Feeding Frenzy

At the end of my recent presentation on light-pack bushwalking (March General Meeting), I was asked to prepare a summary of its key points for publication in *it*. The first part of this summary appeared in April 2006 *it* as an annotated pack contents list for a typical trip.

This article examines in more detail the food component of that list and looks at how you could adapt my approach to food planning for your own use, if you were so inclined. Ideally, it should be read in conjunction with my June 2004 *it* article 'Food for Thought', which looks at the philosophy underpinning my food planning approach.

Daily energy usage

As the first step in your food planning, you should calculate the average daily amount of energy you will use on your trip.

Your average daily energy use will be a factor of your gender (men use more than women); weight (the heavier you are the more you use); height (the taller you are the more you use); and age (the older you are the less you use). You can calculate your average daily energy use by using one of the following formulae[1]:

Men: E = [66.47 + 13.75W + 5H – 6.76A] x 4.2 x F
Women: E = [655.1 + 9.56W + 1.85H – 4.68A] x 4.2 x F

Where **E** is your average daily energy use (in kilojoules); **W** is your weight (in kilograms); **H** is your height (in centimetres); **A** is your age (in years); and **F** is an appropriate activity factor for the trip (1.375 for a very easy trip; 1.55 for a moderately active trip; 1.725 for a very active trip; 1.9 for an extremely active trip).

Example 1: *Dick is 40 years old, 180cm tall and weighs 85 kgs. A typical day on his trip would be a medium paced 15km walk on a well graded, undulating foot track (moderately active). His average daily energy use would be:*
E = [66.47 + (13.75 x 80) + (5 x 180) – (6.76 x A)] x 4.2 x 1.55 = 12140kJ

Example 2: *Harriet is 60 years old, 160cm tall and weighs 55kgs. A typical day on her trip would be a fast 20km walk in rough country with steep climbs (extremely active). Her average daily energy use would be:*
E = [655.1 + (9.56 x 55) + (1.85 x 160) – (4.68 x 60)] x 4.2 x 1.9 = 9540kJ

Daily energy intake target

Once you have made an estimate of your average daily energy usage, you need to set the daily energy intake target that will form the basis of your food plan. If you set a target that matches your energy usage, your weight will remain stable. If your target is less than you use, you will lose weight. If your target is more than you use, you will gain weight.

A daily shortfall/excess of ~4000kJ/day will lead to a weight loss/gain of ~1kg/week. A daily shortfall/excess of ~2000kJ/day will lead to a weight loss/gain of ~0.5kg/week. My own food plan is based on an energy intake that is ~2000kJ/day less than my average daily energy usage.

[I accept that I will lose weight (quickly regained at the end of a trip!) but my experience has been that this food plan provides enough energy to keep me walking and does not leave me feeling hungry.]

Daily Food Plan

Once you have set a daily energy intake target, you need to prepare a daily food plan based on this target. This can be as simple or as complicated as you wish.

You could try/modify the food plan that I use now (presented in the table accompanying this article, with target energy intake options ranging from 8500 to 12000 kJ/day and daily food weights ranging from 500 to 700 grams/day); or you could start from scratch by choosing your own food types and working out a mix of serving sizes that will give you your energy intake target. If you opt for the latter option, you will need to know the energy value of each of the food types that forms part of your plan. You can get this information from the nutrition labels including on processed food packages and/or from a good diet guide[2].

It will probably take a bit of experimentation before you can settle on a food plan that works for you but I would encourage you to persist until you get it right. The result should be a satisfying and varied diet that does much to increase the enjoyment of your time on the track whilst at the same time reducing the weight of the food that you carry.

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[1] From Noakes, Manny and Clifton, Peter. 2005. *The CSIRO Total Wellbeing Diet*. Penguin. Australia.

[2] For example: Borushek, Allan. 2005. *Pocket Calorie and Fat Counter*. Family Health Publications. Australia.

Terence's food plan for target energy intake 8500-12000kJ/day

	Food energy value (kJ/100g)[1]	Target energy intake/day 8500kJ Serving (g)	9000kJ Serving (g)	9500kJ Serving (g)	10000kJ Serving (g)	10500kJ Serving (g)	11000kJ Serving (g)	11500kJ Serving (g)	12000kJ Serving (g)
Breakfast									
Muesli[2]	1500	70	70	70	80	90	90	90	100
Powdered milk[3]	1950	30	30	30	35	40	40	40	50
Dehydrated fruit[4]	1000	10	10	15	15	15	20	20	20
Mid-morning									
Mixed nuts-fruit[5]	2350	50	50	60	60	60	60	70	70
Lunch									
Crispbread[6]	2350	30	40	40	40	40	50	50	50
Peanut Butter[7]	2600	30	40	40	40	40	50	50	50
Muesli bar[8]	1830	30	30	30	30	30	30	30	30
Dried fruit[9]	1000	50	50	60	70	70	70	80	80
Mid-afternoon									
Black tea/coffee	-	5	5	5	5	5	5	5	5
Dinner									
Packet soup	2000	25	25	25	25	25	25	25	25
Dried Protein[10]	1840	25	25	25	25	25	25	30	30
Dried Vegetables[11]	1320	40	40	40	40	40	40	50	50
Carbohydrate[12]	1500	70	70	80	90	90	90	90	100
Chocolate[13]	2100	30	30	30	30	40	40	40	40
Total grams/day		**500**	**520**	**550**	**585**	**615**	**635**	**670**	**700**

1. Food energy values are based on an average for a range of brands/varieties for each food type.
2. Choose muesli with high nut/seed/coconut content for maximum kilojoules.
3. Use full cream milk in preference to skim milk for maximum kilojoules.
4. Home dried fruit (eg strawberries, rockmelon, bananas, pawpaw, rhubarb, plums), dehydrated to brittle chips.
5. Choose a mix with a high proportion of nuts for maximum kilojoules.
6. Vita Weet is the most energy dense readily available brand of crispbread.
7. If your preferred topping has a lower energy value than peanut butter, the serving size will need to be increased if the daily energy intake target is to be maintained. Other toppings used by bushwalkers include salami (1770kJ/100g); cheese (1670); honey (1250); jam (1040); tuna in oil (870); vegemite (500); and tuna in brine (480). The most energy dense readily available topping is macadamia nut paste (2800kJ/100g)
8. Day Dawn is the lightest readily available brand of muesli bar.
9. Use strongly flavoured fruit (eg crystallised ginger) as part of mix to maximise satisfaction with small serving.
10. Either home pre-cooked and dried (eg chicken, lamb, beef mince) or from Asian Grocery (eg shrimp, mussels).
11. Either home pre-cooked and dried (eg broccoli, capsicum, corn) or from Supermarket (eg peas, beans, carrots) or Asian Grocery (eg mushrooms, red dates) or Lebanese Grocery (eg okra).
12. Either home pre-cooked and dried (eg brown rice, basmati rice, barley, millet) or from Supermarket (eg 3-min pasta, 2-min noodles, instant couscous, instant polenta).
13. Take choc buds and eat one or two at a time to maximise satisfaction with small serving.

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Terence is not a qualified dietician/nutritionist, simply a keen bushwalker who has read what he can readily find on the subject