

diabetes and healthy food choices



Eating healthy food is
an important part of
self-managing diabetes



diabetes
new zealand

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This pamphlet has been developed by New Zealand Registered Dietitian Alison Pask to provide some basic guidelines for people with diabetes. These may be adapted by your health professional to suit your individual needs. The information is general and is not designed to replace advice given to you by your own dietitian or other health professional.

Diabetes and healthy food choices

Healthy Eating Plan

Your blood glucose levels are affected by the amount and type of starchy and sweet food you eat or drink. Your risk of having a heart attack is affected by the amount and type of fat you eat. Eating more energy than your body needs leads to weight gain. Energy comes from carbohydrates, fats, protein and alcohol. Energy in food is called calories or kilojoules.

Simple changes to your diet will help. Make these changes part of your everyday life.

People with diabetes do not need to buy special food or cook separate meals. The whole family can eat the same healthy food.

- Drink plenty of water. Avoid drinking fruit juice and other sweet drinks.
- Eat breakfast, lunch and dinner every day.
- Base your meals around the Diabetes New Zealand Healthy Plate model.
- Eat some carbohydrate food at each meal, but not too much.
- Choose low sugar, low saturated fat, low salt, and high fibre food.

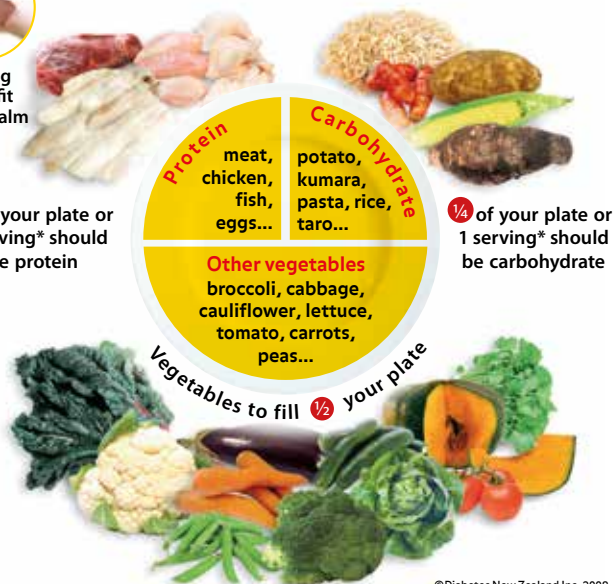


1 serving should fit in the palm of your hand

$\frac{1}{4}$ of your plate or 1 serving* should be protein

$\frac{1}{4}$ of your plate or 1 serving* should be carbohydrate

Diabetes New Zealand Healthy Plate



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Use the traffic lights to help you make healthy food choices



Avoid eating these foods

Eat some but not too much of these foods

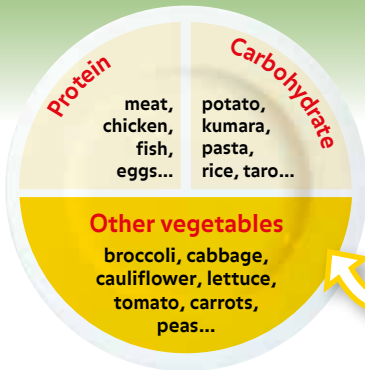
Eat lots of these foods

Non-starchy vegetables



Eat lots

Eat at least 3-4 servings of non-starchy vegetables each day. These vegetables are less likely to raise your blood glucose levels.



- Choose a selection of different coloured vegetables each day
- Raw, cooked, frozen, canned and dried vegetables all count
- Leave the skin on wherever possible.

½ of your plate should contain non-starchy vegetables

Two examples: 4 servings of vegetables



½ cup cooked mixed vegetables

+



1 cup salad

+



1 tomato

+



1 carrot



½ cup frozen beans

+



½ cup cooked broccoli

+



1 cup coleslaw

+



1 wedge pumpkin

Be aware

Avocado contains heart-friendly fats. Try not to eat too much, especially if you are trying to lose weight.



Non-starchy vegetables

These vegetables are less likely to raise your blood glucose levels.



Asparagus



Bean sprouts



Beetroot



Bok choy



Broccoli



Capsicum



Carrots



Cauliflower



Celery



Chinese cabbage



Cucumber



Eggplant



Green beans



Leeks



Lettuce



Mushrooms



Onions



Peas



Puha



Pumpkin



Silver beet



Swede



Taro leaves



Tomatoes



Turnip



Watercress



Zucchini

Carbohydrate



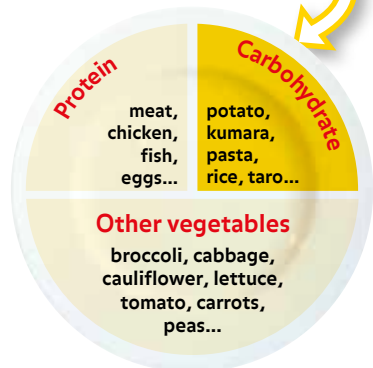
**Eat some
but not
too much**

Eat some but not too much carbohydrate food. Include some carbohydrate at each meal. Foods high in carbohydrate include both starchy and sweet foods. They break down into glucose in the body. Eating too much carbohydrate will increase your blood glucose above recommended levels.

Carbohydrate foods include:

- Breads, cereals, chapati, roti
- Pasta, rice, couscous
- Legumes e.g. chickpeas, lentils, baked beans
- Starchy vegetables e.g. potato
- Fruit
- Milk and milk products
- Sugar and sweet foods.

¼ of your plate should contain carbohydrate



**Healthy
choices**

- Eat a similar amount of carbohydrate at each meal, each day.



Carbohydrate – General tips



- A breakfast cereal with low fat milk or low fat, unsweetened yoghurt is a great start to the day.
- Choose a cereal low in sugar, low in fat and high in fibre such as Weetbix or porridge.

- A homemade soup makes a substantial meal if split peas, lentils or barley and plenty of non-starchy vegetables are added.



Healthy choices

- Look for breads and cereals high in fibre such as barley, bran, oats and oat bran, rye, seeds, wheat germ, wholegrain and whole wheat products.
- Tomato and vegetable-based sauces are great on rice or pasta.
- Include plenty of salad or vegetables with your pasta or rice.



Be aware

- Some breads and cereals such as croissants, garlic bread, cheese breads, Danish pastries and toasted muesli can be high in fat.
- Pasta sauces and soups containing butter, cream, cheese or coconut cream can be too high in fat and should be avoided.
- Many instant noodles are high in fat that is bad for our hearts. Some instant noodles contain palm oil. Fried rice can also be high in fat.
- Limit these foods.

Carbohydrate – Fruit



Eat at least 3-4 servings of fruit, spread throughout the day. These also count towards your total carbohydrate intake for each meal.



- Raw, canned, frozen and dried fruit all count.
- Choose canned fruit in natural fruit juice or artificially sweetened water.



- Spread the fruit you eat over the day
- Eat 1 serving only at each meal or snack
- Eat only a small amount of dried fruit e.g. 1 tablespoon of sultanas or 3 prunes.



Two examples: 4 servings of fruit



1 orange
(1 serving)



1 small or ½
large banana
(1 serving)



1 cup of
berries
(1 serving)



½ cup canned
peaches in
natural juice



½ cup canned
pears in natural
juice



1 medium apple



15 grapes



2 kiwifruit

Carbohydrate – Milk and yoghurt



Eat 2–3 servings each day. These also count towards your total carbohydrate intake for each meal.

- Milk contains carbohydrates as milk sugars (lactose). Drinking large quantities will increase blood glucose above recommended levels.
- Milk and yoghurt are also good sources of protein and calcium.
- Flavoured milk is not recommended.



- Low fat or reduced fat milk or soy products
- Low fat, low sugar yoghurt e.g. diet, lite or unsweetened.

Example: 2 servings

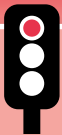


1 cup low fat
milk



1 pottle low fat,
low sugar yoghurt

Carbohydrate – Sugar



Sweet foods such as cakes, biscuits, lollies and sweet drinks will raise your blood glucose levels.

- All sugars will raise your blood glucose levels.
These include: Brown sugar – Caster sugar – Corn syrup
– Dextrose – Disaccharides – Fructose – Glucose – Golden syrup
– Honey – Icing sugar – Lactose – Malt extract – Maltodextrin
– Maltose – Molasses – Monosaccharides – Raw sugar
- You can include small amounts of sugar e.g. 1 teaspoon, as part of a high fibre, low fat meal.

Carbohydrate

Examples of carbohydrate servings

Starchy vegetables



1 small
potato



1/2 small
kumara



1/2 a green
banana



1/2 cup of
taro



1/2 cup
of corn
kernels



1/2 cup of
yams

Breads and cereals



3 Ryvita
crackers



1 1/2
Weetbix



1/4 cup of
raw oats



1 small
roti



1 medium
slice of
wholegrain
bread



1/2 a
wholemeal
bun

Grains and legumes



1/3 cup
of rice



1/3 cup
of pasta



2/3 cup of
baked
beans



1 cup of
canned
red kidney
beans



1/3 cup of
cooked
couscous



1 cup of
cooked
dhal

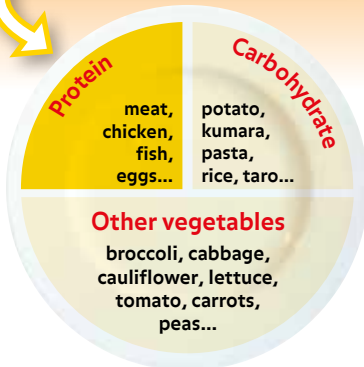
Your dietitian will be able to give you a more detailed list of carbohydrate portions.

Protein – meat, chicken, fish, eggs and cheese



Eat 1–2 servings of meat or meat alternatives each day.

¼ of your plate should contain protein



Healthy choices

- Eat 1-2 fish meals each week.
- Eat at least 4-5 serves of legumes each week.
- Use plain or flavoured cottage cheese, ricotta, quark or a small amount of parmesan cheese.

Examples of servings of protein



1/3 cup of cottage cheese



1 egg



1/2 cup of tuna in water



2 small fish fillets



1 cup of mussels



1 small chicken breast



1/2 cup of lean mince



120g of roast lamb (2 slices)

Be aware

- Skim the fat off the top of stew, casseroles, mince and boil ups.
- Avoid eating fatty or salty meats e.g. battered fish and hot dogs.
- Limit the amount of cheddar, cream cheese and some soft cheeses as they are high in fat.

Fats and oils



Eating too many calories or kilojoules from any source will lead to weight gain. Fat is particularly high in calories / kilojoules and it is easy to eat too much.

Saturated fat can raise blood cholesterol levels and increase the risk of heart disease.

Healthy choice

- We need some but not too much heart friendly fat and oil in our diet.
- Peanut butter or raw nuts with no added salt can be a good source of fat.
- Eat up to 30g each day. This is equal to one dessertspoon of peanut butter or a small handful of nuts. For weight control one serve of nuts replaces other oils and spreads.
- Use a lite coconut milk or use coconut flavoured light evaporated milk instead of coconut milk or cream.

Eat some but not too much of these fats and oils (or spreads made from these oils)

Polyunsaturated

- Corn oil
- Grape seed oil
- Linseed or flax oil
- Safflower oil
- Sesame oil
- Soybean oil
- Sunflower oil
- Walnut oil
- Wheat germ oil

Monounsaturated

- Almond oil
- Avocado oil
- Canola oil (rapeseed)
- Olive oil
- Peanut oil
- Rice bran oil

Polyunsaturated and monounsaturated oils help lower blood cholesterol and protect against heart disease. They are called heart friendly fats.

Avoid eating these saturated fats and trans fats

- Beef tallow
- Butter
- Chefade
- Chicken skin and fat
- Chocolate
- Cocoa butter
- Coconut oil, coconut cream
- Copha
- Cream
- Ghee, clarified butter
- Hydrogenated oils
- Kremelta
- Lard, suet, dripping
- Milk solids
- Palm oil
- Shortening
- White fat visible on meat

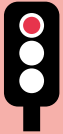
Fats and oils

Be aware

- All fats and oils are high in calories/kilojoules.
- Cholesterol free doesn't mean fat free.
- Lite or light may only mean lighter in colour or flavour, not low in fat.



Salt (sodium)



A high salt intake is linked to high blood pressure in some people. This may lead to a stroke, heart attack or kidney disease.

All types of salt contain sodium including: table salt, rock salt, vegetable salt, sea salt, monosodium glutamate (MSG) and any ingredient beginning with sodium e.g. sodium bicarbonate.

- Three quarters of our salt/sodium intake comes from manufactured foods. Check the label reading guidelines on sodium content on page 22 of this resource.
- Gradually decrease the amount of salt you use. Allow your taste to adjust slowly.
- Add flavour to meals with herbs, spices, garlic and lemon juice.
- If using salty foods like ham, bacon, stock, soy sauce, olives, anchovies or cheese, don't add extra salt.
- Use salt-reduced stocks, low salt soy sauce and tomato sauce.
- If you do use a small amount of salt, make sure it is iodised.



Drinks



Aim for at least 6–8 cups of fluid each day.

Tap water is the best drink.

For variety, choose from:

- Tea or coffee
- Diet or zero soft (fizzy) drink
- Artificially sweetened cordials, powdered drinks or chocolate drink powders
- Unflavoured mineral or soda water
- Diet or low energy drinks



**Be
aware**

- Low fat milk is a good choice but it does contain carbohydrate from the natural milk sugar lactose. Go to page 9 for more information.
- Use sweetened drink powder such as Milo or Bournvita in small quantities only e.g. 1 teaspoon per cup.



Avoid drinking

- Drinks with more than 2.5g of carbohydrate per 100 ml
- Fruit juice including squeezed fruit juice and fruit juice with no added sugar
- Soft drinks and tonic water
- Sport drinks
- Flavoured water
- Flavoured milk
- Energy drinks
- Cordials

Sweeteners

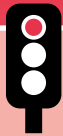


- For a sweet taste, you may wish to use liquid, tablet or powder artificial sweeteners in place of sugar in your drinks and food
- Use a variety of different sweeteners rather than just one type. Aim to reduce the amount of sweetener you use over time.



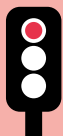
Foods containing sweeteners may be high in fat and calories or kilojoules e.g sugar-free chocolate.

Alcohol



Alcohol is high in calories or kilojoules and may lead to weight gain.

- Ask your doctor if you should drink alcohol
- Limit alcohol to 3 drinks or fewer each day for men; 2 drinks or fewer each day for women
- Check out the size of your glass: one standard drink is 100ml wine, 30ml spirits or 300ml beer
- Aim to have 2 or more alcohol free days each week.



Avoid drinking

- Ready to drink pre-mixes
- Sweet or dessert wines
- Port and liqueurs.

One standard drink



100ml wine



300ml beer



30ml spirits

Foods to avoid



Foods listed below are high in total fat, saturated fat and/or sugar. They can lead to high blood glucose levels, a higher risk of heart disease and weight gain.

Foods high in total and saturated fat	Foods high in sugar	Foods high in fat and sugar
<ul style="list-style-type: none"> • Chippies • Coconut cream • Corn chips • Cream • Fish and chips and other fried takeaways • Fried foods • Hot chips • Pies and pastries • Reduced cream and sour cream dips • Regular mayonnaise • Sausages, salami, luncheon sausage and other processed meat • Vegetable chips 	<ul style="list-style-type: none"> • Condensed milk • Cordial • Honey • Jam • Lollies • Puddings • Roll-ups • Soft drinks • Syrups • Sweetened tinned food 	<ul style="list-style-type: none"> • Biscuits • Cakes • Chocolate • Chocolate spreads • Donuts • Muesli bars • Regular ice cream

Low fat ice cream and frozen yoghurt can be high in sugar – limit to one scoop occasionally.



Avoid eating food and drink high in total fat, saturated fat and sugar.



Biscuits, crackers and cakes



Most biscuits, crackers and cakes are high in carbohydrate, fat and calories/kilojoules. Some crackers can also be high in salt. Only eat on special occasions.

Better choices for a special occasion

- Low fat, high fibre crackers
- Biscuits made with wholemeal flour, bran, oats and dried fruit
- Eat no more than one or two biscuits at a time.

Be aware

- Some crackers have as much fat as chippies
- Go easy on high fat toppings e.g. margarine and cheese
- Sugar-free biscuits may contain a lot of fat and energy.

Jams, spreads, dressings, dips, sauces and pickles

Better choices:

- Reduced fat, reduced salt, low calorie or low kilojoule items
- Yoghurt based dips and dressings
- Small amounts of pickles eaten with savoury foods add extra variety and flavour.



Be aware

- Chocolate or nut spreads can be high in fat and sugar
- Fruit-only jams, sugar-reduced jams and honey still contain carbohydrate so use small quantities
- It is okay to include a scraping of standard jam or honey on one slice of wholegrain bread
- The small amount of sugar in savoury foods such as tomato sauce is okay for most people provided you eat small amounts only
- Hummus varies in fat content. Select low fat varieties.

Snacks



**Morning and afternoon tea snacks are often not necessary.
Ask your dietitian or other health professional if you need them.**

If you are having a snack, choose one of these examples:

- 1 medium sized raw fruit
- 1 slice of wholegrain bread
- 1 glass of low fat milk
- 1 pottle of low fat lite or diet yoghurt
- 2–3 low fat wholegrain crackers
- A handful of plain popcorn
- 1 slice of high fibre fruit bread



Ideas for taking a plate



- Fresh fruit platter
- Fruit kebabs
- Vegetable platter with tomato salsa or low fat hummus
- Wholegrain club sandwiches with a variety of low fat fillings
- Asparagus rolls
- Mini low fat muffins
- Wholegrain crackers with low fat toppings



Sample meals

Two examples of an ideal breakfast

1 cup of porridge + one bobby banana + ¼ cup of yoghurt

- Use low fat, low sugar yoghurt and raw or unsweetened fruit.
- Use Weetbix or other recommended cereals for variety.



2/3 cup of baked beans with 1 slice of wholemeal bread + tomato

- Use a scraping of margarine on bread.
- Add spinach or mushrooms for variety.



Two examples of an ideal lunch

Chicken and salad wholegrain roll with fruit

- Use a scraping of margarine.
- Use tinned fish, beef or reduced cheese for variety.



1 cup of salmon rice salad + 1 pottle of diet yoghurt

- Use a small amount of heart-friendly dressing
- Use shredded chicken, slices of cold meat or hard-boiled egg for variety.



Two examples of an ideal dinner

Roast beef with kumara and vegetables (½ cup roasted kumara, 1 small potato, ½ cup of pumpkin and broccoli/cauliflower)

- Use chicken, lamb, pork or fish for variety.
- Remove fat from meat.
- Eat half a plate of non-starchy vegetables.



1 cup of rice with 1 cup of chickpea, pumpkin and spinach curry



- A roti bread can replace the rice.
- Lentil dhal, chicken or meat based curries add variety.



Food guidelines summary

These guidelines are a general guide for people with diabetes and heart disease. Your food needs to match your weight, medications, medical conditions and activity levels.

The information is not designed to replace advice given by your dietitian or other health professional.

Food	Healthy Servings	How much is one serving?
 Non-starchy vegetables Pages 4 & 5	At least 3–4 servings each day	<ul style="list-style-type: none"> • ½ cup cooked vegetables • 1 cup raw green vegetables or salad • 1 tomato or carrot
Drinks Page 14	6–8 drinks per day	<ul style="list-style-type: none"> • 1 glass water (250ml) • 1 cup diet soft drink (180ml) • 1 glass trim or low fat milk (250ml) • 1 cup tea or coffee
 Starchy vegetables, breads, cereals, rice, pasta & legumes Pages 6, 7 & 10	<ul style="list-style-type: none"> • At least 6 servings each day • Choose a variety of grains – at least half of your breads and cereals should be wholegrain • At least 4–5 servings weekly of legumes 	<ul style="list-style-type: none"> • 1 medium slice of whole grain bread or ½ bread roll • 1 small pita bread, naan, roti or wrap • ½ cup bran cereal or cooked porridge • ⅓ cup cooked pasta • ⅓ cup cooked rice • 1 small potato • ½ kumara or parsnip • ½ cup corn • 1 small round of taro • 1 cup cooked dried beans, chickpeas, lentils or dhal • ½ cup tofu or tempeh
Fruit Page 8	At least 3–4 servings each day	<ul style="list-style-type: none"> • 1 medium apple, pear or orange • 10–15 grapes or strawberries • 3 prunes • 1 tablespoon raisins or sultanas • ½ cup stewed, frozen or canned fruit in natural or lite juice • ½ banana

**Food****Healthy Servings****How much is one serving?****Milk, yoghurt, cheese, other milk products**

Pages 9 & 11

- 2–3 servings each day
- Replace with soy products if preferred

- 1 glass low fat milk (250ml)
- 1 pottle low fat, diet or lite yoghurt
- 1/3 cup low fat cottage cheese
- 2 tbsps grated Parmesan cheese
- 3cm cube Edam cheese

Meat, chicken

Page 11

Limit to 1–2 servings each day

- 2 slices trimmed meat or chicken (100–120g)
- 1/2 cup lean mince or casserole (125g)
- 1 small lean steak (100g)
- 1 small chicken breast (120g)

Eggs

Page 11

3 eggs weekly

- 1 egg

Fish, seafood

Page 11

1–2 servings weekly

- 2 small or 1 large fillet fish
- 1/2 cup tuna
- 1 cup mussels

Nuts, seeds

Page 12

2–3 servings each day

- 1 dessertspoon nuts or seeds
- 1 dessertspoon peanut butter

Fats, oils

Page 12 & 13

Up to 3 servings each day

- 1 teaspoon soft table margarine or oil
- 2 teaspoons low fat mayonnaise or vinaigrette
- 1 tablespoon avocado

**Sugar**

Page 9

Up to 1 serving each day as part of a meal

- 1 tablespoon sugar, jam, syrup or honey
- Small scoop reduced fat ice cream or frozen yoghurt

Salt

Page 13

- Limit high salt seasonings to 1 each day
- Limit high salt foods

- 1/6 stock cube
- 1/3 teaspoon gravy mix
- 30g lean ham or pastrami
- 1 teaspoon Marmite or Vegemite
- 1 teaspoon soy sauce

Alcohol

Page 15

- Limit: 3 drinks or fewer each day for men; 2 drinks or fewer each day for women
- Use diet drinks as mixers

- 1 glass ordinary strength beer (300ml)
- 1 glass table wine (100ml)
- 1 pub measure spirits – whisky, gin, vodka (30ml)

Adapted from the New Zealand Guidelines Group Cardioprotective Dietary Patterns

Food labels

All food packaging is required to have a nutrition information panel. Label information can be used to compare similar foods and select the healthier items.

Fat & Saturated Fat:

Fat is high in calories/kilojoules. Consuming too many calories/kilojoules will lead to weight gain. Saturated fat can increase blood cholesterol levels and risk of heart disease.

Tip

- Choose foods with less than 10g total fat per 100g.
- Choose foods with less than 2g saturated fat per 100g.
- Low fat yoghurt has less than 2g total fat per 100g.
- Low fat milk has less than 1g total fat per 100g.

Carbohydrate & Sugar:

Carbohydrates provide calories/kilojoules and will increase blood glucose levels. It is important to eat some carbohydrate but not too much. Sugars are part of the total carbohydrate in food. A small amount of sugar in food is acceptable.

Tip

- Choose foods with less than 10g sugar per 100g.
- Low sugar breakfast cereals and yoghurts have less than 15g sugar per 100g.
- Avoid drinks with more than 2.5g carbohydrate per 100g.

Fibre:

Fibre is not always shown on a food label. It is found in fruits, vegetables, wholegrain breads and cereals.

Tip

- Choose foods with more than 6g fibre per 100g.

Breakfast	
Serving Size:	30g
Servings per pack:	33
Energy (kJ) (Cals)	
Protein (g)	
Fat Total (g) Saturated (g)	
Carbohydrate Total (g) Sugars (g)	
Dietary fibre (g)	
Sodium (mg)	
Ingredients: Wholegrain wheat, sugar, vitamins, minerals	

Sodium (salt):

Aim for less than 2300mg sodium per day.

Tip

- Food with low sodium content has less than 120mg per 100g.
- Food with high sodium content has more than 600mg per 100g.

Cereal Example	
(2 biscuits)	
Per Serve	Per 100g
444 106	1480 354
3.6	12.0
0.4 0.1	1.3 0.3
20 0.8	67 2.8
3.3	11
84	280
salt, barley malt extract,	

Serving Size and Per Serve:

Use the per serve column to find out the amount of carbohydrate in a serving. For example, one serve of this breakfast cereal is 30g (2 biscuits) and contains 20g of carbohydrate.

Check the serving size and servings per pack first. A 600ml drink bottle may contain three serves but if you are thirsty you may drink the whole bottle.

Per 100g:

The 100g column is the most frequently used information.

Use the 100g column to compare similar products or to select foods based on specific guidelines.

For example, to find a breakfast cereal with the highest fibre content, compare the fibre per 100g of different cereals.

Glycaemic Index (GI):

- GI is rarely shown on food labels.
- It gives an idea of how quickly different foods containing the same amount of carbohydrate raise blood glucose levels.
- Low GI foods are more slowly digested so help maintain a more even blood glucose level.
- The total amount of carbohydrate eaten is more important than the GI of a food.
- Visit www.glycemicindex.com for more information.

List of ingredients:

Ingredients in a product are provided on a label but may not always be part of the nutrition information panel.

Ingredients are listed in order of quantity from largest to smallest.

***Diabetes and healthy food choices* is produced by Diabetes New Zealand.**

To learn more about diabetes:

- **talk to your doctor or practice nurse**
- **visit www.diabetes.org.nz**
- **join Diabetes New Zealand**

To order *Diabetes and healthy food choices* or any of the other Diabetes New Zealand pamphlets, visit www.diabetes.org.nz

Diabetes New Zealand supports people affected by diabetes and health professionals throughout New Zealand. We act for people affected by diabetes by:

- providing local support
- acting as an advocate
- raising awareness of diabetes, especially interventions that will prevent type 2 diabetes or reduce diabetes complications
- educating and informing people about diabetes, its treatment, management and control
- supporting research into the treatment, prevention and cure of diabetes

You'll find helpful information for people affected by diabetes in our pamphlets and on our website at www.diabetes.org.nz.

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