UK Armed Forces Personal Guide to Nutrition

Authors: Anna Casey PhD and Paula Wood RD

AFPGN/V1.0/Oct2006
This document has been produced for MoD and, unless indicated, may be used and circulated in accordance with the conditions of the Order under which it was supplied. It may not be used or copied for any non-Governmental or commercial purpose without the written agreement of QinetiQ Ltd.

Last update October 2006

This guide was funded by the UK Defence Food Services IPT and the Human Capability Domain of the UK Ministry of Defence Scientific Research Programme.

© Copyright of QinetiQ Ltd 2006
Approval for wider use or release must be sought from Intellectual Property Department, QinetiQ Ltd, Cody Technology Park, Farnborough, Hants GU14 0LX
• Do you want to stay healthy and fit?

• Do you want to perform well?

• Do you want to cope more easily with the physical demands of military training and operations?

• Do you want to reduce your chance of being injured?

• Do you want to recover more quickly from training sessions?

Yes? You can help yourself...
By choosing the right foods, you can improve your chances of achieving all of these things. This booklet shows you how to do this by making small changes to the foods you eat.

There are 5 sections to this guide:

Section 1: Eating a balanced diet

Section 2: Your energy requirements

Section 3: Your fluid requirements

Section 4: Operational ration packs

Section 5: Sports drinks and food supplements
Section 1: Eating a balanced diet

What is a balanced diet?

Eating a balanced diet means eating foods from different ‘food groups’. If you eat lots of different sorts of foods you will get all the nutrients you need to exercise to the best of your ability, to concentrate, and to keep you fit and healthy.

What should I eat?

Food can be grouped into different types (‘food groups’) such as:

1. bread, other cereals *e.g.* rice and pasta; and potatoes.

2. fruits *e.g.* apples, oranges, bananas; and vegetables *e.g.* broccoli, sweetcorn, carrots.

3. meat *e.g.* beef, lamb, pork, chicken, turkey; fish *e.g.* cod, salmon, tuna; and alternatives *e.g.* tofu, Soya.

4. milk and dairy foods *e.g.* cheese, yoghurt.

5. foods containing fat, foods and drinks containing sugar *e.g.* crisps, chocolate, fizzy drinks.

However, some types of foods should be eaten more often than others!
Aim to achieve the balance shown above every day. This means, for example, that you need to eat more carbohydrate-rich foods, such as breads, cereals and potatoes, and more fruits and vegetables each day than fatty and sugary foods.
**What does a balanced diet provide?**

A balanced diet provides nutrients such as carbohydrate, proteins, fats, fibre, vitamins and minerals, in the right amounts.

Whatever your job is, you need all these nutrients to stay fit and healthy. If you do some physical training, you need extra amounts of some of these nutrients. If you are training hard, you will need even more. Women need extra amounts of certain nutrients, and more information can be found in the UK Servicewomen’s Guide to Health and Performance (ask your Unit for a copy).

**Tips for having a balanced diet**

- think about how much training you have done today, and how much you are going to have to do tomorrow – this will help you decide how much you need to eat.

- choose what you are going to eat *before* you reach the servery.

- choose with care; you can achieve a healthy meal by following the tips on the next page.

- avoid replacing meals with snacks.
Tips for a balanced diet

1. Put carbohydrates on your plate first

2. Then vegetables

3. Then meat, poultry or fish
Why is carbohydrate important?

Carbohydrate is one of the main sources of energy for the body.

Carbohydrate provides energy for all types of exercise, whether fast or slow, long or short. It is stored mainly in your muscles. The amount of carbohydrate in your muscles determines how long and how hard you can exercise. It has a big effect on your performance and how quickly you recover from each training session.

The more carbohydrate you have stored in your muscles:

• the longer you will be able to run, and
• the faster you will be able to run

Even if you are not training, you are still advised to obtain at least half of your total intake of energy from food in the form of carbohydrate.

Foods containing carbohydrate (preferably wholegrain sorts) should be eaten regularly throughout the day.
Good sources of carbohydrate

<table>
<thead>
<tr>
<th>Breakfast</th>
<th>Lunch / Dinner</th>
<th>Other times</th>
</tr>
</thead>
<tbody>
<tr>
<td>breakfast cereals: <em>e.g.</em> Weetabix, Shredded Wheat, Sultana Bran</td>
<td>potatoes: boiled, jacket, mashed bread</td>
<td>breakfast cereals</td>
</tr>
<tr>
<td>porridge</td>
<td>pasta: <em>e.g.</em> noodles, spaghetti, pasta twirls, lasagne rice</td>
<td>bread, toast,</td>
</tr>
<tr>
<td>bread: preferably wholemeal or brown</td>
<td></td>
<td>sandwiches</td>
</tr>
<tr>
<td>baked beans</td>
<td></td>
<td>fruit juice</td>
</tr>
<tr>
<td>fresh and dried/semi dried fruit <em>e.g.</em> bananas</td>
<td></td>
<td>low fat yoghurt</td>
</tr>
</tbody>
</table>

Should I avoid sugary foods?

Try not to eat too many sugary foods. Sugar contains calories but no nutrients, which is why you may have heard sugar referred to as ‘empty calories’. Sugary foods contain a lot of calories, so a large intake of sugary foods can contribute to weight gain and serious problems with your teeth. If you don’t look after your teeth, sugar will cause them to rot.

Sugary foods and drinks

- sugar-coated cereals *e.g.* Frosties, Coco Pops, Crunchy Nut Cornflakes
- soft drinks (cola, lemonade, Fanta, Sprite, Pepsi)
- ice-cream and custard desserts
- cookies and biscuits
- baked goods *e.g.* pastries, cakes, doughnuts
- jams, jelly and syrups
- sweets and chocolate
- cordials and hi-juice drinks
Ways to decrease sugar

• choose wholegrain breakfast cereals (*e.g.* Weetabix, Shredded Wheat) rather than sugar-coated cereals (*e.g.* Frosties, Coco Pops, Sugar Puffs, Crunchy Nut Cornflakes). Do not add sugar to cereal.

• eat plain biscuits (*e.g.* Digestives or Rich Tea) rather than chocolate or cream-filled biscuits, or cakes.

• replace ordinary yoghurts and fromage frais with diet varieties.

• choose low-sugar or sugar-free versions of squashes, fizzy drinks and mixers.

• reduce the amount of sugar you add to tea and coffee, or use artificial sweeteners instead.

What about low carbohydrate diets?

Diets containing very little carbohydrate have been popular over the last few years, although their appeal seems to be wearing off. Scientific studies show that an adequate carbohydrate store in the body is very important to physical performance, and that too little carbohydrate will reduce your ability to train and perform. **Low carbohydrate diets are not recommended for military personnel, whether you are training or not.**
Protein

Your muscles are made from protein, and the body needs protein to help it to grow and repair itself. Your muscles need to repair themselves after every training session.

You should eat lots of different protein-rich foods, since the different types of protein you need are contained in different foods.

<table>
<thead>
<tr>
<th>Good sources of protein</th>
</tr>
</thead>
<tbody>
<tr>
<td>lean meat (beef, pork, bacon, lamb)</td>
</tr>
<tr>
<td>fish (fresh, frozen and canned)</td>
</tr>
<tr>
<td>poultry (chicken, turkey)</td>
</tr>
<tr>
<td>milk, eggs, cheese</td>
</tr>
<tr>
<td>beans</td>
</tr>
<tr>
<td>lentils</td>
</tr>
<tr>
<td>nuts</td>
</tr>
<tr>
<td>meat substitutes e.g. tofu, soya</td>
</tr>
</tbody>
</table>

Do I need extra protein if I’m training and trying to put on muscle?

Many athletes, sportspeople and coaches think they need to eat large amounts of protein. This is not supported by scientific evidence. If you eat enough to keep your body weight the same and you eat lots of different sorts of foods, you are doing enough. Active people need more protein than inactive people, but as their food intake is generally higher, they automatically increase their protein intake to an adequate level. If you eat very large amounts of protein, you probably aren’t leaving room to eat enough carbohydrate to properly support the demands of the training you’re doing. Try to eat fish twice a week, including a portion of oily fish (e.g. salmon, fresh tuna, mackerel).
High protein intakes can, in the long-term, cause liver and kidney problems. For information on protein powders and bars, see page 31.

**Fat**

We need some fat in our diet to keep healthy, but we do not need large amounts. Fat is a source of a number of useful vitamins that are capable of being dissolved in fat. These are called ‘fat-soluble vitamins’ and include vitamins A, D, E and K. Fat is also a good source of energy (but this means it is full of calories!).

Try to reduce your intake of fat. Fat is 'hidden' in many foods, especially convenience and takeaway foods. A high intake of fat can lead to serious health problems later in life.

**The kind of fat we eat is important:**

- the type of fat in oily fish (e.g. salmon, mackerel, herring, fresh tuna) and nuts is good for your health;
- the type of fat in fried foods (e.g. chips, burgers, pastry) should be eaten sparingly. You will have heard this type called ‘saturated fat’.
- recruits trying to get fit and pass physical tests shouldn’t eat chips with everything!
### Ways to decrease fat

- drink semi-skimmed or skimmed milk instead of full-fat.

- eat cheese only in small amounts, or choose reduced fat types.

- choose boiled or jacket potatoes instead of chips and roast potatoes.

- replace butter and margarine with low-fat spreads (*e.g.* Flora Light, Gold, Delight).

- eat less fatty meats (*e.g.* lamb) and processed meats (*e.g.* sausages, pies), and replace them with lean meat (*e.g.* beef with fat removed), or poultry (*e.g.* chicken or turkey with the skin taken off).

- eat fish canned in spring water or tomato sauce, rather than fish canned in oil.

- use low-fat versions of salad creams, mayonnaise and salad dressings.

- reduce the amount of crisps, savoury snacks, pies and pastries you eat.

### Takeaway foods

Many takeaway foods are high in saturated fat, salt and sugar. Try to limit the amount of takeaways you eat, and when you do have them, try to choose healthier options:

- pizza with a vegetable topping instead of large amounts of meat
- chicken with bamboo shoots and boiled rice instead of sweet and sour chicken and special fried rice
- avoid chips, burgers, battered fish, fried chicken
- avoid creamy curries *e.g.* korma, tikka masala, passanda
- avoid bhaji’s, samosa’s, and prawn crackers
Fibre

This is found in plant foods. Eating enough fibre helps with digestion, helps to keep the stomach healthy, and prevents constipation. Meat, fish, and milk products do not contain fibre.

Increase the amount of fibre you eat. When you do this, you should also increase the amount of fluid you drink.

Ways to increase fibre

• increase the amount of wholemeal and granary breads you eat.

• choose high fibre breakfast cereals (e.g. Shredded Wheat, Weetabix), that are lower in salt and sugar.

• choose brown rice and whole-wheat pasta.

• eat more vegetables. They are a good source of fibre – the best sources are peas, sweetcorn and beans.

• eat the edible skins of fruits where possible, e.g. apples (after washing fruit thoroughly).

• if you eat biscuits, choose those high in fibre (e.g. Digestives, Hob Nobs, oatcakes and bran biscuits).
Vitamins and minerals are substances in food that are needed in small amounts to enable your body to stay healthy and to work properly. They help to break down foods and release the energy in them for your muscles to use. Some foods, e.g. some breakfast cereals and breads, have vitamins and minerals added to them, and these foods are called ‘fortified’.

**Fruits and vegetables** are good sources of important vitamins and minerals.
You should aim to eat at least five portions of **different** fruits and vegetables every day (not counting potatoes). This doesn’t mean just five pieces of fruit. You should aim to include vegetables, especially green vegetables, too.

The box below shows other good sources of vitamins.

**Good Sources of vitamins**

- green veg  
  *e.g.* broccoli
- fresh fruit  
  *e.g.* oranges, apples
- fruit juice
- milk
**Important vitamin: folate (folic acid)**

All women of child-bearing age who are having sex, and may therefore become pregnant and have the baby, are recommended to consume at least 400 micrograms (µg) of the vitamin folate every day. This is to minimise the risk of serious defects in a baby during pregnancy.

Folate is important very early in pregnancy before many women realise they are pregnant: prior to conception, and during the first 12 weeks of pregnancy.

The easiest way is to take a daily supplement of 400 µg folic acid (the manufactured form of folate). Folic acid supplements are widely available from chemists and supermarkets, or ask your medical officer for help. Pregnant women should avoid supplements containing vitamin A, as well as liver and liver products (e.g. liver pâté), and fish liver oil supplements (all of which contain high levels of vitamin A).

You should also try to consume foods that are naturally good sources of folate e.g. green vegetables such as spinach and broccoli, asparagus, peas, avocado, citrus fruits and their juices such as oranges, and rye bread, as well as foods that have been fortified with folic acid e.g. some breads and breakfast cereals.

A daily supplement containing 10 µg vitamin D should also be taken during pregnancy.
Important mineral: iron

If your iron levels are low, the body cannot get enough oxygen and the result is a feeling of tiredness and fatigue, and difficulty in shaking off colds and illnesses. It is a common problem among women.

Iron is found in plant and animal foods, but the iron in meat is more easily absorbed by the body. Vegetarian diets should include plenty of iron-rich plant foods and grains. **Vitamin C may help the body to absorb iron**, so it’s a good idea to add a source of Vitamin C to a meal e.g. a glass of orange juice at breakfast.

* liver and liver products should be avoided during pregnancy. If you eat liver or liver products every week, you should avoid any supplements containing vitamin A or fish liver oils (which are also high in vitamin A).
Important mineral: calcium

Calcium strengthens your bones and may help to prevent stress fractures and other injuries to your bones during training. Injuries to bones, *e.g.* stress fractures, are common during Phase 1 training, and training has to be stopped.

It is important that all personnel (but especially girls and women) eat sufficient calcium **now** to protect their bones from thinning and breaking when they get older (a condition called osteoporosis).

Good sources of calcium

- milk (whole milk, semi-skimmed and skimmed milk – all good sources)
  - *drink it, add it to cereals and drinks*

- cheese, yogurt

- dried apricots

- nuts

- green leafy vegetables *e.g.* broccoli, cabbage, okra (not spinach)

- soybean products

- bony fish *(e.g.* sardines, pilchards)*

- foods fortified with extra calcium *(e.g.* some breakfast cereals and breads)
Salt

What’s the problem with salt?

Eating a lot of salt can make your blood pressure go up. High blood pressure has been linked to an increased risk of death from strokes and diseases affecting your heart. In this country, a lot of men and women have high blood pressure. Scientific studies have shown that reducing the amount of salt we eat will reduce our blood pressure and the level of heart disease.

For these reasons the Government wants us to eat no more than 6 grams (g) of salt a day. This equals just one level teaspoon (and includes all the salt already in the food you eat).

<table>
<thead>
<tr>
<th>Foods high in salt</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>processed / ready meals</td>
<td>soy sauce and ketchup</td>
</tr>
<tr>
<td>bacon</td>
<td>olives in brine</td>
</tr>
<tr>
<td>crisps</td>
<td>pickles</td>
</tr>
<tr>
<td>salted and roasted nuts</td>
<td>tinned vegetables and pulses</td>
</tr>
<tr>
<td>sweet and savoury biscuits</td>
<td>soup</td>
</tr>
<tr>
<td>chips with added salt</td>
<td>stock cubes / gravy granules</td>
</tr>
<tr>
<td>smoked and cured meat and fish</td>
<td>breakfast cereals (some)</td>
</tr>
<tr>
<td>cooking sauces e.g. sweet and sour</td>
<td>pretzels</td>
</tr>
</tbody>
</table>
How do I cut down on salt?

• don’t add salt to your food at the table before you have tasted it – salt is often added during cooking and you probably don’t need to add any more.

• don’t add salt during cooking.

• avoid eating too many of the foods in the box on page 19.

How do I know how much salt is in food?

• To see how much salt (sodium chloride) is in a product e.g. a packet of crisps, look at the label on the packet.
• Some labels will tell you how much salt is in the product.
• Most labels will tell you how much sodium is in the product.
• Check the amount per pack, per item, or per serving (i.e. the amount you intend to eat), not per 100 g.
• Use the salt counter below to work out the salt content.

• A lot of salt is 1.25 g of salt (0.5 g of sodium or more) e.g. crisps.
• A little salt is 0.25 g salt (0.1 g sodium or less).

Salt counter

You can work out the amount of salt in food by multiplying the value for sodium given on the food label by 2.5.

For example, if the sodium content is listed as 0.2 g per serving, the salt content per serving is 0.5 g (0.2 x 2.5).
Alcohol

There are a few things you should know about drinking alcohol:

- Alcohol enters your blood very quickly after a drink.
- Even in small amounts, alcohol interferes with your co-ordination, your reaction speed, and your judgement.

So it is recommended that you do not drink alcohol when you are performing any military duty.

- Drinking too much alcohol will reduce your performance in training.
- Alcohol is high in calories, which cannot be used by the muscles. Due to its high energy content, alcohol can cause weight gain.
- Alcohol increases the amount of urine you produce, contributing to dehydration. The more alcohol you drink, the greater the loss of fluids from the body.
- You are putting your health at risk if you are a regular binge drinker (e.g. at weekends) or you drink a lot of alcohol.

If you are pregnant or trying to conceive, you should try to avoid alcohol completely. If this is not acceptable to you, you are advised to drink no more than one or two units of alcohol, once or twice a week.
Section 2: Your energy requirements

Energy balance

Your energy output is the amount of energy your body burns up each day.

Your energy intake comes from the food and drink you consume each day.

Your energy input (through food and drink) must equal your energy output for you to be able to sustain training and recover properly.

If they are equal, you are in energy balance.

Energy output

Just being alive uses up energy!

We use up energy when we breathe, when our hearts beat, even when we use our brain to think...

But exercise uses up the most energy.
The more exercise you do, the greater your energy output.

Energy output

In general, men burn up more energy than women, bigger people more than smaller people, younger more than older people, and fitter more than less fit people. However, if you are small, but very active, you may expend the same amount of energy as someone who is large but inactive.
### Energy input

The table below shows you how much energy you need if you are of average size.

<table>
<thead>
<tr>
<th>Amount of energy needed from food and drink each day:</th>
<th>Megajoules MJ</th>
<th>Kilocalories kcal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK Phase 1 Recruit Training (Army)</td>
<td>15.0</td>
<td>3,570</td>
</tr>
<tr>
<td>UK Officer Cadet Training (RMA Sandhurst)</td>
<td>20.1</td>
<td>4,780</td>
</tr>
<tr>
<td>(average of training in RMAS and on Exercise)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK SAS Selection, Brecon Beacons, Weeks 1-4.</td>
<td>27.5</td>
<td>6,550</td>
</tr>
<tr>
<td>Includes 64 km march with 25kg bergen and weapon.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>British Infantry, Collective Training, Kenya (hot, dry)</td>
<td>16.1</td>
<td>3,833</td>
</tr>
<tr>
<td>Training once per day (<em>e.g.</em> 30 minute run)</td>
<td>12.8</td>
<td>3,050</td>
</tr>
<tr>
<td>Mainly sedentary (no physical training)</td>
<td>10.6</td>
<td>2,550</td>
</tr>
<tr>
<td>Bedrest (no walking about at all)</td>
<td>7.3</td>
<td>1,740</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK Phase 1 Recruit Training (Army)</td>
<td>12.4</td>
<td>2,960</td>
</tr>
<tr>
<td>UK Officer Cadet Training (RMA Sandhurst)</td>
<td>15.9</td>
<td>3,780</td>
</tr>
<tr>
<td>(average of training in RMAS and on Exercise)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training once per day (<em>e.g.</em> 30 minute run)</td>
<td>9.2</td>
<td>2,200</td>
</tr>
<tr>
<td>Mainly sedentary (no physical training)</td>
<td>8.1</td>
<td>1,940</td>
</tr>
<tr>
<td>Bedrest (no walking about at all)</td>
<td>6.0</td>
<td>1,400</td>
</tr>
</tbody>
</table>
Eating too much

Too much energy leads to putting on weight!

If you don’t burn up the energy you obtain through food and drink, it will be stored in the body (e.g. as fat). Over time, this will result in you putting on weight.

Eating too little

Not enough energy leads to an uphill struggle

Consuming less energy than you expend is called ‘negative energy balance’. In the short-term (a few days), this is unlikely to affect your health or your training, unless you are doing a lot of endurance training. Over time, negative energy balance will lead to fatigue and weight loss, and will seriously affect your performance in training.
Section 3: Your fluid requirements

How much should I drink?

Take responsibility for finding out how much fluid you require. The amount people sweat varies a great deal, and some personnel will need to drink more than others.

Do the urine test on the next page to find out how much you need. It doesn’t take long to do this, but remember that your needs will change depending upon the amount of exercise you do, the type and amount of clothing you are required to wear, and the weather.

• You should drink at least 1.2 litres of water or other fluids per day to avoid dehydration.
• You need more than this if you are sweating e.g during exercise.
• If you don’t drink enough fluid, you will become dehydrated.
• Dehydration causes a large drop in physical performance and slows recovery.
• Severe dehydration can be fatal.

75% of the human body is made up of water .... It is vital that you keep hydrated!
The Urine Test

Check your urine:
• colour: a good indicator of dehydration
• volume
• smell

If you are well hydrated, your urine will be light in colour and there will be lots of it.

If you are dehydrated, your urine will be darker in colour, and there will be less of it.

When should I drink more?

Ensure you begin training or operational activity in a hydrated state. A small degree of dehydration will not affect you, but severe dehydration harms both performance and health.

Drinking fluids is important when exercising in all weather conditions.

In the heat, water is lost in sweat and must be replaced as often as possible.

In the cold, you will still sweat during exercise, and breathing in cold, dry air will draw water out from your airways. If your clothing is inadequate and your body cools, you may also lose water by urinating more often. Despite this, the cold will make you feel less thirsty.
### How will I know if I am dehydrated?

- check the colour and amount of your urine – do The Urine Test
  - if you feel thirsty, you are already dehydrated
  - exercise will feel unusually hard
  - your skin may go redder
  - you may feel lethargic, impatient or irritable
  - you may develop a headache, and you may find it hard to concentrate

### How will I know if others are dehydrated?

- they may start to lag behind in training
- they may be irritable for no apparent reason
- if they are severely dehydrated, they will become confused and dizzy and their muscles may go into spasm
- severe dehydration is serious – GET HELP

### How do I prevent dehydration?

- drink cool (not ice-cold) fluids before, during, and after training and operational activity.
- carry drinks when you can
- use water coolers when you can
- avoid fizzy drinks (these fill you up before you are hydrated)
- avoid alcohol (alcohol dehydrates the body)

For more tips on hydration, ask for the **EPAFF 10 Top Tips on Hydration**, available from your Unit.
Section 4:  
Operational ration packs (ORP)

UK ORP are used to feed you on operations and during field exercises, with the aim of keeping you alive, maintaining your physical and mental functions, maintaining motivation, preventing fatigue, and speeding up recovery.

This is no small task, and your rations have been designed very carefully to ensure they are well-balanced and meet the energy needs of most Service personnel. It is therefore important that you eat as much of the ration pack as possible. Every item is there for a reason. Make sure any extra foods you decide to take are worth the weight and space they take up in your pack.

All ORP include a breakfast, main meal and dessert, snacks, beverage powders, and sundries including weatherproof matches, water purification tablets, chewing gum, and tissues. Hexamine cookers (also referred to as burners) are issued alongside ORP. For operational purposes they are issued on the basis of one cooker per man per week. They are designed to be used with all ORP variants and menus.
## Section 5:
Sports drinks and food supplements

### Sport drinks

Sports drinks are a good way to replace fluids before, during, or after exercise. You should choose isotonic sports drinks that have about 2 to 6 grams (g) of carbohydrate per 100 ml (find out by reading the label). A good example is the new drink found in operational ration packs (Lucozade Body fuel).

These drinks are especially suitable because they generally taste nice when you are exercising, they can be consumed quickly, and the fluid and the carbohydrate they contain are readily absorbed into the body. You may find that these drinks contain different types of carbohydrate, such as glucose, fructose, sucrose, and/or glucose polymers. The type of carbohydrate is not very important, although fructose-only drinks should be avoided as they can cause stomach upsets.

### Energy bars

Sports bars and muesli bars are convenient sources of energy, but it is important to read the labels to find out which nutrient is supplying most of the energy. Many of the bars available are very high in fat and will therefore not help to keep carbohydrate stores topped up whilst exercising.

### Protein powders and bars

Protein powders and bars are available in shops, but they are a waste of money for most Service personnel. Scientific studies show they are no better than protein-rich foods. The only real advantage to using these supplements is one of convenience. They may be useful if you have limited access to solid food for a while, or you wish to reduce the weight of food you are carrying by taking powders (although, of course, this depends on access to drinking water).

### Vitamin and mineral supplements

If you are eating a balanced diet, you are unlikely to need vitamin and mineral supplements. Exercise training does increase your requirement for vitamins and minerals but you will meet this increased requirement as you should be consuming more food. If you do feel that your diet is inadequate, request further medical advice so that your diet can be assessed properly.
Helpful hints for a balanced diet

Try to think about what you eat in terms of a set of traffic lights.

These foods should only be eaten in small amounts. Foods in this group include butter and margarine, mayonnaise and oily salad dressings, biscuits, cakes, puddings, ice cream, chocolate, sweets, crisps, sugar, sweetened drinks, and takeaway food, such as chips, fish in batter, fried chicken, takeaway burgers, pasties and meat pies. **Foods in this group should be thought of as TREATS!**

This group includes meat (beef, pork, bacon, lamb), poultry (chicken, turkey), fish (fresh, frozen and canned), fish products (fish fingers, fish cakes), offal (liver, kidney), eggs, cheese, yogurt, milk, nuts and nut products, tofu and other meat substitutes. **You need these foods in your diet, but not in large amounts.**

Foods containing CARBOHYDRATE provide you with energy. They include bread, unsweetened breakfast cereals, rice, pasta, noodles and potatoes. Fruit and vegetables (fresh, frozen and canned) and salad, beans and lentils should also be eaten frequently. They provide you with vitamins and minerals to keep you strong, healthy and fit. **Your diet should be largely based on foods in this group.**
AFNAS
Armed Forces Nutrition Advisory Service

AFNAS provides expert advice and information on diet, nutrition and military feeding. It is available only to UK military personnel and MOD Civil Servants. The Service is confidential and free of charge.

It is easily accessible with 6 clicks of a mouse on the intranet, starting at the DLO homepage, or 3 clicks on the Internet at:

www.feedingtheforces.com