THE UNIVERSITY OF WESTERN AUSTRALIA

WESTERN AUSTRALIAN CENTRE FOR HEALTH AGEING

DRUGS USED IN DIABETES

Deprescribing in older people: A clinical practice guideline

dRx™

DRUGS USED IN DIABETES

Alpha-glucosidase inhibitors:
Acarbose

Biguanide:
Metformin*

Dipeptidyl peptidase 4 (DPP-4) inhibitors:
Alogliptin, linagliptin*, saxagliptin, sitagliptin*, vildagliptin

Glucagon-like peptide-1 (GLP-1) analogues:
Dulaglutide, liraglutide, semaglutide*

Sodium-glucose co-transporter 2 (SGLT2) inhibitors:
Dapagliflozin*, empagliflozin*

Sulfonylureas:
Glibenclamide, gliclazide*, glimepiride, glipizide

Thiazolidinediones:
Pioglitazone

Insulins*

Combinations of oral blood glucose-lowering drugs:

- Saxagliptin with dapagliflozin
- Empagliflozin with linagliptin
- Metformin with sitagliptin*/ empagliflozin*/ alogliptin/ dapagliflozin/ linagliptin/ glibenclamide/ saxagliptin/ vildagliptin

*Common Pharmaceutical Benefits Scheme medicines

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Type	Recommendation
	WHEN TO DEPRESCRIBE
GPS	HbA1c targets should be individualised based on individual factors and preferences, aiming to avoid hypoglycaemia (ungraded good practice statement). In general, we support the suggested HbA1c targets: • < 7.0 - 7.5% (53-58 mmol/mol) for robust older people (two or fewer coexisting chronic conditions and intact cognitive and functional status); • < 8.0% (64 mmol/mol) for older people with complex/intermediate health status (three or more coexisting chronic conditions requiring medicines/lifestyle interventions, two or more instrumental activities of daily living impairments, or mild-to-moderate cognitive impairment); and • Avoid specifying strict HbA1c targets in older people with moderate-to-severe cognitive impairment, two or more impairments in activities of daily living, chronic illnesses with significant symptoms/impairment of functional status, or limited life expectancy (ungraded good practice statement). Medicines such as GLP-1 analogues, SGLT2 inhibitors, DPP-4 inhibitors and metformin can generally be used with minimal risks of hypoglycaemia, irrespective of the HbA1c (ungraded good practice statement).
CBR	For older people using diabetes medicines to manage glycaemic control in **type 2 diabetes mellitus (T2DM)**, we suggest offering deprescribing: 1. If the two most recent consecutive HbA1c levels are below the individualised target, prioritising deprescribing insulin therapy, then sulfonylureas next (given the higher risk of hypoglycaemia); or 2. In the presence of side effects impacting quality of life (e.g. infections attributed to SGLT2 inhibitors or other agents, gastrointestinal adverse effects, and weight loss attributed to metformin) where the benefit of discontinuation outweighs the risk.
CBR	In older people taking SGLT2 inhibitors or GLP-1 analogues for indications other than their glycaemic control benefits (e.g. **cardiovascular and/or renal risk reduction**), we suggest deprescribing be offered if these medicines are associated with adverse effects (e.g. potential muscle wasting, which can exacerbate frailty), ensuring the benefit of discontinuation outweighs the risk and other management strategies are in place. If used for non-glycaemic indications as above, these medicines should be continued independent of the HbA1c with other medicines such as insulin and or sulfonylureas decreased and deprescribed if needed.

CBR, consensus-based recommendation; GPS, good practice statement

GPS Deprescribing decisions should be made in collaboration with the individual and their diabetes care team, including specialist providers (ungraded good practice statement).

ONGOING TREATMENT

CBR We suggest continuing diabetes medicines used for **glycaemic management** in older people where the benefits generally outweigh the risks, including those who:

- Have type 1 diabetes, other forms of diabetes such as latent autoimmune diabetes (LADA), or diseases of the exocrine pancreas (these should only be adjusted in consultation with the diabetes care team); or
- Experience hyperglycaemic symptoms and are not at an increased risk of hypoglycaemia; or
- Are robust without reduced life expectancy and are not at an increased risk of hypoglycaemia.

HOW TO DEPRESCRIBE

CBR Where appropriate, we suggest discontinuing oral diabetes medicines without the need for tapering with the possibility of restarting the medicine if needed, provided this approach aligns with the individual's goals and preferences, following informed consent. These should only be adjusted in consultation with the diabetes care team.

Seek expert advice for the tapering of injectable diabetes medicines.

CBR For people on combination therapy of diabetes medicines, we suggest:

- Deprescribing one at a time;
- Prioritising medicines most likely to cause hypoglycaemia; and
- Considerations be given to the impact of diabetes medicines on weight.

These should only be adjusted in consultation with the diabetes care team.

An example of this would be prioritising short-acting insulins and sulfonylureas and last for other agents with additional cardiovascular risk reduction if considered appropriate to deprescribe.

In people taking other medicines that impact blood glucose levels (e.g. centrally acting medicines, beta-blockers, thiazide diuretics, antipsychotics, corticosteroids, quinolones, ACE inhibitors), we suggest close monitoring of blood glucose levels for the first two weeks when deprescribing diabetes medicines.

CBR, consensus-based recommendation; GPS, good practice statement

MONITORING

CBR We suggest monthly monitoring of the overall risk-benefit profile and lifestyle changes for at least three months, then every six months thereafter. However, this should be tailored based on individual factors such as their preferences, responses, and tolerance to deprescribing.

We suggest careful monitoring for signs and symptoms of hypoglycaemia and hyperglycaemia, as the presentation can often be different in older people and easily missed in older people.

CBR **Self-monitoring of blood glucose**
For people who are already self-monitoring blood glucose, we suggest advising people to self-monitor random and fasting blood glucose levels at least once daily during tapering, and self-monitor for symptoms of hyperglycaemia (e.g. increased nocturia or thirst), as well as reporting to their healthcare provider if symptomatic or if their blood glucose levels become elevated.

HbA1c monitoring
We suggest reviewing HbA1c levels once after approximately three months, and then twice a year for people who are stable and well-managed.

GPS **Continuous glucose monitoring (CGM)**
CGM should be considered and offered to people with diabetes to detect glucose fluctuations throughout the day, noting that CGM is not subsidised by the National Diabetes Services Scheme for individuals who do not have Type 1 diabetes at the time of writing. Where it is safe to do so, de-escalate blood glucose monitoring in line with patient preferences and goals of treatment to reduce the daily burden of disease monitoring (ungraded good practice statement).

GPS Healthcare providers should reinforce the benefits of optimal dietary intake and physical activity (ungraded good practice statement).

CBR, consensus-based recommendation; GPS, good practice statement

Note:

Evidence is drawn from studies involving participants aged ≥ 65 years and over.

Chronological age may not reflect health status. Among Aboriginal and Torres Strait Islander peoples, individuals aged 50 years and over are considered older.

Statements in this guideline are not prescriptive and should be applied using a shared decision-making approach.

Access to healthcare services may vary and can influence healthcare decisions.

Medicine needs may change over time; medicines may be restarted if clinically necessary, based on shared decision-making and informed consent.

For supporting evidence and further information, please visit **deprescribing.com** or scan the QR code:

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