

# Deprescribing for Type 2 Diabetes Mellitus










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*Family and Lifestyle Physician*

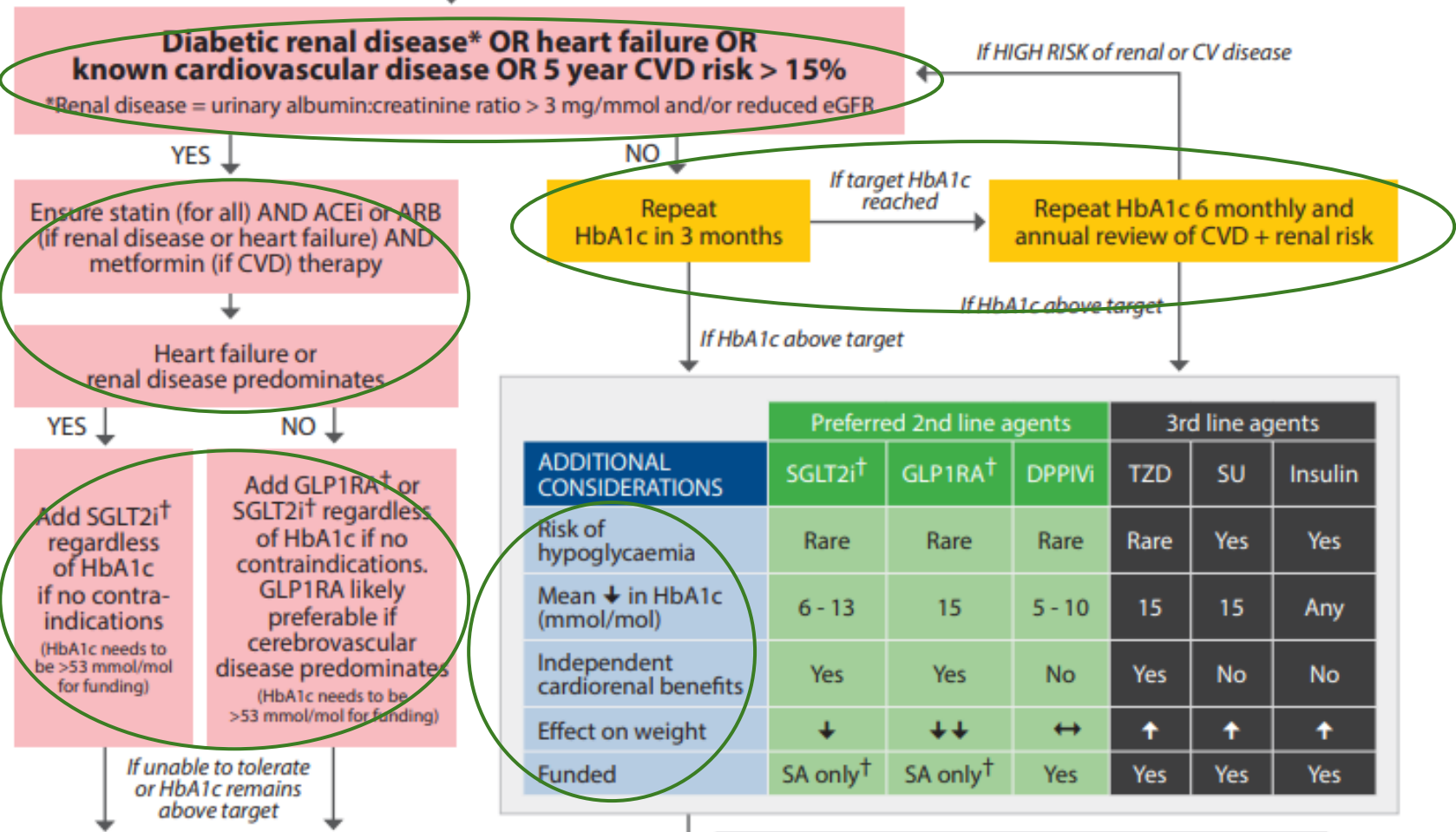


# Developing Type 2 Diabetes

	 Awanui Labs	 Awanui Labs	 Awanui Labs	 Awanui Labs	 Awanui Labs	 Awanui Labs
	 22/07/22 08:18	25/08/22 10:21	08/12/22 09:04	16/08/23 09:27	29/11/23 07:23	29/05/24 15:30
HbA1c	<b>49</b>	<b>53</b>	<b>59</b>	<b>66</b>	<b>67</b>	<b>81</b>
Comment						
Glycated Haemoglobin						

**MANAGEMENT ALGO**

Expiry date: 30 June 2024



Ensure statin (for all) AND ACEi or ARB (if renal disease or heart failure) AND metformin (if CVD) therapy

Heart failure or renal disease predominates

**YES** ↓ Add SGLT2i† regardless of HbA1c if no contraindications (HbA1c needs to be >53 mmol/mol for funding)

**NO** ↓ Add GLP1RA† or SGLT2i† regardless of HbA1c if no contraindications. GLP1RA likely preferable if cerebrovascular disease predominates. (HbA1c needs to be >53 mmol/mol for funding)

ADDITIONAL CONSIDERATIONS	Preferred 2nd line agents			3rd line agents		
	SGLT2i†	GLP1RA†	DPPiVi	TZD	SU	Insulin
Risk of hypoglycaemia	Rare	Rare	Rare	Rare	Yes	Yes
Mean ↓ in HbA1c (mmol/mol)	6 - 13	15	5 - 10	15	15	Any
Independent cardiorenal benefits	Yes	Yes	No	Yes	No	No
Effect on weight	↓	↓↓	↔	↑	↑	↑
Funded	SA only†	SA only†	Yes	Yes	Yes	Yes

SGLT2i = SGLT2 inhibitors e.g. empagliflozin  
 GLP1RA = GLP1 receptor agonists e.g. dulaglutide, liraglutide  
 DPPiVi = DPPiV inhibitors e.g. vildagliptin  
 TZD = Thiazolidinediones e.g. pioglitazone  
 SU = Sulfonylureas e.g. glipizide, gliclazide

†SA criteria for SGLT2i and GLP1RA (all required and same for both classes)

• Patient has type 2 diabetes with an HbA1c

# MANAGEMENT ALGORITHM FOR TYPE 2 DIABETES

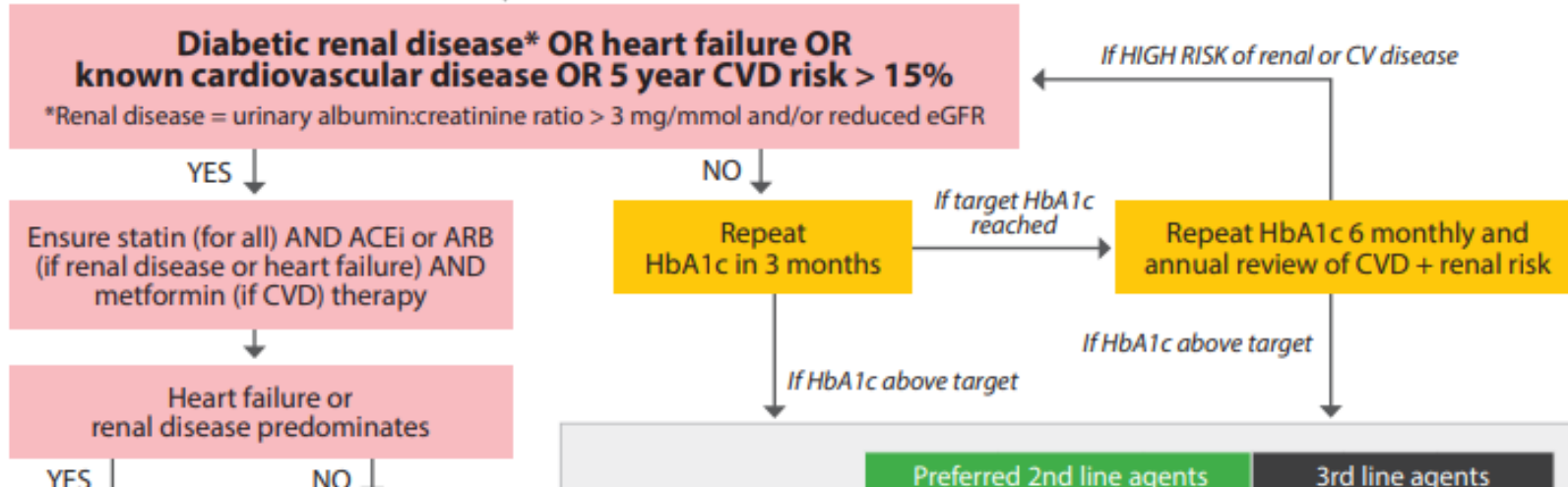


## INITIAL MANAGEMENT









Diagnosis	Lifestyle management	Metformin
Confirm the diagnosis and type of diabetes Determine individualised glycaemic target	Education, support, healthy eating + exercise Essential at all times throughout duration of diabetes	Start unless contraindicated Increase to maximal tolerated dose or 2 g per day
Weight management		
<ul style="list-style-type: none"> <li>Set individualised weight management plan if overweight or obese</li> <li>5% sustained total body weight loss is associated with improvement in metabolic parameters</li> <li>10–15% sustained total body weight loss is typically needed for remission of diabetes</li> </ul>		

The target HbA1c for most patients with type 2 diabetes is < 53 mmol/mol

- If HbA1c > 64 mmol/mol at diagnosis consider starting additional agent with **lifestyle management and Metformin** to reach target
  - If cardiovascular and/or renal disease and/or heart failure → preferably SGLT2i or GLP1RA (see below)
  - If no cardiovascular or renal disease and no heart failure → preferably DPP4i
- Consider starting insulin therapy immediately if:
  - Symptoms of hyperglycaemia/insulin deficiency and/or HbA1c > 90 mmol/mol
  - Suspicion of type 1 diabetes or loss of pancreatic function



# Reversing Type 2 Diabetes

	 Awanui Labs	 Awanui Labs	 Awanui Labs	 Awanui Labs	
	◀	<u>20/03/23</u> <u>13:30</u>	06/04/23 07:46	27/06/23 07:47	03/10/23 07:50
HbA1c		<b>99</b>	<b>97</b>	<b>60</b>	<b>58</b>
Comment					
Glycated Haemoglobin					

# MANAGEMENT ALGORITHM FOR TYPE 2 DIABETES

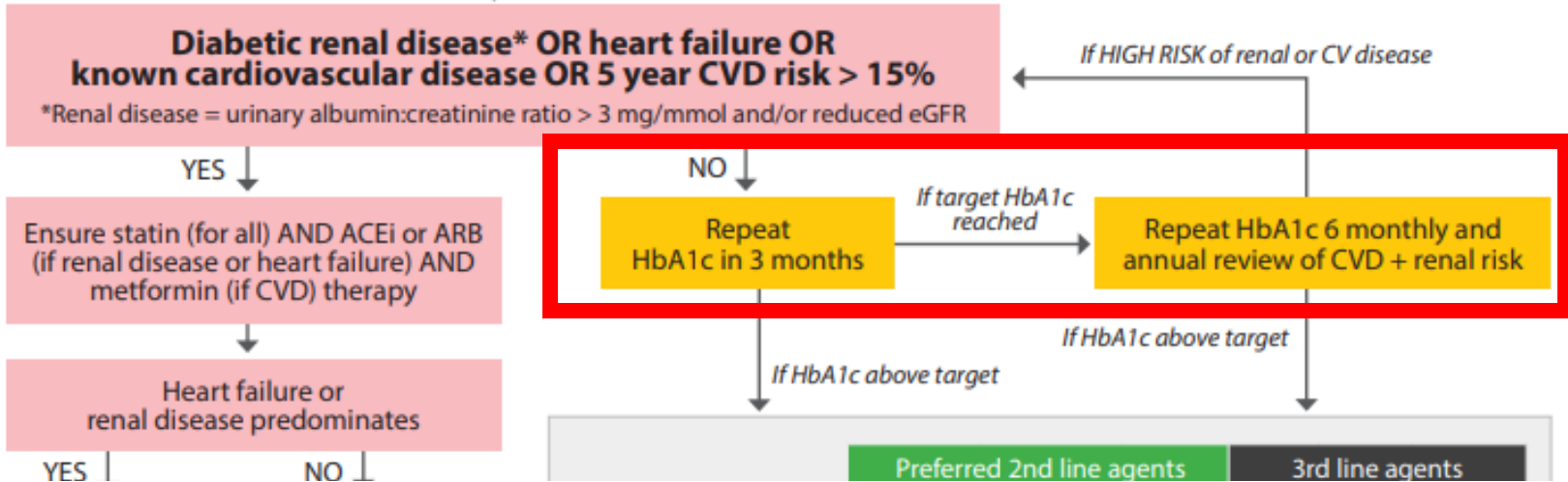


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**MANAGEMENT ALGO**

Expiry date: 30 June 2024

**Diabetic renal disease\* OR heart failure OR known cardiovascular disease OR 5 year CVD risk > 15%**  
 \*Renal disease = urinary albumin:creatinine ratio > 3 mg/mmol and/or reduced eGFR

YES ↓  
 Ensure statin (for all) AND ACEi or ARB (if renal disease or heart failure) AND metformin (if CVD) therapy

Heart failure or renal disease predominates

YES ↑  
 Add SGLT2i<sup>†</sup> regardless of HbA1c if no contraindications (HbA1c needs to be >53 mmol/mol for funding)

NO ↑  
 Add GLP1RA<sup>†</sup> or SGLT2i<sup>†</sup> regardless of HbA1c if no contraindications. GLP1RA likely preferable if cerebrovascular disease predominates (HbA1c needs to be >53 mmol/mol for funding)

↑ If unable to tolerate or HbA1c remains above target

GLP1RA<sup>†</sup> preferred next therapy after SGLT2i<sup>†</sup>  
 SGLT2i<sup>†</sup> preferred next therapy after GLP1RA<sup>†</sup> (dual SGLT2i/GLP1RA therapy is not currently funded)

Alternative agents include:  
 DPPiVi if not on GLP1RA  
 Thiazolidinediones if no heart failure  
 Sulfonylureas  
 Insulin

NO ↓  
 Repeat HbA1c in 3 months

↑ If target HbA1c reached

Repeat HbA1c 6 monthly and annual review of CVD + renal risk

↓ If HbA1c above target

↑ If HbA1c above target

	Preferred 2nd line agents			3rd line agents		
ADDITIONAL CONSIDERATIONS	SGLT2i <sup>†</sup>	GLP1RA <sup>†</sup>	DPPiVi	TZD	SU	Insulin
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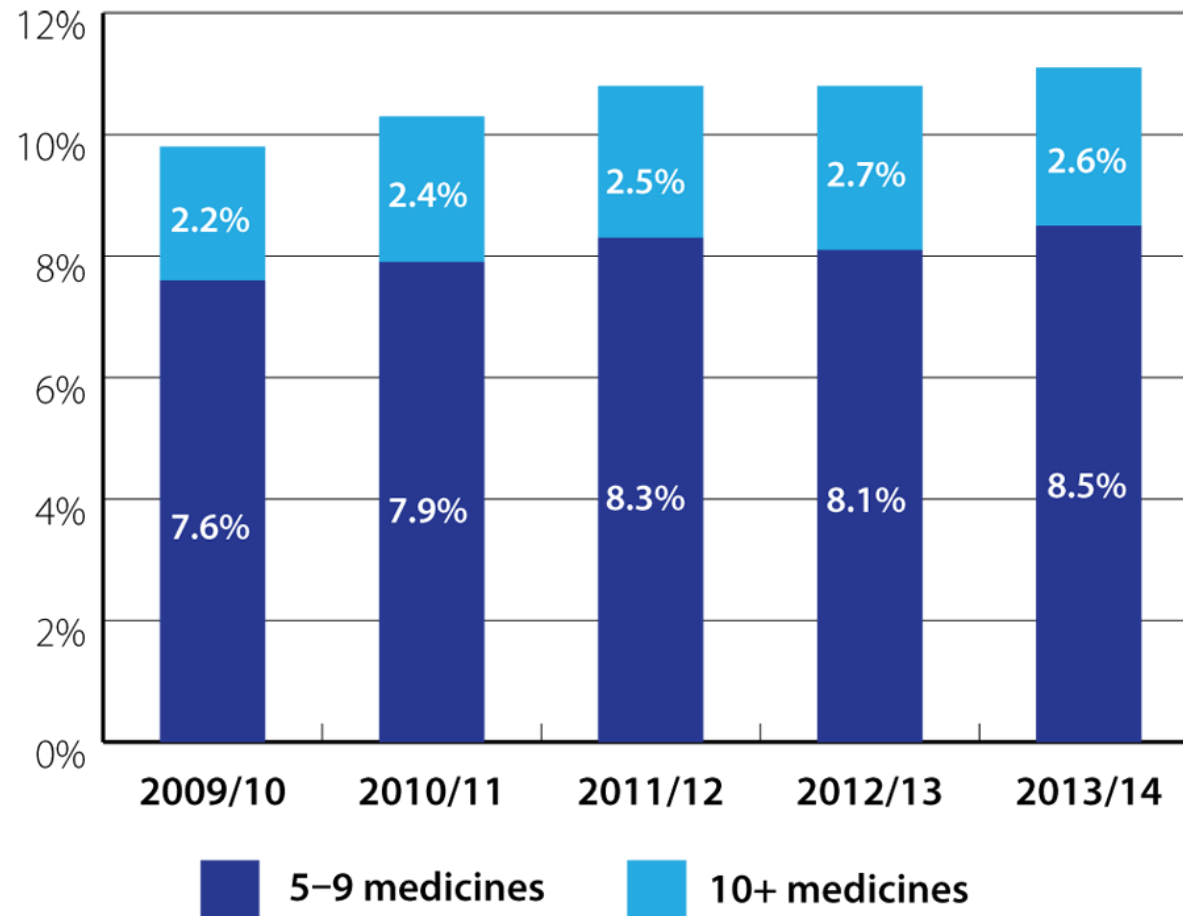
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# Polypharmacy

- 5 or more medications
- Therapeutic
- Problematic



Proportion of the New Zealand population who were continuously prescribed ( i.e. three or more dispensing of a medicine in a year) five to nine medicines, or ten or more medicines from 2009 – 2014<sup>4</sup>



# Deprescribing

Planned and supervised process of dose reduction or stopping of medication that might be causing harm, or no longer be of benefit.

Part of good prescribing – backing off when doses are too high, or stopping medications that are no longer needed.

# In New Zealand

**Polypharmacy and deprescribing | Ngā rongoā maha me te whakakore tūtohu (Frailty care guides 2023)**

<https://www.hqsc.govt.nz/resources/resource-library/polypharmacy-and-deprescribing-nga-rongoa-maha-me-te-whakakore-tutohu-frailty-care-guides-2023/>

Why is this important?

*Or that our patients no longer  
require medications to reduce  $\downarrow$   
goal health risks  $\uparrow$  range*

# How to de-prescribe?

- Assessment
- Medication safety profile
- Rationalising treatment regiment
- Dose tapering and monitoring
- Collaborative Care

# Assessment

**PEER** Simplified Cardiovascular Decision Aid FAQ Languages: English (EN) ▾

### 1. Estimate your risk

Where do you live?

How old are you?  50 years

What is your sex?  Male  Female

What is your ethnicity?

What is your deprivation quintile?

For detailed information, see [page two of the NZDep2013 brief flyer \(PDF\)](#) or [visit the website](#).

Do you have a family history of heart disease or stroke?  No  Yes

Do you currently smoke?  Never  No, but I did before  Yes

Do you have diabetes?  No  Yes

Do you have atrial fibrillation?  No  Yes

What is your systolic blood pressure?  130 mmHg

Do you take medications for blood pressure?  No  Yes

### 5-year risk of cardiovascular disease

(heart attack or stroke (fatal or non-fatal), heart failure, angina, transient ischemic attack, or peripheral vascular disease)

**Your risk 2% With treatment 2%**

No Event  Treatment Benefit  Event

### 2. Choose your treatments

**lifestyle options**

- Mediterranean diet
- Physical activity

**Medication options (only select one)**  
These options have clear and direct evidence for primary prevention

- Statin (low to moderate dose)
- Statin (high dose)
- Single blood pressure medication (thiazide, ACEI/ARB, or CCB)

**Non-statin options not recommended for primary prevention in our guideline**

- Ezetimibe
- PCSK9 inhibitor
- Fibrates

[Print](#)  
[EMR Note/Share Link](#)

**PEER Simplified Lipid Guidelines**  
**Patient Handout**

→ Patient's baseline health

→ Patient's health risks

→ Patient's Lifestyle

# Medication safety profile



- Current medication list
- Health goals
- Rationalising treatment regiment

# Dose tapering and monitoring

- Medication factor:
  - half-life
  - Pharmacokinetics
  - Side effects
  - Drug interactions
- Patient factor:
  - Health risk factors
  - Baseline health
  - Lifestyle factor



# Blood glucose monitoring



## Food and Blood Glucose Level Record Sheets

Test your blood glucose level (BGL) before each meal, 2 hours after each meal and before bed. Record the readings in the BGL columns on the table and list everything you eat and drink, including the amount of each food/drink on four days prior to attending your appointment.

Finally, record any physical activity for the day - write this below the table each day.

Day One date \_\_\_\_\_

BGL before meal	Meal - Write down everything you eat and drink, including the approximate amounts.	BGL 2 hours after meal
	Breakfast -	
	Morning tea -	
	Lunch -	

Does the patient take insulin?

YES

NO

What is the current insulin regime followed?

Go to page 3

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# Collaborative care



# Other resources

- NZ formulary (NZF)
- Deprescribing.org
- Australian Deprescribing Network
- Screening Tool of Older Persons' Prescriptions (STOPP) v.3
- NPS Medicinewise
- Choosing Wisely
- Medication side effect diary



# 5 QUESTIONS TO ASK ABOUT YOUR MEDICATIONS

when you see your doctor, nurse, or pharmacist.

## 1. CHANGES?

Have any medications been added, stopped or changed, and why?

## 2. CONTINUE?

What medications do I need to keep taking, and why?

## 3. PROPER USE?

How do I take my medications, and for how long?

## 4. MONITOR?

How will I know if my medication is working, and what side effects do I watch for?

## 5. FOLLOW-UP?

Do I need any tests and when do I book my next visit?



Keep your medication record up to date.

### Remember to include:

- ✓ drug allergies
- ✓ vitamins and minerals
- ✓ herbal/natural products
- ✓ all medications including non-prescription products

Ask your doctor, nurse or pharmacist to review all your medications to see if any can be stopped or reduced.

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Visit [www.hqsc.govt.nz](http://www.hqsc.govt.nz) for more information

## PLANNING FOR A CHANGE: WHEN MY MEDICINES MAY BE CAUSING SIDE EFFECTS

You and your doctor have decided to change a medicine that may be causing certain side effects like forgetfulness or feeling unsteady. These are sometimes called anticholinergic (*an-tee-koh-li-nur-jik*) side effects.

## Anticholinergic side effects diary



**MedicineWise**  
**Keep track of your medicines**

Available on the **App Store** | GET IT ON **Google Play**



### Make a plan with your doctor and pharmacist



- ▶ With your doctor, work out clear steps for changing your medicine.
- ▶ Most of the time, your medicine dose will be reduced slowly. This can take several weeks or even months.
- ▶ Your pharmacist can help to set up the correct dose to take each day or week.

### Check how you are feeling



- ▶ You may need to see your doctor more often while you make changes. This is to see how you are going and talk about any new problems you may be having.
- ▶ Between visits, write down how you feel. Do you have any new symptoms? How are you coping with your other health conditions? Take this list to your next doctor's appointment so you can talk about what is going on.

### Find other ways to manage your health


# References and resources:

- <https://nzf.org.nz/>
- <https://www.nps.org.au/medicine-finder>
- [https://static-content.springer.com/esm/art%3A10.1007%2Fs41999-023-00777-y/MediaObjects/41999\\_2023\\_777\\_MOESM1\\_ESM.pdf](https://static-content.springer.com/esm/art%3A10.1007%2Fs41999-023-00777-y/MediaObjects/41999_2023_777_MOESM1_ESM.pdf)
- <https://deprescribing.org/resources/deprescribing-guidelines-algorithms/>
- <https://lowcarbfreshwell.com/documents/10/Deprescribing-Freshwell-Flow-Chart-v11.pdf>
- <https://www.australiandeprescribingnetwork.com.au/940-2/>
- <https://www.hqsc.govt.nz/resources/choosing-wisely/recommendations-and-resources/choosing-wisely-new-zealand-resources/>
- <https://idmhconnect.health/sites/default/files/media-document/Medication-side-effects-diary-Easy-Read.pdf>

# Thank you

