

INCREASED SAFETY AND PERFORMANCE THROUGH "SMART FOOD"

Patrick Kirk
Tracey Gilbert
Katrina Darry

SUMMARY

An area often overlooked by workers, in terms of their general health and well-being, is that of nutrition. This report describes the role that each food group plays in the overall performance of the body, and which foods provide the best sources of energy, essential minerals and vitamins. The report has been based around foods which are cheap, easily available, and in many cases, already commonly eaten by many forest workers.

Eat Smart

Your job as a forest worker is very physical and it can cause a great deal of stress on your body if you do not look after it. *Eating and drinking properly* to ensure that your body receives the right fuel and fluids is vital to allow your body to sustain working in peak condition. It ensures that you can cope with the mental and physical stress your job puts you under.

Where to Start

Start with Carbohydrates

Your body, like any machine, needs the right fuel to make it work efficiently. All foods provide fuel, but the best fuel is found in **starchy (complex) carbohydrate foods**. These foods give you long lasting power and endurance. They also give you a large amount of essential vitamins and minerals.

By eating a diet high in complex carbohydrate, you will be able to work up to 2 - 3 times harder than if you were on a high fat diet.

Complex carbohydrate foods include: *bread, cereals, pasta (spaghetti), baked beans, rice, fruit, potatoes, kumara, peas and corn*. These foods should make up at least 55% of your total energy intake each day which, as a guideline, should be about **three-quarters of every meal or snack**.

Limit Fatty Foods

To get enough carbohydrate each day, it is vital you **limit the amount of fatty foods that you eat**. *Fatty foods* are slowly digested and can make you feel very tired and sluggish (e.g. *fried eggs, bacon, sausage*). They are certainly not going to keep your energy levels up through a hard day's work. A lot of fat in the diet also increases your risk of developing heart diseases and cancers.

Don't Forget About Protein !

Protein foods are important for muscle growth and strength, as well as providing good immunity against colds and flu. *Protein* foods are found in all animal foods including: **red meat, chicken, fish, eggs, cheese, milk, and yoghurt**. Smaller amounts are found in wholegrain breads and cereals, beans, nuts and seeds. To make sure you get enough carbohydrate, it is important you don't eat too much protein. *Only a quarter* of each meal should be protein foods.

Smart Meals

It is vital that you start every day with a **big smart breakfast** to ensure that muscles are loaded with energy.

Breakfast Helps Your Mental Performance!

Breakfast will improve motivation, concentration, attention, alertness and reaction time by providing fuel for mental skills.

Smart Snacks

Your muscles can only hold enough carbohydrate to last about **1.5 - 2 hours** of physical work. This makes it essential to have regular high carbohydrate snacks between each meal.

The **most important** snack of the day is the one you have when work is finished. This is known as your **Recovery Snack**.

For the **first 30 minutes after finishing work**, your muscles are still very active and they can take up *carbohydrate* very quickly and efficiently. If you **eat carbohydrate within this 30 minute time period**, you will **recover a lot faster** from your day's work. This makes it possible for your muscles to be fully refuelled with carbohydrate by the next morning.

If you do not eat a recovery snack within this 30 minutes, it may take you *at least 24 hours* to restock all your used carbohydrate. This makes it very difficult to do a full productive day's work the next day.

Beware of eating chocolate, sweets, chips or fizzy drinks for snacks. These foods are either very high in fat or sugar, and contain *very little essential vitamins or minerals*. They do not improve your work output, they only slow you down.

A “Low Energy” Eating Plan

	Fat (g)	Carbohydrate (g)	Protein (g)
<u>Breakfast</u>			
4 rashers Bacon	20		28
2 Eggs	19	0	26
4 Toast	19	0	10
2 Pies	48	69	27
1 cup Hot Chips	35	67	9.5
Coke	0	68	0
		43	
<u>Smoko/Lunch</u>			
Meat leftovers	30	0	110
2 Sausage rolls	45	70	20
2 Pies	48	67	27
2 Cheese rolls	23	35	14
Fizzy Drinks	0	43	0
<u>Dinner</u>			
300g Meat in fat	42	0	90
2 Potatoes (Fried)	5	15	4
Vegetables	0	17	4
<u>Dessert</u>			
Baked puddings	19	42	7
1 cup Ice cream	15	33	6
1/2 tin Fruit	0	37	2
<u>Snacks</u>			
50g Chocolate	15	30	4
Packet Chips	17	26	4
Fizzy Drink	0	43	0

These meals and snacks will provide:

500 (g) Carbohydrate = 34% of your energy
350 (g) Fat = 54% of your energy
393 (g) Protein = 12% of your energy

Because carbohydrate intake is **LOW** (34%) muscles will receive **very little fuel**.

Some High Energy “Smart Meal” Ideas

	Fat (g)	Carbohydrate (g)	Protein (g)
<u>Breakfast-cold</u>			
1-2 cups of cereal	1	36	9
1 Fruit	0	14	0.5
Trim milk/yoghurt	2	40	22
2 Toast	1	30	5
Margarine/butter	8	0	0
Jam, honey, vegemite	0	14	0
Glass Trim milk	1	14	11
<u>Breakfast-hot</u>			
2 Toast	2	30	5
Margarine/butter	8	0	0
440g tin beans, spaghetti, corn	2	60	9
Glass fruit juice	0	28	0.5
<u>Smoko/Lunch</u>			
6 Bread or 3 rolls	3	120	15
Margarine/butter	12	0	0
50g Lean meat/chicken/cheese in a sandwich	7	0	13
1-2 Fruit	0	28	2
Pottle fruit yogurt	0	24	7
Fruit Juice	0	28	0.5
<u>Dinner</u>			
200g Lean red meat, chicken or fish	20	0	52
3-4 Potatoes or (1-2 cups pasta/rice)	1	120	9
2-3 Vegetables	0	4	4
Bowl trim milk custard, rice pudding	2	25	12
Fruit	0	14	2
<u>Snacks</u> (choose)			
Fruit buns, sandwich	6	42	6
Packet of raisins	0	20	1
Noodles/rice	1	60	9

These meals and snacks will provide :

770 (g) Carbohydrate = 56% of your energy

150 (g) Fat = 25% of your energy

194 (g) Protein (g) = 19% of your energy

Because carbohydrate intake is **HIGH** (56%) muscles will receive **lots of fuel**.

Carbohydrates should make up at least 55% of your total daily food intake

DEHYDRATION

Physical exercise, especially in the heat, causes your body to lose fluid by sweating. Losing sweat makes your body *dehydrated*.

Dehydration has significant effects on the body. These include poor concentration and co-ordination, your physical work feels harder to do, and you get tired easily and more quickly. This is often the time that *injuries* and negative attitudes towards your job can occur.

**The best way to prevent dehydration is to
DRINK even when YOU ARE NOT THIRSTY !**

SMART TIPS FOR FLUIDS

Drink frequently to avoid thirst.

Try and drink 1 - 1.5 cup of fluid every 15 minutes
and total 0.5 - 1 litre every hour of work.

This will need to be increased in hot weather.

Plain cold water is best

but you may like to try a cold sports drink
which provides carbohydrate energy as well.

Try to reduce the amount of alcohol you drink during your working week

Alcohol causes poor concentration, dehydration,
poor co-ordination and early fatigue.

This effect can last up to 48 hours after drinking alcohol

RECOVERY SNACKS

What you eat as soon as you finish work at the end of the day plays a major role in how well you work and feel the next day.

If you eat at least **50g of carbohydrate** in the **first 15-30 minutes** after finishing work, you will be well on the way to totally refuelling your muscles for the next day.

Eat a 50g Recovery Snack Straight After Work or On the Way Home From Work

SUITABLE RECOVERY SNACKS

Any one of the items listed below will supply your body with 50 g of carbohydrate

- 3 x Oranges
- Half a cup of Dried Fruit
- 2 x Fruit Buns or Scones
- 1 x Honey or Jam Sandwich
- 1 x Banana and 1 cup Sports Drink
- 1 x 440g tin Baked Beans or Spaghetti
- 1 x Banana Sandwich
- 2 x 200g pottles Yoghurt
- 600ml Flavoured Milk
- 3 x Museli Bars

This recovery snack should then be followed up by a larger *carbohydrate* meal, such as your main evening meal, within the following **2-3 hours**.

Remember!!!

Most of the foods mentioned in this report are already being eaten by most of you. All that has to change for most people is knowing what, when and how often you have to eat them to let your body get the most benefit from the food you eat !!

SMART EATING

SUMMARY PAGE

Preparing and maintaining your body for your job is just like preparing and maintaining your equipment. Continuous refuelling of your body with the right kind and quantity of fuel is vital when it comes to ensuring a job well done.

CUT DOWN on all fat and sugary foods.
They make you slow and lethargic

Always eat a big BREAKFAST.
This loads your muscles with
energy for the day

Drink plenty of FLUIDS
throughout the day. Aim for
at least 7 litres/day



Eat RED MEAT 3 times a week
to ensure a good iron intake

Eat LOW FAT DAIRY products
at least 3 times a day to build and
maintain strong bones

Have a good CARBOHYDRATE
RECOVERY SNACK as soon as you finish
work each day. This reloads the muscles
for the next day

Eat small amounts of CARBOHYDRATE
FOODS frequently throughout the
day to replace what you burn up. This will give you
strength, energy and stamina.

Choose STARCHY CARBOHYDRATE foods as the
base of all your meals and snacks. These foods
are your ENERGY foods

For further information, contact:

LOGGING INDUSTRY RESEARCH ORGANISATION
P.O. Box 2244,
ROTORUA, NEW ZEALAND.

Fax: 0 7 346-2886

Telephone: 0 7 348-7168

