight of supplies carried and the inexperienced walker may be handicapped by bottles of lemonade or even jam in a glass jar. The robust walker who was seen enjoying a family sized can of mandarin oranges on a remote peak, clearly reckoned that the pleasure derived from it outweighed any lighter alternative.

Temperature Stability. Intense heat or cold can cause problems to the uninitiated. Heat causes runny honey to ooze into all other contents of the lunch box, so use crystallised honey in the summer and wrap each sandwich individually. Chocolate melts, but cooking chocolate, Galaxy and Ritter Sports varieties have a higher melting point so will travel better. One enterprising member wraps her favourite brand in foil before setting out, then in hot weather pops it into a burn for a few minutes to solidify. Chunks of cheese ooze fat, harden on the outside and develop a fudge-like consistency within, which I find delicious. During heat, Dutch and cottage cheeses are more stable than Cheddar, cream or spreading varieties.

In very cold conditions, slice up chocolate bars and packets of dates and break up chocolate into bite sized pieces before leaving. The memory still haunts me of five minutes of agony in sub-zero conditions on Cairnwell, impaled in a Mars bar, upper and lower teeth embedded in this most tenacious object and freezing air numbing my tonsils.

Moistness. Breathing through the mouth and any degree of dehydration reduce salivary flow, so moist foods are easier to chew and swallow. Fresh fruits are particularly moist and apples are the most popular fruit carried. A little weight can be saved and the need to remove gloves on cold days avoided, if oranges and grapefruit are peeled and partly segmented beforehand then carefully wrapped up.

Tomato, marmalade, pickles or jam added to cheese or meat in sandwiches can greatly increase their palatability.

A most important factor in choice of food for the hills is our own liking for them. This was not taken into account by the planners of a Russian attempt on Everest in the 1970's. Rations described as nutritionally perfect for each stage of the expedition bore no relation to the preferences of individual climbers and the whole undertaking failed due to the ensuing dissention. Some foods which are normally enjoyed, particularly meats and other savoury foods may appear to change in flavour during exertion. Altitude may play a part in this phenomenon which is common to deep sea divers. It seems that our enormous consumption of chocolate, dried fruit, sweets and fruit cake while on the hills bears little relation to normal eating habits. Tolerance for very sweet foods appears to rise when energy demands are high.

Emergency supplies carried by club members are, in order of frequency:—chocolate, raisins, Kendal Mint Cake, fudge, nuts, boilings, chocolate bars, fruit cake, fruit and nut mixtures and dates. Some take large supplies while others with the end of the walk in sight, eat up their 'emergency' stocks as a bonus. One person keeps a packet of dried figs, which she dislikes, in her rucksack, thus ensuring that they really will only be used for a true emergency—or perhaps as the ultimate deterrent to avoid one.

Once off the hill our primary need is for fluid, usually at least half a litre right away. In cold weather a flask of soup has a dual effect. The body cools down quickly when exertion stops and hot fluids can minimise the resultant feeling of chill. Soup also helps to make up the deficit of salt which is lost in perspiration. If 'instant' soups are the main fluid taken at this stage of the day, dilute them with much more water than directed on the packet otherwise their high salt content will intensify a thirst. Salted crisps can seem particularly tasty, but have these along with plenty of unsalted drinks. Some of us who do not normally add salt to foods feel that a main course tastes insipid without it after prolonged exertion—a demonstration of the remarkable ability of the body to indicate a real need. A hot main course can be kept in a wide necked thermos flask if home is a long way off and you don't intend to stop for a meal on the way. Alcohol should only be consumed once you are well into the process of dehydration with other fluids, and if you will not be driving. Full rehydration cannot be accomplished quickly so take more fluid before settling down for the night. A hangover-like feeling the next morning is a sign of continuing dehydration. Drink the teapot dry before setting out again or you will feel 'under the weather' all day.

Food supplies for weekend trips are based mainly on those in Table I. Additions for breakfast are muesli ready mixed with milk powder, which only needs hot or cold water added to make a most satisfying dish, wholegrain breakfast cereals, milk powder, wholemeal

bread and rolls, oatcakes, crispbreads, honey, marmalade and spreading cheese.

When an evening meal has to be prepared, the choice of foods will be partly determined by availability of cooking and storage facilities and whether supplies have to be carried in. The following were popular:—

Instant and 'quick cook' dried soups

Corned beef, tinned or home made bolognaise and chili con carne, quiches, omelettes, bacon, packet cheese sauce, baked beans, instant potato and dried vegetables.

'Quick cook' noodles, rice, macaroni and spaghetti

Tinned puddings, tinned fruit and 'quick mix' custard.

Tea and coffee bags, lager, beer, cider and wine.

Fresh fruit and salad vegetables.

I am continually impressed by the sophisticated meals produced in often adverse conditions on weekend meets, often three courses which would do credit to a superior hotel.

Yes, Cairngorm Club members love to eat, but we also eat to walk. One mysteriously remarked that he enjoyed my company—especially in misty conditions. As I pondered his true meaning he continued "I'll never become separated from the group while you continue to put all that garlic in your pizza".



POPULAR HILL FOOD

	Instant Energy	Sustained Energy	High	Temperature	
			Energy/ Weight Ratio	Stable	Moist
Meat pie		***	**	**	*
Sausage/sausage roll		***	**	**	*
Cheese/boiled egg		**	**	*	
Pot noodles		**	***	**	**
Pizza		**	*	*	*
Wholemeal/wholewheat sandwiches					
+ cold meat/paté		***	**	**	*
+ cheese		***	**	**	
+ cheese + tomato, pickle marmalade		***	**	**	**
+ jam/honey/marmalade	**	**	**	**	**
+ tomato/salad		*	*	*	**
+ banana	*	**	*	**	**
Buttery rolls		**	**	*	*
Fruit loaf	**	**	**	**	**
Fruit cake/black bun/ brownies/chorley cakes/ clootie dumpling	**	**	**	**	**
Muesli bars	**	**	***	***	
Dried fruit bars	**	**	**	**	*
Nuts		***	***	***	
Dried fruits	***	*	***	***	
Mixed fruit and nuts	**	**	***	***	*
Yoghurt	*	*			**
Sweet biscuits	***	*	***	*	
Chocolate biscuits	***	*	***		
Savoury/cheese biscuits	**	*	**	**	
Oatcakes	*	***	**	***	
Crisps/savoury nibbles	*	*	***	**	
Banana	*	**	*		*
Apple	*	*		***	***
Citrus fruits	*			**	***
Chocolate/chocolate bars	***	**	***		
Kendal mint cake	***		***	***	
Fudge	***	*	***	***	
Boilings	***		***	***	

TABLE 1.

Footnote—In the last number of the Journal, Hazel Coubrough contributed an article entitled 'Food Intake and Endurance Events'. Not all Club members run the whole distance on a Meet and Hazel Coubrough therefore agreed to provide information which is of more direct benefit to the mountain walker and climber. For those members who do or might be tempted to run the whole way, please note that in her previous article, page 32—line 3, the figures should read 800ml-1000ml fluid/hour—Editor.