

5 CATERING FOR EXPEDITIONS

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The job of catering officer on an expedition is usually the least popular – because “we do it every day”, very little time is spent on planning the food and yet it is a most vital element. The feeding of an expedition is like the fuel that drives an engine. No fuel, no drive. The wrong fuel will reduce performance.

FORESEEING SOME OF THE PROBLEMS AND OVERCOMING THEM

During an expedition, food takes on an exaggerated but vital importance and without proper consideration the whole venture could become a mediocre experience. It is dangerous to consider food only as a fuel, because it also has a most important effect on morale.

The problems

At worst, an expedition can fail if food consumption is higher than estimated and supplies run out. Poor storage or contamination can produce the same results, as can expeditions mislocating food dumps.

There is the possibility of having plenty of food but of the wrong sort. Eating the same food every day is not only boring but can cause revulsion and even nausea in the most stoic expedition trenchermen! Today, more than ever before, we “suffer” from well-educated palates and are used to having variety in our meals. Lack of variety brings underlying problems in its wake, the most dangerous being the effect on morale. Petty jealousies can occur over the more delicious and select items in an otherwise plain diet. Someone is guaranteed to take more than his or her fair share, and it is not unknown for mature people to fight over food.

The time taken in preparing food can also be a cause of aggravation, especially when you are hungry, or if dehydrated foods are being used and there is insufficient water. Poor cooking equipment, such as inefficient stoves, and cooking pots that are

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too small or hard to clean, will cause frustration and lead to wastage, and a meal that looks unappetising is undoubtedly hard to swallow.

Once the meal is finished, washing up can be difficult. Think about how this will be tackled. Will you take tin foil? The amount of washing up can be reduced if all dishes are wiped clean with soft paper before they are washed in hot water.

The solution is in the planning

Many problems are encountered only after it is too late, when it requires considerable time and finance to correct the situation. However, with careful planning most can be avoided.

The nature of the expedition and the volume of food needed must be the first considerations. From this basis, more elaborate ideas can be researched:

- How many meals are required each day?
- Is there sufficient time/daylight to prepare these meals?
- Will food consumption be increased as the group is living away from their normal environment?

These are not difficult questions to answer and usually result in two meals a day with a midday snack. This saves cooking time and allows flexibility in day-to-day organisation.

Next, decide the total meal requirement for the trip. One person requires 1 × breakfast, 1 × snack, 1 × main meal each day. Simple multiplication gives:

$$\text{Number in the party} \times \text{Number of days in the field} = \text{Total person/days food}$$

The importance of variety has already been mentioned and it is very difficult for one person to decide what to take. Ask the expedition members for ideas. Question them on their likes and dislikes. This will involve them in the feeding programme and makes them feel that the catering officer cares about their needs. A simple questionnaire may help.

Having gathered together these suggestions, work out a few sample menus. The “skeleton method” is often the easiest way of doing this. Start with the main item of the meal and then what is needed to go with it. Begin with the main meal of the day, and work through the snack meal and breakfast. Do not forget the drinks to accompany each meal. The ideal expedition feeding programme is as near to a normal daily diet as possible with nothing unusual about it. Do not get carried away and try to make the meals exotic. If you are stuck for ideas, browse around the local supermarket or look through simple cookery books.

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NUTRITION

Nutrition is usually the last consideration for the catering manager. This is because it is important to provide foods that your team will eat and will enjoy eating. Food has a psychological importance as well as a physiological role. A perfectly balanced meal that is not eaten, for whatever reason, has no nutritional value and all your efforts will have been wasted. And, remember, it is very unlikely that any nutritional deficiency will manifest itself if the food is good quality and balanced to some degree. The time to look closely at this aspect is in extreme environments. In Arctic winter conditions, for example, you will need a very high fat content to help keep the body warm.

PROCURING RATIONS

Where to buy the food: the cost implications

From the outset you must be aware of the cost implications of the food that you will eat. This will include not only its purchase, but transportation and the fuel and equipment needed to prepare it. Don't get carried away with the idea that food given to the expedition in the UK is free. For example:

$$\text{Cost of food bought in UK} + \text{Freight to host country} + \text{Transport from point of arrival to base camp} = \text{Cost of food eaten in host country.}$$

Do not take the availability of food items in remote places for granted; some villages and small towns grow or buy enough only to support themselves and have none to spare for visitors. Shops in remote areas, on the other hand, may surprise you with the range of their stock. If they have good communications they may be able to order food for you. This provides an income for the local people and is a demonstrable way of providing benefit to a remote area.

Try to research exactly what foods are available in the host country with the up-to-date costs. A reconnaissance is invaluable for assessing food prices and availability in remoter locations.

Specialised rations usually have to be imported. The requirements of a mountaineering expedition, for example, may well be such that the high-altitude elements of the ration programme need to be selected and packaged in the UK where they will have been assessed for palatability, texture, weight and durability of packaging. One must accept that such specialised rations and their transportation are expensive.

If you don't buy your food in the host country, and have to obtain it in the UK, first find out what you can obtain through sponsorship by either donation or discount. The balance can be bought from a supermarket or cash and carry.

Remember, at the cash and carry you can usually buy only by the packet or container, not individual items. Specialist foods usually come direct from the manu-

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facturer. Please note that civilians cannot always buy military composite rations from official sources and that their sale to civilians may be restricted.

Types of ration

The relative merits of the various types of ration are outlined below.

Fresh local food

There is no substitute for fresh food for both taste and nutrition.

Meat

All local meat, whether flesh, fowl or fish, should be freshly killed. In all but the coldest climates, it is unwise to purchase any quantity that cannot be consumed within a couple of days. If you have a permanent base camp, consider keeping a few chickens, a small sheep or goat, providing that you are willing to slaughter it yourself. Fishing can sometimes supplement the expedition's diet. Some meats are more dangerous than others. If you eat partly cooked or raw beef, at the worst you may get beef tapeworm that stays in your gut, but, if you eat half-cooked or uncooked pig, you may get pig tapeworm which migrates into your muscles and into your brain. For this reason Muslims, Orthodox Jews and Coptic Christians do not eat pork. Store meat in as cool a place as possible, raised to allow free circulation of air and protected, with muslin, from flies. If beef or lamb acquires a sickly smell and becomes slimy, you may be able to save it in time if you wash it in a strong brine solution. Certain spices do help tenderise meat and have a redeeming effect.

Vegetables and fruit

Although the variety may be limited, vegetables and fruit in season will be cheap and plentiful. Choose those that are fresh and ripe, and not bruised or blemished. Dates, grapes, etc. have fragile skins and are easily infected. Fruit from trees may be contaminated by pesticide. Correct storage will reduce deterioration and wastage. Keep them in a cool place where the air can circulate. They should be regularly sorted, those that are badly bruised are discarded and the less damaged eaten immediately. Green vegetables do not keep well and should be eaten as soon as possible.

If you eat raw fruit or vegetables, they must be washed in sterilised or boiled water, wiped and peeled. For salads choose cucumbers or tomatoes, and avoid lettuce unless you soak it properly in a sterilising fluid (e.g. Milton 2) for at least 30 minutes and then dry it. Weight for weight, lettuce has 300–400 times greater surface area than a cucumber or tomato. The acid in your stomach will kill a certain number of nasty germs but if you overdo it some will get through and make you ill. Most vegetables in less developed countries are reared with the aid of human faeces ("night soil"), and are likely to have a lot of these germs on their surface.

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TABLE 5.1 EXAMPLES OF FRESH AND TINNED FOODS*

<i>Basic item</i>	<i>Weight (oz)</i>	<i>(g)</i>	<i>Alternatives</i>	<i>Weight (oz)</i>	<i>(g)</i>
Meat (beef)	8	240	Lamb or pork or offal	8	240
			or (c) corned beef	8	240
			or (c) stewed steak	8	240
			or (c) steak and kidney pudding	10.5	315
			or (c) meat and vegetables	18	540
			or chicken	8	240
Bacon	1.5	45	or rabbit	8	240
			Luncheon meat	1.5	45
			or eggs (large)	1	egg
Sausages (fresh)	1.75	52.5	or eggs (small)	2	eggs
			(c) sausages	1.75	52.5
			or (c) luncheon meat	1.5	45
			or eggs (large)	1	egg
			or eggs (small)	2	eggs
Fish fillets	1.5	45	or whole fish	7	210
			or fish – headed and gutted	5.25	157.5
			or fish fillets	3.5	105
			or boned kippers	3.5	105
			or smoked haddock fillets	3.5	105
			or (c) beans	5.75	172.5
			Fish, whole	3	90
			or fish – headed and gutted	2.25	67.5
			or boned kippers	1.5	45
			or smoked haddock fillets	1.5	45
			or (c) sardines	0.5	15
			or (c) salmon	0.75	22.5
			or (c) herrings	1	30
			or (c) beans	2.5	75
or fresh potatoes	21	630			
Large eggs	1	egg	or small eggs	2	eggs
Canned milk (fl. oz)	5	150	Fresh milk	12.5	375
			or powdered milk (mixed)	12.5	375
Cheese (Cheddar)	0.5	15	Processed cheese	0.5	15
			or (c) cheese	0.5	15
			or chocolate	1	30
Butter (fresh)	0.5	15	Butter concentrate	0.5	15
			or margarine	0.5	15
Margarine	1.5	45	(c) margarine	1.5	45
Cooking fat	0.5	15	Margarine	0.5	15
			or local cooking oil	0.5	15
Bread	12	360	Flour	9	270
			or biscuits	9	270
			or potatoes, fresh in lieu of each oz of bread	3	90
			or vegetables, fresh in lieu of each oz of bread	1	30
Flour	2.5	75	Bread	3.33	99.9
			or rice	2.5	75
			or potatoes, fresh in lieu of each oz of flour	4	120
			or vegetables, fresh in lieu of each oz of flour	1	30

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Basic item	Weight (oz)	(g)	Alternatives	Weight (oz)	(g)
Rice	0.25	7.5	Macaroni	0.25	7.5
			or semolina	0.25	7.5
			or cornflour	0.25	7.5
			or spaghetti	0.25	7.5
			or ice cream	1.25	37.5
Breakfast cereals	0.75	2.5	Rolled oats	1	30
			or rolled oats and sugar	1	30
			or breakfast cereals	0.25	7.5
			and (c) milk	0.75	2.5
Marmalade	3	90	Jam	1.5	45
Honey	1	30	Marmalade	1	30
			or syrup	1	30
			or sugar	2	60
Tea	0.5	15	Coffee	1	30
			or instant coffee powder	0.25	7.5
Dried fruit	0.5	15	Jam	0.5	15
			or marmalade	0.5	15
			or syrup	0.5	15
			or fresh fruit	3.75	112.5
			or apple solid pack	1.5	45
Fresh fruit	5	150	Melons, mangoes, papayas, pineapples or bananas	6	180
			or lemons, oranges and grapefruit	5	150
			or other fresh fruit	4	120
			or (c) fruit	2	60
			or dried fruit	0.5	15
Vegetables (fresh)	8	240	(c) vegetables	4	120
			or (c) beans	4	120
			or dried pulses	2	60
			or dehydrated vegetables	0.75	22.5
			or frozen vegetables	4	120
Onions (fresh)	1	30	Dehydrated onions	0.08	2.4
			or fresh vegetables	1	30
Potatoes (fresh)	20	600	(c) potatoes	13.25	397.5
			or bread	3.25	97.5
			or mashed potato powder	4	120
			or dehydrated potatoes	2.75	82.5
Lemon/orange powder	0.25	7.5	Tea	0.08	2.4
			and sugar	0.25	7.5
			and (c) milk	0.5	15
			or jelly powder	0.75	22.5
			or sugar	0.75	22.5
Salt (culinary)	0.25	7.5			
Salt (table)	0.175	5.25			
Custard powder	0.08	2.4			
Baking powder	0.08	2.4			
Tomato purée	0.25	7.5			
Pickles	0.08	2.4			
Pepper (pinch)					
Mustard (teaspoon)					
Vinegar (teaspoon)					

*Amounts suitable for one person per day, (c) = canned

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Milk, ice cream and fruit juices

Local milk, ice cream and fruit juices should be avoided. Bottled drinks with metal caps (but not those with corks) should be safe, although the necks should be rubbed well after the tops have been removed and before the drinks are consumed. When cooling a drink, place the ice outside and not inside the container. If you are sampling locally cooked foods, choose well-cooked hot spicy meals, and avoid salads and ice cream.

Supermarket food bought in the UK

It is unlikely that you would want to feed a large expedition entirely on fresh local food. Very few people enjoy unfamiliar food for any length of time, despite what they say in the UK before they leave (this also includes experienced expeditioners who adamantly think to the contrary!). Familiar foods bought at a supermarket or cash and carry before you go will provide essential basics that cannot be obtained in the host country, as well as the luxury items that add interest and lift morale.

Generally, the cheaper the price, the poorer the quality and, in the case of tinned goods, the higher the water content. With meats, the fat content will be higher in cheaper products. Test the product range yourself before buying in bulk. Familiar products are often welcomed by members.

Expeditioners eat primarily with their eyes; in other words they will be immediately attracted to food that looks colourful, interesting and familiar. Having appraised the food with a quick glance, their next assessment will be by smell, and last, having selected the food of their choice and put it on their plate, it must pass the final test of taste. At any of these stages people may well decide that, because the food has not met their standard at any one of these levels, they are no longer hungry, the result being no food intake, wastage of time in preparation and fuel, and poor effect on morale.

Consequently, the catering officer should give continual thought to the attractiveness of meals to appease the expeditioners' feeding requirements and tastes, to the extent that selection of both tinned and food items should consider the presentation of the product by its wrapper or easily recognisable household brand name. For example, John West fish products are invariably presented in a cardboard wrapper that shows a cooked and garnished meal comprising the food item inside the can. Such effective marketing becomes the garnish of the canned ration!

Food in extreme temperatures

Remember that foods bought in the UK in a warm supermarket may not be in the same state as this when stored in the Arctic or tropics. Favourite foods such as cheese, butter, some biscuits and chocolate tend to freeze solid or melt, leaving them impossible or unappetising to eat. This can be a big disappointment at the time. Therefore, it is important to consider the physical state of familiar foods when exposed to extreme temperatures.

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Specialist expedition foods

These types of foods are designed for a specific purpose, and should by no means be considered to be the only answer to expedition rations, even for expeditions working in remote harsh environments. They are nothing more than a convenience and, where fresh alternatives are readily available and cost-effective, they should not even be considered. They are in essence the food planner's final resort to allow the expedition to achieve the objectives and overall aim.

Three main types are currently being marketed for expeditions: dehydrated foods, accelerated freeze-dried food and boil-in-the-bag meals.

Dehydrated foods (Table 5.2)

The dehydration process is a harsh one involving high temperatures and prolonged heat treatments. Consequently, the resultant food does not retain its original texture. The exception is pre-cooked and dehydrated cereals, rice and some vegetables. Meat-based meals tend to provide the "meat" in the form of textured vegetable protein, which is processed from soya beans. The protein in soya beans is a food technologist's dream because it can be spun and woven to resemble different textures. It is also a neutral colour with a bland flavour, so many different colours and flavours may be added to produce a range of dishes. It has been used most extensively to produce textures that imitate meat – this is unfortunate because the consumer then compares it with meat, with less than favourable results. Soya protein granules are also available which are used to produce minced meat-based dishes. These products contain edible gums and starch to give the required thickness, but beware of eating too many of them because your diet could take on the consistency of wallpaper paste!

TABLE 5.2 DEHYDRATED FOODS

<i>Advantages</i>	<i>Disadvantages</i>
Lightweight, and cheaper than freeze-dried foods	Tends to shrivel and change colour during processing
Wide variety of flavours, and manufacturers	Must be soaked or cooked before eating
More available overseas	Requires to be fully cooked with much water
	Uses more fuel than freeze-dried, but probably less than fresh food

Another source of protein to compete with soya in dehydrated meals is a type of fungus known as Quorn. This might sound unappealing but food technologists have produced some very acceptable and elaborate dishes.

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Accelerated freeze-dried food (Table 5.3)

This is a much less harsh preservation technique than dehydration, and as a result it tends to preserve the original flavour and texture of the food when rehydrated. The preservation process involves freezing the food and putting it in a vacuum. The water in the food is then driven off as a vapour by sublimation. This uses very little heat and therefore causes less damage to the food. After the food is freeze-dried it is sealed in moisture-proof packets containing nitrogen. Provided that these are not punctured, the food can remain preserved for a number of years, the lack of oxygen and water preventing deterioration. Most expedition foods available in America are freeze-dried. There is a large selection of exotic meals available, such as chicken and cashew nuts with wild rice.

TABLE 5.3 ACCELERATED FREEZE-DRIED FOOD

<i>Advantages</i>	<i>Disadvantages</i>
Low bulk and lightweight	Fragile and easily damaged
Immediate meal available in five minutes	Quickly digested/hungry again quickly
No preparation or expertise required, just add hot or cold water	Two-person portion of main meal = one expedition portion
Sterile with long storage life	Cannot be eaten where water is not available in sufficient quantities

Boil-in-the-bag meals (Table 5.4)

These have the advantage of not dirtying the pan and, as the water is not contaminated it can be used for making a hot drink or soup. In conditions where, for a limited period, no fuel is available the meal can be eaten cold or sucked frozen like a lollipop. These are heavier than dehydrated rations but have the advantage of not having to be reconstituted. The contents are unaffected by extremes of temperature, humidity and salinity.

TABLE 5.4 BOIL-IN-THE-BAG MEALS

<i>Advantages</i>	<i>Disadvantages</i>
Does not need reconstituting	Heavier than dehydrated or freeze-dried
Less bulky than tins or fresh food	Fragile and easily damaged
Superior flavour/texture	Most expensive of the specialist expedition foods
Can be eaten cold without water	

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“Tinned equivalent”

This is a military term used to devise a suitable ration for an expedition or exercise that is based on an established fresh scale of rations, e.g. you may establish that each member of the expedition will be entitled to a daily fresh meat element of 8 oz (240 g). However, in the field, meat may not be reliably supplied; you may alter your feeding programme to mix fresh and tinned rations, or dried main meal elements to suit the environment, work load, availability, costing, transportation and other criteria as they arise. Examples are shown in Table 5.5.

“CILOR”

This is also a military term, being an abbreviation of “cash in lieu of rations”. A useful tip for the expedition planner, who, having decided the ration scale per person for the expedition and evaluated its monetary value in local currency, may find that the issuing of the ration allowance in cash enables a person on the move to purchase his or her own cooked meal. If the person should wish to purchase outside of the ration value, this is of course his or her own financial responsibility and not that of the expedition as a whole. Similar guidelines could be applied in an emergency, where any over-expenditure should be charged against the contingency fund and claimed back later from insurance.

Lightweight rations

Producing a lightweight ration for 48 or 72 hours is seldom a problem. A few favourite items, whether savoury, chocolate or biscuit, combined with a small canned or dehydrated main meal if carrying a stove, and some teabags and coffee usually seem to suffice. In summer conditions, in a European environment, it is not unusual for parties to travel with fresh bread, cheese, garlic sausage, fruit juice drinks or even sweetened powder additives to dissolve with uncontaminated water. Perhaps distributed through the party will be a simple stove and some fuel as a safety measure in case the weather should turn. It is not always necessary to carry a stove – common sense dictates the time and conditions when one is not required. Remember, the main reason for cooking food is to break down sinews and starches, making items easily digestible and more palatable. There is little increase in energy value by cooking foods, whether fresh, tinned or dehydrated, but the boost to morale is beyond any argument. For the expeditioner, there are certain points to remember when designing this part of the ration programme. A lightweight ration should give the maximum calorific intake for minimum weight, be easy to prepare and as varied as possible. When under physical or mental strain, the appetite seems to decrease and, on occasions, the desire to eat is reduced by fatigue.

For short periods of around 7–10 days, before returning to a place where fresh food is available, a lightweight ration can be considered along the following lines. Remembering that the basal metabolic rate (the amount of energy used only for the

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TABLE 5.5 TINNED RATION SCALE FOR FOUR PEOPLE FOR ONE DAY

	<i>Basic item</i>	<i>Weight (oz)</i>	<i>(g)</i>	<i>Alternatives</i>	<i>Weight (oz)</i>	<i>(g)</i>
1. Breakfast	Baked beans in tomato sauce	16	480			
	Oatmeal blocks	5 × 1				
	Sausages	16	480	or bacon grill	16	480
				or baconburger	15	450
2. Main meal	Cuppasoup (choice)	3				
	Steak and onion casserole	16	480	or stewed steak	16	480
				or vegetable goulash	16	480
				or chicken/vegetable curry	16	480
				or corned beef	12	360
				or steak and kidney pudding	16	480
				or chicken supreme	16	480
	Mashed potato powder	6	180	or pre-cooked rice	10	300
	Carrots	10	300	or processed peas	10	300
				or mixed vegetable	10	300
	Apple pudding	22	660	or canned pears	24	720
				or rice pudding	24	720
				or chocolate pudding	17	510
			or mixed fruit pudding			
3. Snack	Tinned cake	10	300	or luncheon meat	16	480
				or (c) fish	16	480
				or hamburgers	15	450
	Selection of jams	9	270			
	Tinned cheese	8	240			
	Margarine	8	240			
	Chocolate bars	4 × 2				
4. Drinks and sundries	Teabags	2	60			
	Instant coffee	0.5	15			
	Dried milk	3	90			
	Sugar	14	420			
	Salt	1	30			
	Mustard powder	0.125	3.75			
	Small tin opener	1	30			
	Toilet paper	25 sheets				
	Plastic reclosure	2	60			
Paper towels	8	240				

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process of being alive while at rest) has a representative value in a European-style climate of about 1600 kcal per day, any calorific intake beyond these limits in a 24-hour period is a bonus to the already existing resources in the body and the daily energy output.

From the reports of various expeditions working in Alaska, the Yukon, Africa, tropical forest areas and the Himalayas, the requirement of 5000 kcal per day has been proven unrealistic in practical terms, and it is better to assume that an expedition member will actually consume 3500–4200 kcal per day when in the field living on a lightweight ration, as a result of many factors from food repulsion to a stove failing to work correctly. Therefore, the multi-choice system of producing lots of small but varied items is the one now favoured; small tins of cheese, containers of jam, miniature chocolate bars and ring-pull cans of pâté are all worth considering. Some rations built on the multi-choice system of wide variety, but relying on small portions, have as many as 36 different items and thus allow for the widest change in taste, palatability and food texture on a day-to-day basis. Some expeditions spread this type of variety through four or six different ration packs by using the same type of items and varying the flavour, thus keeping weight, packaging and volume the same, while increasing the choices even more.

As we all know, it's hard enough to achieve 100 per cent success with every meal we eat at home, but on an expedition you have to try to achieve the same acceptance with restricted food items in an inhospitable environment! A lightweight ration, by its very nature, makes this type of presentation and appreciation very nearly impossible. One of the ways to make a ration look attractive is to purchase cans or dehydrated foods that have colourful wrappers, which show a photograph of a prepared and finished dish on the label, nicely served and garnished. Another way is to ensure a variety of food colours: green beans, sweetcorn, instant potato, noodles, beef stew. Sometimes ingenuity takes over; in fact on some expeditions cooking competitions have started up between individuals or partners in a tent. I remember a friend producing a multicoloured instant whip, garnished with crumbled Hardtack biscuit, revolting now, but quite delicious at the time! Food cravings become quite common too; only recently I heard of an expeditioner who gained a liking for blackberry-flavoured apple flakes, cooked with an overdose of onion Oxo cubes!

Although there will be complaints and faults with the rations, they should be based on the fact that, by its very nature, a lightweight ration is a restricted form of eating, and not on the fact that the food has been badly prepared. Consideration also has to be given to the main components of a lightweight ration: should it rely on tinned (wet) or dehydrated (dry) main meal elements? Only the planner can consider which will suit his or her needs best for the project being undertaken. The main advantage of a wet ration is that little liquid is required to make the food item edible, whereas with a dehydrated ration a reasonable quantity of water in some form

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must be available. Consider too that, although the ration may be lighter by using a dry lightweight programme, extra fuel (and therefore extra weight) may be necessary to melt liquid to make it edible; cooking times may also be longer and, at altitudes where water boils at a lower temperature, rehydration may be a problem (although this is usually only so over 21,000 feet). Therefore packing heavier canned weight may in the long run prove to be lighter for the overall work effort.

There may also be environmental factors that affect the lightweight feeding programme. In extremely cold climates, a high fat content may be required; in hot climates, light, soft-fibre foods may be best, allowing for a high liquid content; certain types of food and container may not keep in extremes of temperature – the fat in biscuits may go rancid; internal packaging may burst at altitude, as a result of the differences in air pressure inside and outside the plastic or synthetic wrapping; processed cheese may go stale over a long period and chocolate may deteriorate if not processed for the climate by the manufacturers. All these points should, where possible, be borne in mind before making the final decision on what items to include in the lightweight ration and, having made the final recommendation, it is then advisable to check calorific values, to ensure that each ration is around the 4000 a day mark. I have never really found it important to worry about calorific values, and those who do usually seem to end up taking a ration full of items that make up the exact daily energy requirement, which is stodgy and boring, and eventually nobody wants to eat any of it. In these instances, such ordinary items as cans of sardines, tubs of margarine and sweet biscuits turn into items to be coveted, even stolen, or hidden from others!

By giving people the type of items that they want to eat and forgetting the calorific recommendation, it makes more money available for selected items, reduces volume of packaging and weight, and keeps acceptability and morale high.

Emergency rations (Table 5.6)

These are essential and should not be overlooked. The food should be of high carbohydrate content and of a type that is easily absorbed by the body, e.g. sugar or glucose. It is not sufficient merely to allocate additional standard rations as emergency rations. The emergency rations pack should be clearly labelled, and should not be used to supplement normal meals but kept for emergencies only. The packing of such rations must be durable, in order to withstand repeated handling without actually being opened for use (e.g. mess tin). Suggested emergency food types are: glucose tablets, hot drink (e.g. tea, coffee, Complan), muesli-type food, dried fruit, chocolate bars, sweet biscuits, nuts, fuel and matches. It may be advisable to include the food pack with the emergency equipment such as flares, survival bag and emergency stove.

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TABLE 5.6 ONE-PERSON 24-HOUR EMERGENCY RATION

	<i>Basic item</i>	<i>Weight (oz)</i>	<i>(g)</i>	<i>Alternative</i>	<i>Weight (oz)</i>	<i>(g)</i>
1. Breakfast	Porridge oats	3	90			
	Drinking chocolate	2.5	75			
2. Main meal	Cuppasoup	1				
	Dehydrated prawn curry	2.5	75	or dehydrated stew	2	60
				or vegetable curry	2.5	75
	Dehydrated peas	1.5	45			
	Smash potato	2	60	or pre-cooked rice	2.5	75
	Dehydrated vegetable	2	60			
	Apple flakes	1	30	or apple and bilberry flakes	1	30
3. Snack	Chicken and bacon spread	2	60	or chicken/beef/cheese spread	2	60
	Jam	1.5	45			
	Margarine	1	30			
	Plain biscuits	2.5	75			
	Sweet biscuits	2.5	75			
	Chocolate bars	3.5	105			
	Chocolate toffees	2	60			
	Nuts and raisins	1.5	45			
	Date and dried fruit bars	2	60	or muesli bars	2	60
	Dextrose tablets	1	30			
4. Drinks and sundries	Instant coffee	0.5	15			
	Instant tea	0.25	7.5			
	Oxo	1 cube				
	Dried milk	0.5	15			
	Sugar	1	30			
	Salt	Pinch				
	Spoon	1				
	Small tin opener	1				
	Waterproof matches	1 box				
	Paper tissues	1 pack		or toilet paper	5 sheets	
Face wipes	1					

EXPEDITION HANDBOOK

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