

Wellness Diabetes

Self-Management Group Education for People with Type 2 Diabetes



Mau ano koe e whakaaro, kei a koe te tikanga

You can determine your wellness, it's up to you

(Reweti Te Mete)

Paua represents uniqueness and the beauty of life

Provided by:

Health and Wellness Services
WBOP PHO
154 / First Avenue West, Tauranga
Phone: 07 571 2100

Presented by some of our Partners in Health:

Dietitians
Pharmacists
Foot Specialists
Diabetes Nurse Specialists



WBOP PHO
Western Bay of Plenty
Primary Health Organisation

Welcome to the Wellness Diabetes Self-Management Group

Congratulations on your decision to join the growing number of people with diabetes who are attending self-management groups. These groups are supported by the Ministry of Health and are funded through the Bay of Plenty District Health Board. Your General Practice (doctor) and local Primary Health Organisation are supportive of the Wellness Diabetes groups.

These groups are an important part of your on-going diabetes treatment plan and will help you manage your diabetes better; we are here to support you as you make changes.

Over the next five weeks you will get to know the community dietitian, the diabetes nurse specialist and me, the diabetes self-management group education co-ordinator. Feel free to ask us questions at any time, and if we do not have the answer we will find it for you. If you have a friend or family/whanau member with you, they can also ask questions.

Thank you for joining us in your journey for better diabetes health. We look forward to getting to know you.

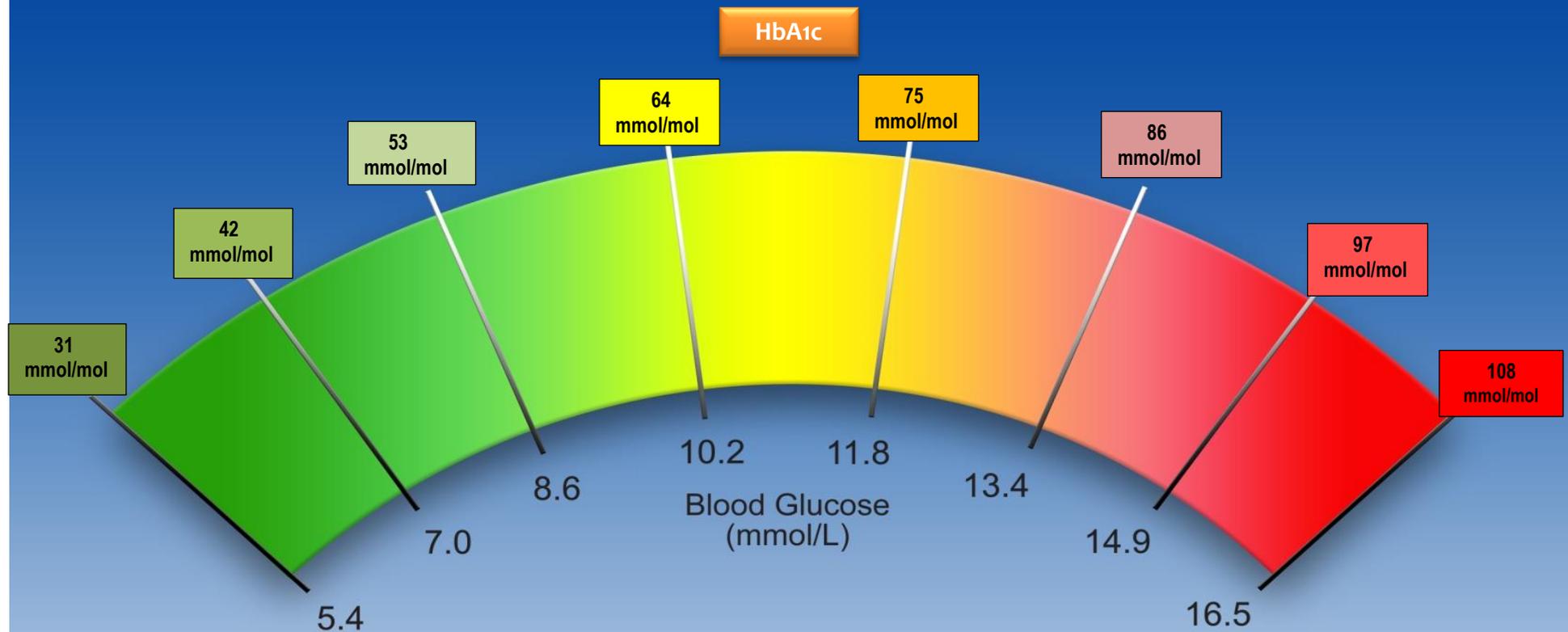
Hannah Keddell & Jennie Verstappen
NZ Registered Dietitians
Self-Management Group Education Coordinators
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Western Bay of Plenty Primary Health Organisation
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Please note this booklet does not replace medical advice from a health professional.

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HbA_{1c} as indicator of Diabetes Control



Nathan et al. Translating the A1C Assay Into Estimated Average Glucose Values. Diabetes Care 2008; 31:1473-1478
Christchurch Diabetes Centre 2009

2.0 Know your numbers

You can keep track of your treatment goals and know your own numbers by having regular check-ups at your general practice. The measurements below help to measure your risk of diabetes complications.

Target levels will vary from person to person.* You should work out a safe and manageable target for you with your nurse or doctor. If your measurement is high, ANY reduction will be good for your health.

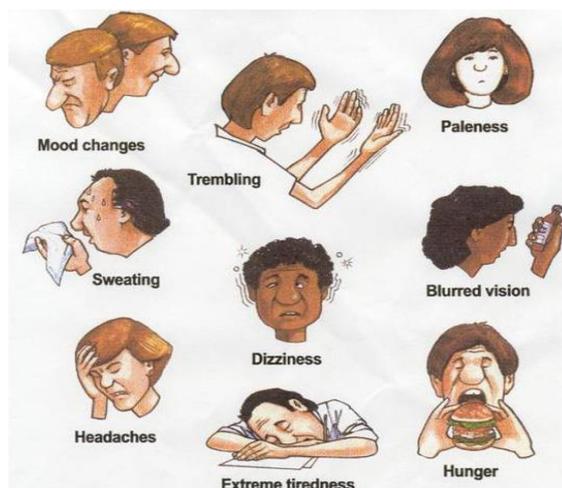
Test Name	Why it is measured	Your results	Your Ideal Level	Healthy Targets*
BMI <i>(Body Mass Index)</i>	Your BMI is a number worked out from your height and weight see if you are a healthy weight. Your waist might also be measured.			18.5 - 25 (or as agreed)
HbA1c	This test is a good guide to your average blood glucose levels over the 2-3 months leading up to the test. If your HbA1c is high, your risk of diabetes-related complications is increased.			50 – 55 (or as agreed)
ACR <i>(Urine albumin to creatinine ratio)</i>	Urine albumin to creatinine ratio (ACR) is used to check for kidney disease. If the blood vessels in our kidneys are damaged, they can leak tiny amounts of albumin into our urine.			Less than 2.5 males 3.5 females
Blood Pressure <i>(BP)</i>	Blood pressure is the pressure of blood in your arteries. If you have high blood pressure (hypertension), your risk of stroke, heart attack and kidney failure are increased.			130/80
TC/HDL Ratio <i>(Total cholesterol to high density lipoprotein ratio)</i>	Cholesterol is made in the liver from the fats and oils we eat. It is stuck into the cell wall of all our cells. When we have too much cholesterol, heart disease may develop.			Less than 4
Cardiovascular Risk <i>(Heart Health Check)</i>	This measurement uses other test results to help work out your cardiovascular risk (risk of having a stroke or heart attack).			Less than 15%

TEST/Measure	Result/Date	Result/Date	Result/Date	Result/Date
BMI				
HbA1c				
ACR				
BP				
TC/HDL ratio				

3.0 Managing Hypoglycaemia (low blood glucose)

Hypoglycaemia or having a 'hypo' is when your blood glucose levels drop below 4.0 mmol. All people on insulin or taking some diabetes tablets are at risk of hypo's.

Common Symptoms: It is important to treat a hypo quickly even if you do not feel any symptoms.



Step One:

Eat or drink some quick acting sugar.

- 6-8 jellybeans
- 1/2 glass juice, fizzy (not diet)
- 3 tsps honey or jam
- 3 tsps sugar or glucose powder dissolved in a glass of water
- 5 vita glucose tabs or 4 Dextro® energy tablets
- 1 hypofit gel sachet



Step Two:

After 10 minutes, re test your blood glucose level. If this is still under 4mmol go back and repeat Step 1

Step Three:

Once your blood glucose is over 4mmol, it is important to have something to eat to prevent this happening again.

- If it is your mealtime then have this.
- If not have a healthy snack (piece of fruit, a glass of milk or a few crackers) to keep your levels safely above 4mmol.

4.0 Sick Days

What to do when you are sick

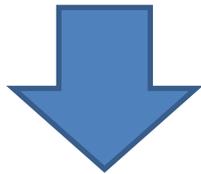
Illness that may increase your blood glucose levels (hyperglycaemia):

- Colds
- Flu
- Infections



Illness that may decrease your blood glucose levels (Hypoglycaemia):

- Vomiting
- Diarrhoea



If you are not well enough to look after yourself ask someone to help. Call your doctor, practice nurse or diabetes nurse specialist if they are available. If you are unable to contact your usual healthcare provider, contact Healthline on 0800 611 116 or call your GP clinic and be connected with a nurse at the local call centre.

When you are sick

1. Increase the number of times you test your blood glucose levels to at least 3-4 times daily:

If your tests are continually higher than 15mmol/L, for 3-4 readings, contact your doctor, practice nurse or diabetes nurse specialist.

2. Continue to take your usual diabetes tablets/insulin:

Blood glucose usually increases during illness so it is important you continue to take your usual diabetes tablets/insulin, even if you are not eating your regular meals.

You might need to stop your metformin if you have ongoing vomiting or diarrhoea for more than 8-12 hours. **Phone your doctor or pharmacist for advice.** Remember to re-start your metformin once you are well again.

3. Drink plenty of water:

Dehydration is the loss of fluid in the body which can develop quickly, especially if you have been vomiting and/or have diarrhoea. Try to have one cup (250 ml) of water each hour.



4. Contact your usual healthcare professional if you have any of the following symptoms:

- Vomiting or diarrhoea for 12 hours or more
- Blood glucose levels continually above 15mmol/L for 12 hours
- Become drowsy, feeling weak and/or abdominal pain
- Infection or high temperature

5. If your blood glucose levels are higher than usual:

Avoid sugary drinks and drink plenty of water. Eat foods that do not increase your blood glucose levels, for example, coloured vegetables, lean meats, eggs, seafood, nuts and seeds, avocado, fish, vegetable soups.

6. If you take insulin:

Have a 'sick day plan' for when you are unwell. Discuss in advance with your doctor or practice nurse whether you should take extra insulin during 'sick days' and if so, how much and when.



7. Contact family or friends for support:

Family and friends are very important for help and support with food and shopping. Let your family and friends know if you need support.

What's your sick day plan?

5.0 Travelling with Diabetes

Whether your journey is long or short, travelling with diabetes can have its challenges.

Planning ahead is the key to make sure things go smoothly.



General advice:

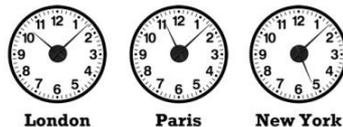
- Carry enough medication and blood glucose testing supplies.
- Travel with your insulin in an insulated bag or in a **FRIO®** cool wallet. **FRIO®** wallets can keep your insulin cold for a minimum of 45 hours. If not using a **FRIO®** wallet store any insulin you are not using in a fridge but remember to take it with you when you leave your accommodation.
- Carry a list of your current medications and health conditions in case you need to see a doctor or need more medication. If you leave any medication at home, a prescription can be sent by your GP to the nearest pharmacy.



Additionally, if going overseas...



- Carry a letter from your healthcare team, including a list of your current medication and health conditions. This should explain that you need to carry your medications blood glucose meters and hypo treatment with you. This may include a 'sick day' plan
- Talk to your doctor or diabetes nurse specialist about adjusting insulin and medication across different time zones.



- When flying, keep all your insulin with you in your hand luggage. Don't allow insulin, test strips or meters to travel in your suitcase as it can be damaged with temperature changes at altitude.
- Walk up and down the aisle regularly, and do foot and leg exercises while you are in your seat. Avoid crossing your legs, as this might block your circulation.
- Wear comfortable clothing that will allow access for injections/insulin pumps and wear comfortable shoes.



- Wait till your meal is served to take your diabetes medication or insulin.
- Carry your hypo treatment and follow up snacks with you in case of a low blood glucose (hypoglycaemia)
- Let the people you are travelling with know how to treat hypos; if travelling alone, tell the flight staff if you are concerned.
- Test more frequently and make adjustments with rapid acting insulin as advised by your doctor or diabetes nurse specialist.
- Keep hydrated. Drink plenty of fluids such as water and avoid alcohol.



- While away, your blood glucose levels may change if you are more or less active, or you're eating different foods. Test more frequently and adjust your insulin as needed.
- Have any vaccinations well before you go overseas, so that you are protected before travelling.
- Get medical insurance.

Travel Checklist

	Medications: Pack enough insulin and tablets for your trip, plus extra medication in case you lose it or if there is a delay
	Letter for customs & medical providers
	Blood glucose meter and supplies
	Spare test strips, meter batteries and lancet needles
	Ketone meter (if you use one)
	Medical kit: plasters, dressings, hand gel
	Medical insurance details/emergency contact details
	Medic Alert bracelet (<i>optional</i>)
	Hypo kit: Include Glucagon injections if prescribed for you

Adapted from Eli Lilly resource and information from DNZ website

6.0 Disposal of Sharps

1. Insulin pen needles
2. Insulin syringes
3. Finger pricker lancets



All sharps can create an unacceptable hazard to rubbish collection workers, landfill operators & others. When full, return to your pharmacist, they will replace this for you and dispose of it correctly and safely.

Dispose of your sharps safely

Throughout the **WBOP Community Pharmacies** can provide **FREE** sharps containers, and replace them when full. Pharmacies cannot take sharps containers from other sources (e.g from Pathlab or plastic bottles). A smaller container can also be purchased for \$5.00 from the following address:

<https://diabetesauckland.org.nz/shop/sharps-container-1/>

Pathlab/Medlab Services (BOP) provide sharps 1.4L containers (\$10), 7.6 L (\$20). Full containers can be returned to Pathlab for disposal and new ones can be purchased.

7.0 Storage and Handling

- Store your insulin in the refrigerator (between 2°C - 8°C), away from the freezer or freezing coils. You can keep insulin you are using out of the refrigerator for up to one month if kept below 25°C. This avoids stinging when injecting cold insulin and makes resuspension of cloudy insulin easier.
- Do not expose your insulin to excessive heat or sunlight; keep in packaging when not in use.
- Do not freeze your insulin. Insulin that has been frozen must not be used.
- Prior to use, your cloudy insulin vials should be re-suspended by gently rolling the vial between the palms of the hands/ moving the insulin up and down 10 times to make sure the insulin is well mixed. **Always refer to the instructions provided with the insulin and injection device.**



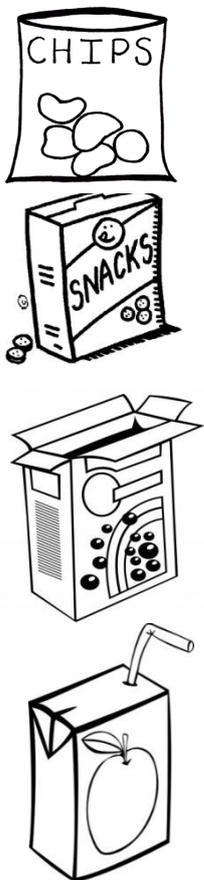
8.0 What Foods are Carbohydrates?



Less sweet more **WATER**



LESS LABELS MORE **REAL FOOD**



MY

Plate





Ways to Flavour Food

Without adding salt

Why reduce our salt intake?

Salt is made up of sodium and chloride. It is the sodium part which keeps our body fluids in balance. We need the right amount of sodium and fluids to carry nutrients around the body and take waste materials out. Too much sodium leads to more fluid being retained. This can increase our blood pressure. High blood pressure (hypertension) is a big risk factor for heart disease.

Around 75% of the sodium in our diets comes from processed, pre-packaged foods. The fewer highly processed foods you eat, the less salt you are likely to consume.



Did you know our taste buds adjust over time; our taste buds can become more sensitive to less salt.

How can I flavour my food?

Try these handy tips:

- Add salt either while cooking or at the table, not both
- Try using herbs such as coriander, basil, parsley, chives, thyme and spices to flavour your food
- Lemon juice, vinegar and toasted sesame seeds add a new dimension to your meals
- Instead of using a salt shaker, have a little container on the table and use your fingers to put salt on just the foods that you want



Make sure you are including lots of coloured fruits and vegetables in your diet

Healthy snack options

Swap this



For this



Before	Healthy transformations to add more colour
Flavoured yoghurt	Plain unsweetened yoghurt with cinnamon OR some fruit e.g. berries OR curry powder and use as a dressing for meat balls or roast pumpkin and chickpea salad
Porridge/Oats	Handful of oats with pumpkin seeds, mix of raw nuts and cinnamon OR ground linseed, a handful or oats with berries (frozen or fresh) cooked in the same way as porridge
Mashed potato	Carrot and potato mash, pumpkin and carrot mash, cauliflower and herb mash
Quiche	Frittata with lots of coloured vegetables
Roast potatoes	Roast zucchini, carrot, beetroot, onions (red and brown), tomato, yams, asparagus, capsicum and a some potatoes/kumara
Potato chips	Dry roasted nuts or kale chips, beetroot leaf chips, zucchini chips, celeriac chips (rub with a small amount of oil and bake in oven at 180° for 5-10 minutes)
Bought sushi	Use less rice and more vegetables OR seaweed (nori) filled with finely sliced carrot, cucumber and fish/meat OR grated cauliflower 'rice' sushi salad with salmon, ripped seaweed, avocado and carrot
Sandwich	Use sandwich or thinly sliced grainy bread OR have an open sandwich with bread as the base and fillings piled high OR a solid vegetable salad OR soup in the colder months OR cook some whisked eggs in a large fry pan and use as a 'wrap' with vege and meat fillings
Pasta/rice/noodles	Substitute/combine with legumes/beans OR vegetable pasta (zucchini, carrot), grated cauliflower, use half the amount of noodles with mung bean sprouts



9.0 Diabetes Medication

Medwise Clinical Pharmacist Service
 pharmacist@medwise.co.nz Ph: 218 6337

Medication Name	Other Names	Purpose for Medication	Special Instructions & possible side effects
Metformin tablets	<i>Arrow-Metformin</i> <i>Apo-Metformin</i> <i>Metchek</i>	Metformin increases your body's response to insulin. It lowers your blood glucose level mainly by decreasing the amount of glucose that your liver releases into the bloodstream.	Take with or just after a meal to help reduce possible side effects. When metformin is first started, some people feel sick or have mild diarrhoea. This is less likely to happen if you start with a low dose and gradually build up to the usual dose over a few weeks. If these side-effects do occur, they tend to ease off in time.
Gliclazide tablets	<i>Diamicron</i> <i>Apo-Gliclazide</i>	These medications are called sulfonylureas and work by increasing the amount of insulin your pancreas makes. This helps to lower your blood glucose level.	Take with a main meal to ensure safety. Some weight gain is a common side-effect. Hypoglycaemia (low blood glucose) is a possible side effect – if this is happening to you, contact your doctor.
Glipizide tablets	<i>Minidiab</i>		
Glibenclamide tablets	<i>Daonil</i>		
Sitagliptin tablets	<i>Januvia</i>	Gliptins work by increasing the amount of insulin your pancreas makes and decreasing the production of glucose in the body. This helps to lower your blood glucose level.	Take with a meal. Side-effects are uncommon and are usually mild. They may include feeling sick, headache and wind (flatulence).
Saxagliptin tablets	<i>Onglyza</i>		
Vildagliptin tablets	<i>Galvus</i>		
Pioglitazone tablets	<i>Pizacord</i>	Pioglitazone lowers your blood glucose level by increasing the sensitivity of your body's cells to insulin (so more glucose is taken into cells for the same amount of insulin in the bloodstream).	Take with a meal. Some weight gain is a common side-effect.
Dapagliflozin tablets	<i>Forxiga</i>	Dapagliflozin works on your kidneys to increase the amount of glucose that your body removes in urine.	This medicine may make you urinate more frequently—make sure you drink enough water to avoid dehydration

Acarbose Tablets	<i>Glucobay</i>	Acarbose works by slowing down the absorption of carbohydrates (which are broken down into glucose) from the gut. Therefore, it can reduce the peaks of blood glucose which may occur after meals.	Swallow tablets whole with liquid before meals, or chew with first few mouthfuls of food. Many people develop gut-related side-effects when taking acarbose, such as bloating, wind, and diarrhoea.
Rapid Acting Insulin Aspart Lispro Glulisine	<i>Novorapid</i> <i>Humalog</i> <i>Apidra</i>	Rapid acting insulin works very quickly and last for 2-5 hours, it is usually injected just before meals	Insulin lowers your blood glucose levels by helping the cells in your bodies to use the glucose as energy. Insulin cannot be taken by mouth as it is destroyed by the digestive juices in the gut, it needs to be injected under the skin (subcutaneously) – not into a muscle or vein. It is import to learn how to inject your insulin properly. Insulin may come in a vial to be injected with a separate syringe, in a cartridge to be used with an injection device (pen) or in a pre-filled injection device (pen). Keep spare insulin vials/cartridges in the refrigerator (but not the one you are using). Discard 30 days after opening.
Short Acting insulin Neutral Insulin	<i>Actrapid</i> <i>Humulin R</i>	Short acting insulin works quite quickly and lasts for up to 8 hours, it usually injected 15-30mins before a meal	
Intermediate Acting insulin Isophane (cloudy)	<i>Protaphane</i> <i>Humulin</i> <i>NPH</i>	Intermediate acting insulin is taken once or twice a day to provide background insulin or in combination with short-acting/rapid-acting insulin	
Long Acting Insulin Glargine	<i>Lantus</i>	Long acting insulin is usually injected once or twice a day	
Premixed Insulin Biphasic insulin	<i>Penmix 30</i> <i>Humulin</i> <i>30/70</i> <i>Novomix</i> <i>Humalog</i> <i>Mix</i>	Premixed insulin is a mixture of fast and intermediate acting insulins	
Glucagon	<i>GlucaGen®</i> <i>HypoKit</i>	Glucagon is a natural hormone, which has the opposite effect to insulin. It causes glucose to be released into the blood stream. GlucaGen® is an injection used to treat severe hypoglycaemia (<i>extremely low blood glucose levels, or “hypos”</i>) in people using insulin or taking tablets to control their diabetes, <u>who have become unconscious.</u>	If your blood glucose is low, you need glucose immediately. Glucagon is for people who cannot take glucose by mouth, because they are unconscious.

Heart Medication (to help prevent diabetes complications)

Medwise Clinical Pharmacist Service
 pharmacist@medwise.co.nz Ph: 218 6337

Medication Name	Other Names	Purpose for Medication	Special Instructions & possible side effects
<u>Statins</u> Simvastatin Atorvastatin Pravastatin Rosuvastatin	<i>SimvaRex, Lipex or Arrow Simva Zarator or Lipitor Cholvastin/Prava chol Crestor</i>	Reduce cholesterol & risk of heart attack/stroke.	Simvastatin & pravastatin work best if taken in evening. Do not eat grapefruit or drink grapefruit juice (simvastatin & atorvastatin). <i>Stomach upset (constipation/wind) & headache may occur. Contact your doctor if muscle pains or weakness occur.</i>
<u>ACE inhibitors</u> Enalapril Cilazapril Quinapril	<i>m-enalapril Inhibace/Zapril Accupril</i>	Cause blood vessels to relax and reduces blood pressure. Help to manage blood pressure (BP) and protect kidney function, especially for people with diabetes.	Possible side effects are <i>dizziness or light-headedness especially if you sit up or stand up to quickly, cough, taste changes, diarrhoea. Contact your doctor if rash occurs.</i>
<u>ANGIOTENSIN II Blockers</u> Candesartan Losartan	<i>Atacand/Candestar Lostaar</i>		Candesartan and losartan are less likely to cause cough.
<u>Calcium Channel Blockers</u> Amlodipine Felodipine	<i>Apo-Amlodipine Plendil or Felo</i>	Helps to manage blood pressure (BP) by relaxing and opening up blood vessels.	Swallow whole with a glass of fluid. Take after food if stomach upset occurs, but always take at the same time with respect to meals. <i>Stomach upset, dizziness, headache, dry mouth and swollen ankles may sometimes occur.</i>
<u>Diuretics</u> Bendroflumethiazide Hydrochlorothiazide Chlorthalidone		Helps to manage blood pressure by removing excess water from the body.	
Aspirin 100mg	<i>Cartia or Ethics aspirin</i>	Reduces the 'stickiness' of blood platelets to reduce the likelihood of a clot forming. This reduces the risk of heart attack or stroke.	Swallow whole after food. <i>For some people, the risks of bleeding outweigh the benefits of low dose aspirin, so do not buy and take this if not prescribed for you by your doctor.</i>

Statins & blood pressure lowering medications are used to reduce cardiovascular risk (*reduce the likelihood of a stroke or heart attack*). Diabetes increases cardiovascular risk. Studies have shown better diabetes outcomes (less problems) when people with diabetes have well controlled blood pressure

10.0 Understanding your MEDICATION

The following questions may help to improve your understanding of medicines;

- When and how should I take the medicine
 - With food? At particular times of the day?
- How do I know if a medicine is causing a side effect?
 - What should I do if I get a side effect?
- Do I really need all these medicines?
- How well do my medicines mix?
- How long do I need to use this medicine?
- Are there ways to help me to remember to take my medicines?
- Why are there so many names for medicines?
- Can I safely take other medicines (such as those bought in the supermarket or pharmacy) or supplements or Rongoā?

Your community pharmacist can also help you with any questions about your medication, or you could contact a Medwise Pharmacist (pharmacist@medwise.co.nz) for any specific questions.

11.0 Goal Setting and Action Plan Template

Goals

Long – Term goal: Where do I want to be with my health in the future? Date:

If I have more than one long-term goal, which one do I want to focus on first?

How important is this to me? (Circle number below)

1 2 3 4 5 6 7 8 9 10



Action Plan

Week One: What am I going to do to support my diabetes this week?

How confident do I feel? (Circle number below)

1 2 3 4 5 6 7 8 9 10



Not Confident

Very Confident

Week Two: What am I going to do to support my diabetes this week?

How confident do I feel? (Circle number below)

1 2 3 4 5 6 7 8 9 10



Not Confident

Very Confident

Week Three: What am I going to do to support my diabetes this week?

How confident do I feel? (Circle number below)

1 2 3 4 5 6 7 8 9 10



Week Four: What am I going to do to support my diabetes this week?

How confident do I feel? (Circle number below)

1 2 3 4 5 6 7 8 9 10



12.0 Helpful Websites

The internet can be a very helpful resource it is important that can be helpful to understand our conditions and treatments better. However, as there is a lot of misleading medical information that is not from a credible source you must be careful where you access your information from. The following websites are recommended by our services.

www.diabetes.org.nz

www.nzf.org.nz (for patient medication information sheets)

www.healthnavigator.org.nz

www.patient.co.uk

<http://www.sportbop.co.nz/get-active/>

<http://www.diabeteshelp.org.nz/>

www.diabetesauckland.org.nz

13.0 Helpful Numbers

Diabetes Help Tauranga ph: (07) 571 3422

Health and Wellness Service ph: (07) 571 2100

14.0 Check Us Out On Social Media

Like and follow us on social media for regular tips, news and updates!

Facebook: Health & Wellness Services – Western Bay of Plenty PHO

Instagram: health.wellness.services

Please Note: none of this information should replace medical advice.

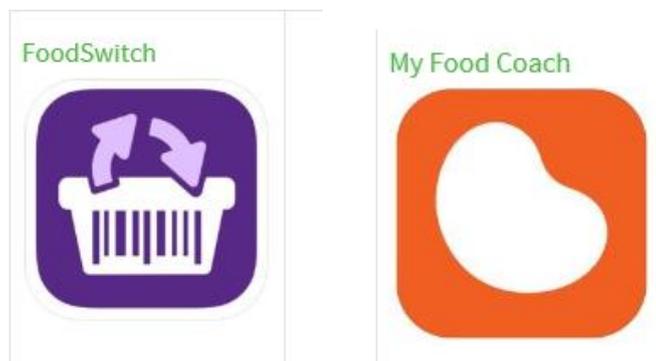
15.0 Apps We Recommend

These have been reviewed by the MOH for more information visit:
<https://www.healthnavigator.org.nz/app-library/>

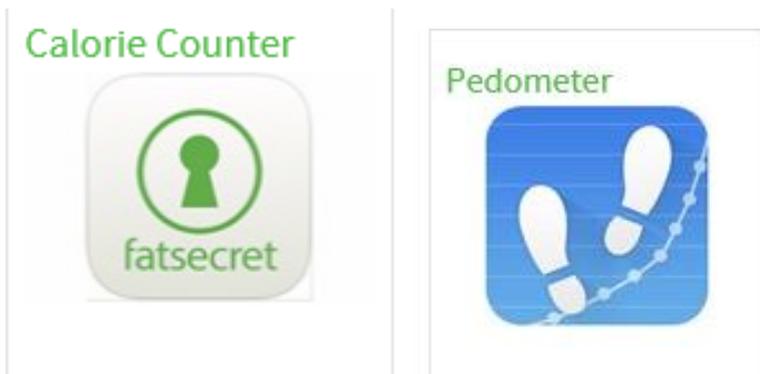
1. Diabetes



2. Nutrition



3. Weight loss



4. Mental Health

