

diabetes and healthy food choices



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



diabetes
new zealand

Contents

PAGE



3	Diabetes and healthy food choices
4	Non-starchy vegetables
6	Carbohydrate
7	Carbohydrate: Fruit
8	Carbohydrate: Starchy vegetables
8	Carbohydrate: Milk and yoghurt
9	Carbohydrate: Breads and cereals
9	Carbohydrate: Rice and pasta
10	Carbohydrate: Legumes
10	Carbohydrate: Sugar
11	Protein: meat, chicken, fish, eggs and cheese
12	Fats and Oils
13	Salt
14	Drinks
15	Alcohol
15	Sweeteners
16	Stop eating
17	Biscuits, crackers and cakes
17	Jams, spreads, dressings, dips, sauces and pickles
18	Snacks
18	Ideas for taking a plate
19	Sample meals
20	Food guidelines summary
22	Food labels

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



Diabetes New Zealand Healthy Eating Plan

Your blood glucose levels are directly affected by the kind and amount of carbohydrate (starchy foods and sugar) you eat.

Your risk of having a heart attack or stroke is affected by the kind and amount of fat you eat.

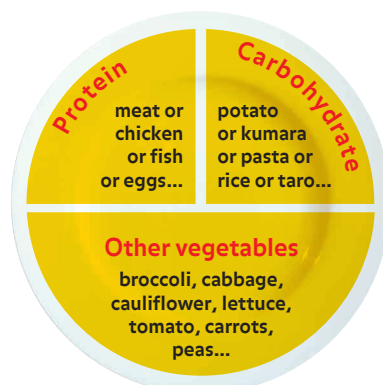
People with diabetes do not need to buy special foods or cook separate meals.

The whole family can eat the same healthy foods

- Drink plenty of water and stop drinking fruit juice and sugar-sweetened drinks
- Eat breakfast, lunch and dinner every day
- Eat some carbohydrate at each meal, but not too much
- Stop eating foods high in sugar
- Choose foods low in fat
- Follow the Diabetes New Zealand Healthy Plate
- Match the food you eat to your weight, medications, medical conditions and activity.

For an ideal eating plan, talk to a New Zealand registered dietitian.

Diabetes New Zealand Healthy Plate



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Use the traffic lights to help you make healthy food choices



Stop eating these foods

Eat some but not too much of these foods

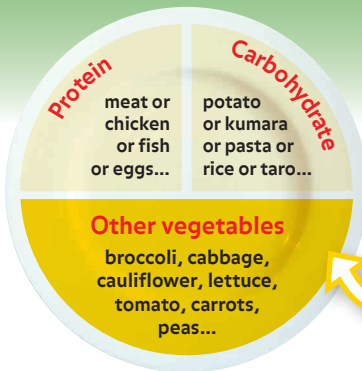
Eat lots of these foods

Non-starchy vegetables



Eat lots

Eat at least 3–4 servings of non-starchy vegetables each day



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

1/2 of your plate should contain non-starchy vegetables

Two examples: 4 servings of vegetables



1/2 cup cooked mixed vegetables



1 cup salad



1 tomato



1 carrot



1/2 cup frozen beans



1/2 cup cooked broccoli



1 cup coleslaw



1 wedge pumpkin

Be aware

Avocado is 1/4 fat. Eat small amounts only.



Non-starchy vegetables

These vegetables are less likely to raise your blood glucose levels



Asparagus



Bean sprouts



Beetroot



Broccoli



Cabbage



Capsicum



Carrots



Cauliflower



Celery



Cucumber



Eggplant



Green beans



Leeks



Lettuce



Mushrooms



Onions



Peas



Puha



Pumpkin



Silver beet



Spinach



Swede



Taro leaves



Tomatoes



Turnip



Watercress



Zucchini

Carbohydrate



**Eat some
but not
too much**

Food high in carbohydrate include both starchy and sweet foods. They break down into glucose (sugar) in the body.

Eating too much carbohydrate will increase your blood glucose above recommended levels.



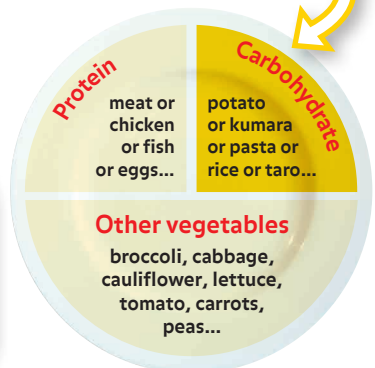
Carbohydrate foods include:

- breads, cereals, chapati, roti
- pasta, rice
- legumes e.g. dried beans
- starchy vegetables e.g. potato
- fruit
- milk and milk products
- sugar and sweet foods.

1/4 of your plate should contain carbohydrate

**Healthy
choices**

- Include some carbohydrate in each meal
- Eat a similar amount of carbohydrate at each meal.



Carbohydrate – Fruit



Eat at least 3–4 servings of fruit each day

**Healthy
choices**

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

**Be
aware**

- 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 small or
1/2 large
banana



1 cup
of
berries



1/2 cup
canned
peaches in
natural juice



1/2 cup canned
pears in natural
juice



1 medium
apple



15 grapes



2 kiwifruit

Carbohydrate – Starchy vegetables



Breadfruit



Cassava



Corn



Green banana



Kumara



Parsnip



Potato



Taro



Yams

Carbohydrate – Milk and yoghurt



Eat 2–3 servings each day

- Milk contains carbohydrates as milk sugars (lactose) – drinking large quantities will increase blood glucose levels
- Milk and yoghurt are also good sources of protein
- 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 – Breads and cereals



- Cereal with low fat milk or diet or lite yoghurt is a great start to the day
- Choose a cereal low in sugar, low in fat and high in fibre

Healthy choices

- Rolled oats, porridge, Weet-Bix
- Wholegrain high fibre breads.

- Look for ingredients that indicate fibre such as barley, bran, grains, oat bran, oats, psyllium, rye, seeds, wheat germ, wholegrain and whole wheat.

Be aware

Croissants, garlic bread, cheese breads, Danish pastries and toasted muesli are high in fat.



Carbohydrate – Rice and pasta



Healthy choices

- All kinds of fresh and dried pastas
- Long grain, parboiled, basmati, doongara or brown rice
- Tomato and vegetable based sauces are ideal on rice or pasta
- Include plenty of salad or vegetables with your pasta or rice.

Be aware

- Pasta sauces containing butter, cream, cheese or coconut cream can be too high in fat
- Avoid instant noodles containing palm oil
- Fried rice can be high in fat.

Carbohydrate – Legumes



- Legumes include:
 - Soybeans
 - Chickpeas
 - Lite baked beans
 - Dried beans
 - Split peas
 - Kidney beans
 - Lentils
- Legumes are a good source of protein as well as providing carbohydrate



Healthy choices



- A homemade soup makes a substantial meal if made with legumes
- Add split peas, lentils, barley and plenty of non-starchy vegetables to soups

Be aware

- Cream soups contain lots of fat and energy
- Use low salt stocks and soup mixes

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

Protein – meat, chicken, fish, eggs and cheese



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

Choose from:

- Lean meat e.g. beef, lamb, mutton, trim pork, venison
- Chicken without skin
- Fish – fresh, frozen or canned
- Seafood • Eggs • Nuts • Dried beans
- Cheese • Chickpeas • Lentils

Recommended cooking methods

- Grilling • Dry roasting • Steaming
- Boiling • Poaching • Casseroling
- Microwaving • Barbecuing on a grill

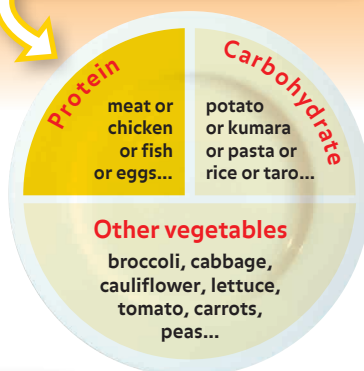
Healthy choices

- Roast meat on a rack so the fat drips away
- Eat 1–2 fish meals each week
- Eat fish canned in water

Be aware

- Skim the fat off the top of stews, casseroles, mince and boil ups
- Avoid eating fatty or salty meats e.g. battered fish and hot dogs
- Cheddar, cream cheese and some soft cheeses can be high in fat

$\frac{1}{4}$ of your plate should contain protein



Example: 1 serving

The amount of meat that fits into the palm of your hand (100–120g a day)



- Eat a variety of nuts without added fat or salt
- Eat no more than 1 dessertspoon of nuts each day
- Use plain or flavoured cottage cheese, ricotta, quark or a small amount of strongly flavoured parmesan cheese

Fats and oils



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

Eating too much total fat will contribute to weight gain.

Healthy choice

- Baking paper or cooking spray prevent sticking and reduce the amount of fat or oil used.

Stop eating these saturated fats and trans-fats	Recommended oils (or spreads made from these)	
	Polyunsaturated	Monounsaturated
<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Corn oil• Grape seed oil• Linseed or flax oil• Safflower oil• Sesame oil• Soybean oil• Sunflower oil• Walnut oil• Wheat germ oil	<ul style="list-style-type: none">• 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.

Fats and oils

**Be
aware**

- All fats and oils are high in kilojoules or calories, regardless of the type
- Cholesterol free doesn't mean fat free
- Lite or light may mean lighter in colour or flavour
- Coconut milk and cream are high in saturated fat – choose a fat reduced product or use coconut flavoured light evaporated milk.



Salt (sodium)



Salt is linked to high blood pressure in some people, which in turn increases the risk of a stroke, heart attack and kidney damage

- All types of salt contain sodium: Table salt • Rock salt • Vegetable salt • Sea salt • Monosodium glutamate (MSG) • Na⁺ • Any ingredient beginning with sodium e.g. sodium bicarbonate
- Gradually wean yourself off salt – allow your taste to adjust slowly. Enhance the flavour of meals with herbs and spices.
- 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 low salt tomato sauce
- If you choose to use small quantities of salt, ensure 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 soft (fizzy) drinks
- Artificially sweetened cordials, powdered drinks or chocolate drink powders
- Unflavoured mineral or soda water
- Diet or low kilojoule or low calorie drinks.



Healthy choice

Low fat milk is a good choice but it does contain carbohydrate from natural milk sugars (lactose) so limit the amount you drink.

Be aware

- There may not be much carbohydrate per 100ml shown on the drink label. However, an average drink serving is much bigger than 100ml.
- Fruit juice contains carbohydrate from natural sugars (fructose).
- Use sweetened drink powers such as Milo or Bournvita in small quantities only e.g. 1 teaspoon per cup.



Stop drinking

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

Alcohol



Alcohol is high in calories or kilojoules so will contribute 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.



Stop drinking

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



- Never drink on an empty stomach
- Limit alcohol if:
 - you are trying to lose weight
 - your blood triglyceride is high
 - your blood pressure is high
 - your blood glucose is poorly controlled.

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.

Stop eating



Foods high in fat, and or sugar, or both are not recommended for your health

Foods high in 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 • Lollies • Puddings • Roll-ups • Soft drinks • Syrups • Sweetened tinned food 	<ul style="list-style-type: none"> • Biscuits • Cakes • Chocolate • Donuts • Muesli bars • Regular ice cream

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



Stop eating food and drinks high in fat and sugar



Biscuits, crackers and cakes



These contain carbohydrate, sugar, fat, salt and calories or kilojoules – have only 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 – check with your doctor or health care team.

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
- 1 handful of pretzels or plain popcorn
- 1 slice of high fibre fruit loaf



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
- Fruit loaf
- Wholegrain crackers with low fat toppings



Sample meals

Two examples of an ideal breakfast

Baked beans on toast

- Use only a scraping of margarine on bread



Weetbix, yoghurt and fruit

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



Two examples of an ideal lunch

Chicken and salad wholegrain roll with fruit

- Use only a scraping of margarine
- Use tuna, beef or low fat cheese for variety



Low fat quiche and salad with fruit

- Use low fat milk in quiche
- Use low fat dressing



Two examples of an ideal dinner

Steak, potato and vegetables

- Remove fat from meat and cook without adding fat or oil
- Eat half a plate of non-starchy vegetables
- Use chicken, lamb or fish for variety



Chicken and vegetable stir-fry with rice

- Remove skin and fat from meat
- Stir-fry in water or a little oil



Food guidelines summary

- These guidelines are a general guide only for people with diabetes – your food needs to be matched to your weight, medications, medical conditions and activity
- Always follow your dietitian's advice.



Food

Healthy Servings

How much is one serving?

Non-starchy vegetables

Pages 4 & 5

At least 3–4 servings each day

- ½ cup cooked vegetables
- 1 cup raw green vegetables or salad
- 1 tomato or carrot

Drinks

Page 14

6-8 drinks per day

- 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 8-10

- 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

- 1 medium slice of whole grain bread or ½ bread roll
- 1 small pita bread, naan, roti or wrap
- ½ cup bran cereal
- ⅓ cup cooked pasta
- ⅓ cup cooked rice
- 1 small potato
- ½ kumara
- ½ 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 7

At least 3–4 servings each day

- 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 Page 8 & 11	<ul style="list-style-type: none">• 2–3 servings each day• Replace with soy products if preferred	<ul style="list-style-type: none">• 1 glass low fat milk (250ml)• 1 pottle low fat, diet or lite yoghurt• ½ cup low fat cottage cheese• 2 tbsps grated Parmesan cheese• 3 cm cube Edam cheese
Meat, chicken Page 11	Limit to 1–2 servings each day	<ul style="list-style-type: none">• 2 slices trimmed meat or chicken (100–120g)• ½ cup lean mince or casserole (125g)• 1 small lean steak (100g)• 1 small chicken breast (120g)
Eggs Page 11	3 eggs weekly	<ul style="list-style-type: none">• 1 egg
Fish, seafood Page 11	1–2 servings weekly	<ul style="list-style-type: none">• 2 small or 1 large fillet fish• ½ cup tuna• 1 cup mussels
Nuts, seeds Page 11	1 serving each day	<ul style="list-style-type: none">• 1 dessertspoon nuts or seeds• 1 dessertspoon peanut butter
Fats, oils Page 12 & 13	Up to 3 servings each day	<ul style="list-style-type: none">• 1 teaspoon soft table margarine or oil• 2 teaspoons low fat mayonnaise or vinaigrette• 1 tablespoon avocado
Sugar Page 10	Up to 1 serving each day as part of a meal	<ul style="list-style-type: none">• 1 tablespoon sugar, jam, syrup or honey• Small scoop reduced fat ice cream or frozen yoghurt
Salt Page 13	<ul style="list-style-type: none">• Limit high salt seasonings to 1 each day• Limit high salt foods	<ul style="list-style-type: none">• ⅓ stock cube• ⅓ teaspoon gravy mix• 30g lean ham or pastrami• 1 tablespoon pickles• 1 teaspoon soy sauce
Alcohol Page 15	<ul style="list-style-type: none">• Limit: 3 drinks or fewer each day for men; 2 drinks or fewer each day for women• Use diet drinks as mixers	<ul style="list-style-type: none">• 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

- On most food packages you will find a **Nutrition Information Panel (NIP)**
- Use the **Nutrition Information Panel** to compare similar foods.

Ingredients

- These are listed in order of quantity by weight from biggest to smallest

Energy

- Energy is another word for calories or kilojoules – energy you eat will be stored as fat if not needed by your body
- Even if a product is low in fat or sugar it still contains energy

Fat

- Fat contributes a lot of energy as kilojoules (KJ) or calories (Kcals) and leads to weight gain if you eat too much

Tip

Choose foods with less than 10g fat per 100g
Choose yoghurt with less than 2g fat per 100g
Choose milk with less than 1g fat per 100g

Saturated fat

- Saturated fat can raise blood cholesterol levels and increase the risk of heart disease, and make your diabetes control worse

Carbohydrate

- Carbohydrate is broken down to glucose (sugar) in the body to provide energy
- It is important to eat some carbohydrate but not too much – eating too much will increase blood glucose

Sugars

- Sugars are part of the total carbohydrate in a food – a small amount of sugar in a food is acceptable

Tip

Choose breakfast cereal and yoghurt with less than 15g sugar per 100g

Breakfast

Ingredients:

Wholegrain wheat, sugar, salt, barley malt extract, vitamins, minerals

Servings per pack: 33

Serving size: 30g

Energy (KJ)
(Kcals)

Fat – total (g)

– saturated (g)

Carbohydrate – total (g)

– sugars (g)

Dietary fibre (g)

Sodium (mg)

Cereal Example		
Glycaemic Index (GI): 55		
	per serve	per 100g
	444 106	1480 354
	0.4	1.3
	0.1	0.3
	20	67
	0.8	2.8
	3.3	11
	84	280

Glycaemic Index (GI)

- GI values give 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 to maintain a more even blood glucose level
- Low GI = 55 or less
- High GI = 70 or more
- The total amount of carbohydrate eaten is more important than the GI
- GI is not always shown
- Visit www.glycemicindex.com for more information

Serving size and per serve

- The serving size is useful if you are going to eat one serving
- Check the size first – a 600ml drink may be three servings but if you are thirsty you may drink the whole bottle
- One serve of this breakfast cereal is 30g and provides 20g carbohydrate



Your serve may be bigger than 30g

Per 100g (per 100ml for liquid items)

- Use the 100g column to compare similar products
- For example, to find the breakfast cereal with the highest fibre content, compare the fibre per 100g

Fibre

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



Choose foods with more than 6g fibre per 100g

Sodium (salt)

- Choose foods with lower sodium content, especially if you have high blood pressure
- Aim for less than 2,300mg of sodium each day



To order Diabetes New Zealand pamphlets
contact Diabetes Supplies Ltd

- 0800 DIABETES (0800 342 238)
- Email info@diabetes.org.nz
- Fax 03 434 5281
- Freepost DNZ, PO Box 54, Oamaru

Diabetes New Zealand

Diabetes New Zealand acts for people affected by diabetes by:

- encouraging local support
- acting as an advocate
- raising awareness of diabetes and diabetes prevention
- educating and informing people about diabetes, its treatment, management and control
- supporting research into the treatment, prevention and cure of diabetes.

This pamphlet is produced by Diabetes New Zealand.

To learn more about healthy eating:

- contact a dietitian for advice on your own personal eating plan
- visit www.diabetes.org.nz
- join your local diabetes society by phoning
Diabetes New Zealand on 0800 369 636

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