Diabetes andhealthy food choices



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



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This pamphlet has been developed in conjunction with NZ registered dietitians 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 (sugar) 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.



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

meat, potato, chicken, kumara, fish, pasta, eggs... rice, taro...

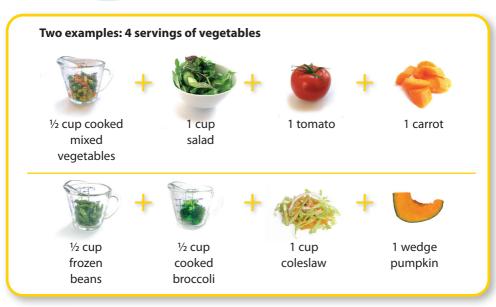
Other vegetables broccoli, cabbage,

cauliflower, lettuce, tomato, carrots,

peas...

- 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





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.



Carbohydrate



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.



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

¼ of your plate should contain carbohydrate





Other vegetables

broccoli, cabbage, cauliflower, lettuce, tomato, carrots, peas...



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.





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- 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 2-3 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.

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: 3 servings of fruit



1 orange (1 serving)



1 small or ½ large banana (1 serving)



½ cup canned peaches 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 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

½ small kumara

½ a green banana

½ cup of taro

½ cup of corn kernels

½ cup of yams

Breads and cereals



3 Ryvita crackers



1 ½ Weetbix



¼ cup of raw oats



1 small roti



1 medium slice of wholegrain bread



½ a wholemeal bun

Grains and legumes



¹/₃ cup of cooked rice



¹/₃ cup of cooked 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

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



potato, kumara, pasta, rice, taro...

Other vegetables

broccoli, cabbage, cauliflower, lettuce, tomato, carrots, peas...



- 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





½ cup of tuna in water

2 small fish fillets





1 cup of mussels

1 small chicken breast





½ 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.



- 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

Go to www.diabetes.org.nz/how-to-cook-with-herbs-and-spices to learn how to use spices.

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
- Sugary 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
- Stop drinking alcohol if you could be pregnant, are pregnant or are trying to get pregnant. There is no known safe level of alcohol consumption during pregnancy.
- 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.



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

- 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

Foods high in sugar

- Condensed milk
- Cordial
- Honey
- Jam
- Lollies
- Puddings
- Roll-ups
- Soft drinks
- Syrups
- Sweetened tinned food
- Sugar sweetened fizzy drinks
- Fruit juice
- Energy drinks

Foods high in fat and sugar

- 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 and cauliflower (or other vegetable) 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 cauliflower 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 health professional.

Remember the traffic lights.

	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 6, 7 & 10	 Limit to 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 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	Limit to 2-3 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
0	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

Food	Healthy Servings	How much is one serving?
Meat, chicken Page 11	Limit to 1–2 servings each day	 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	• 1 egg
Fish, seafood Page 11	1–2 servings weekly	2 small or 1 large fillet fish½ cup tuna1 cup mussels
Nuts, seeds Page 12	2 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 dayLimit 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 Stop drinking alcohol if you could be pregnant, are pregnant or are trying to get pregnant. 	 1 glass ordinary strength beer (300ml) 1 glass table wine (100ml) 1 pub measure spirits – whisky, gin, vodka (30ml)



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.



- 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.



- 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.



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.



- 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,

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.

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.

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

To order a copy of *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 throughout New Zealand 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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