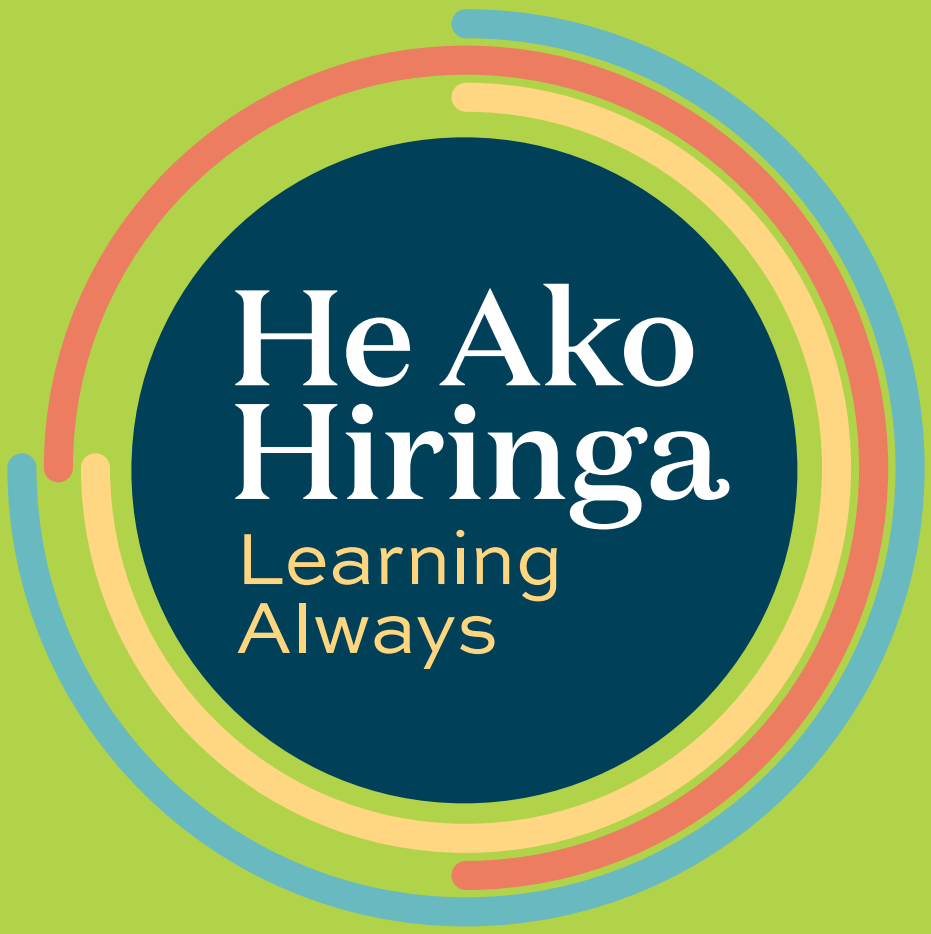
Initiating treatment with dulaglutide in adult patients with type 2 diabetes



Algorithms,
notes and talking points

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When clinically indicated, dulaglutide can be started in adult patients with type 2 diabetes using the steps shown in this resource.

Always maintain metformin treatment if tolerated.

Talking points, relevant for all patients starting dulaglutide, are provided along with two algorithms and accompanying prescribing notes.

Which algorithm you follow will depend on your patient's level of hypoglycaemia risk.

If your adult patient with type 2 diabetes is not using a sulfonylurea or insulin they will have no significant risk of developing hypoglycaemia when starting dulaglutide. For these patients, follow Algorithm 1.

If your adult patient with type 2 diabetes is currently using a sulfonylurea or insulin they will have a risk of developing hypoglycaemia when starting dulaglutide. For these patients, follow Algorithm 2.

Note: This resource is designed for use once a decision has been made to consider treatment with dulaglutide. A similar resource has been developed for initiating empagliflozin. At the time of writing, only one of these agents can be funded on Special Authority for any one patient.

When deciding whether dulaglutide or empagliflozin would be most suitable for your patient, consider that:

- The glucagon-like peptide 1 (GLP-1) receptor agonist dulaglutide is typically the choice for patients in whom cerebrovascular or cardiovascular disease or risk predominates, particularly in the setting of higher HbA1c or motivation to lose weight.
- The sodium–glucose cotransporter-2 (SGLT2) inhibitor empagliflozin is typically the choice for patients in whom heart failure (particularly with reduced ejection fraction) or diabetic kidney disease predominates.

If tolerability with the use of one of these newly funded drugs becomes an issue, the alternative option can be considered for funded use.

For further, comprehensive information, visit the New Zealand Society for the Study of Diabetes (NZSSD) at www.nzssd.org.nz

Patient information can be printed from www.healthnavigator.org.nz/medicines/d/dulaglutide

Talking points – dulaglutide

The following are key talking points for you to cover with patients starting dulaglutide.

Benefits and harms

Expected benefits – in brief, dulaglutide:

- reduces the risk of non-fatal myocardial infarction (heart attack), non-fatal stroke or death from cardiovascular causes by 12% in patients with and without a history of cardiovascular disease[1,2,3]
- reduces death from all causes by 11%[3]
- reduces blood total cholesterol, low-density lipoprotein cholesterol and triglyceride levels[4]
- reduces systolic blood pressure by 2–3mmHg[5,6]
- helps preserve renal function (slows decline in GFR and onset of end-stage kidney disease or renal death) – driven largely by a 24% reduction in macroalbuminuria[7]
- reduces HbA1c by as much as 14mmol/mol[5,8]
- leads to a possible average 1–3kg weight loss[3,5,9]
- may delay the need for insulin in the treatment of type 2 diabetes[4]
- carries a low risk of hypoglycaemia; this is only usually seen when used in combination with a sulfonylurea or insulin.[3,5]

Potential adverse effects – in brief, dulaglutide can cause:

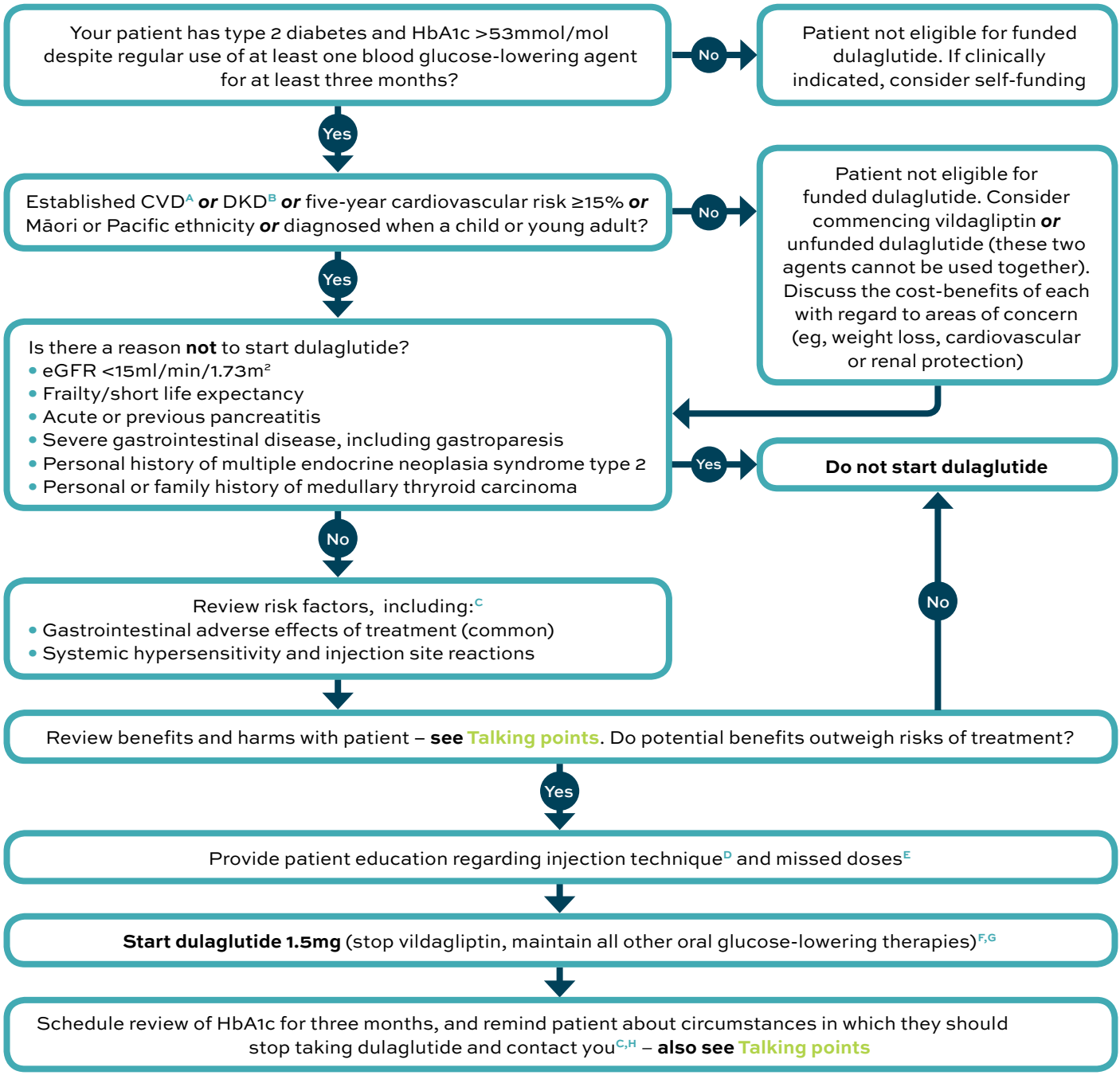
- nausea, abdominal discomfort and reduced appetite in up to 20% of patients – by far the most common side effects, most pronounced after the initial dose but tending to settle over a few weeks[5]
- more severe gastric disturbance, diarrhoea or vomiting, potentially affecting a person's ability to tolerate dulaglutide (suspend dulaglutide in acute/severe gastrointestinal illness, until it resolves); and be alert for persistent, severe abdominal pain with or without vomiting (reports of pancreatitis are rare but its occurrence requires stopping the drug)[5,10]
- injection-site reactions such as redness, soreness and swelling, or transient nodules[10]
- systemic hypersensitivity reactions (eg, urticaria, oedema) in about 1 in 200 patients – there are also rare, documented cases of anaphylaxis.[5]

Points to raise with your patients

- Continue your other medicines unless specifically told to stop by your healthcare provider.
- Don't be surprised if you are asked to change the doses of your other blood glucose-lowering medicines over the next four weeks.
- If using dulaglutide and insulin, avoid using the same injection site and time them separately if you can. Avoid using sites where a nodule may have developed.
- Drink plenty of fluids and stay well-hydrated, particularly in summer and when exercising.
- Do not over-indulge in alcohol.
- Talk with your healthcare provider if you plan to make dramatic dietary changes (eg, a large change in carbohydrates).
- Remember to check your feet and maintain good foot care.
- Contact your practice if you notice any infections or rashes.
- Make sure to tell other healthcare professionals that you are taking dulaglutide.
- **Stop the dulaglutide** if you have severe gastrointestinal illness; persistent, severe stomach pains with or without vomiting; or experience a hypersensitivity reaction causing swelling or fluid accumulation, particularly around the face, lips or tongue – **seek medical advice urgently and contact your own healthcare provider**.

Algorithm 1 – dulaglutide

For type 2 diabetes patients NOT using a sulfonylurea or insulin



Algorithm 1: Additional prescribing notes

A. **Established CVD** (cardiovascular disease) is defined as prior CVD event (ie, angina, myocardial infarction, percutaneous coronary intervention, coronary artery bypass grafting, transient ischaemic attack, ischaemic stroke, peripheral vascular disease), congestive heart failure or familial hypercholesterolaemia.[11]

B. **Established DKD** (diabetic kidney disease) is defined as persistent albuminuria (albumin: creatinine ratio ≥3mg/mmol, in at least two out of three samples over a 3–6 month period) and/or eGFR <60ml/min/1.73m^2 in the presence of diabetes, without alternative cause.[11]

C. **Adverse effects to be alert for**:
- **Gastrointestinal events** are common (mainly nausea, vomiting and diarrhoea) but typically mild or moderate in severity. These adverse effects tend to occur within two to three days of the initial dose, are less severe with subsequent doses and rapidly decline by about week six of treatment.[5]
  - *Monitor for dehydration and deteriorating renal function:* Ensure the patient is aware of the signs of dehydration and how to manage it; this can occur with illness or adverse effects. Monitor renal function in patients with renal impairment reporting severe adverse GI reactions.
  - *Stopping dulaglutide:* The patient should suspend dulaglutide use during an acute GI illness and stop it if they develop gastroparesis or symptoms suggesting pancreatitis.[10]
- **Injection site reactions** such as redness, soreness and swelling, or transient nodules.
- **Systemic hypersensitivity reactions** (eg, urticaria, oedema) can occur – a previous hypersensitivity reaction to a GLP-1 receptor agonist is a contraindication for starting dulaglutide. There are rare, documented cases of anaphylaxis.[5]

D. **Good injection technique** involves choosing appropriate injection sites. Inject dulaglutide subcutaneously into the abdomen or thigh, or a partner/carer may inject it into the upper arm. Change (rotate) the injection site each week – the patient may use the same area of their body providing they choose a different injection site within that area.[12]

E. **If a dose of dulaglutide is missed**, it should be injected as soon as possible if there are at least 72 hours (three days) until the next scheduled dose. If less than three days remain before the next scheduled dose, the missed dose should be skipped and the next dose should be administered on the regularly scheduled day.[5]

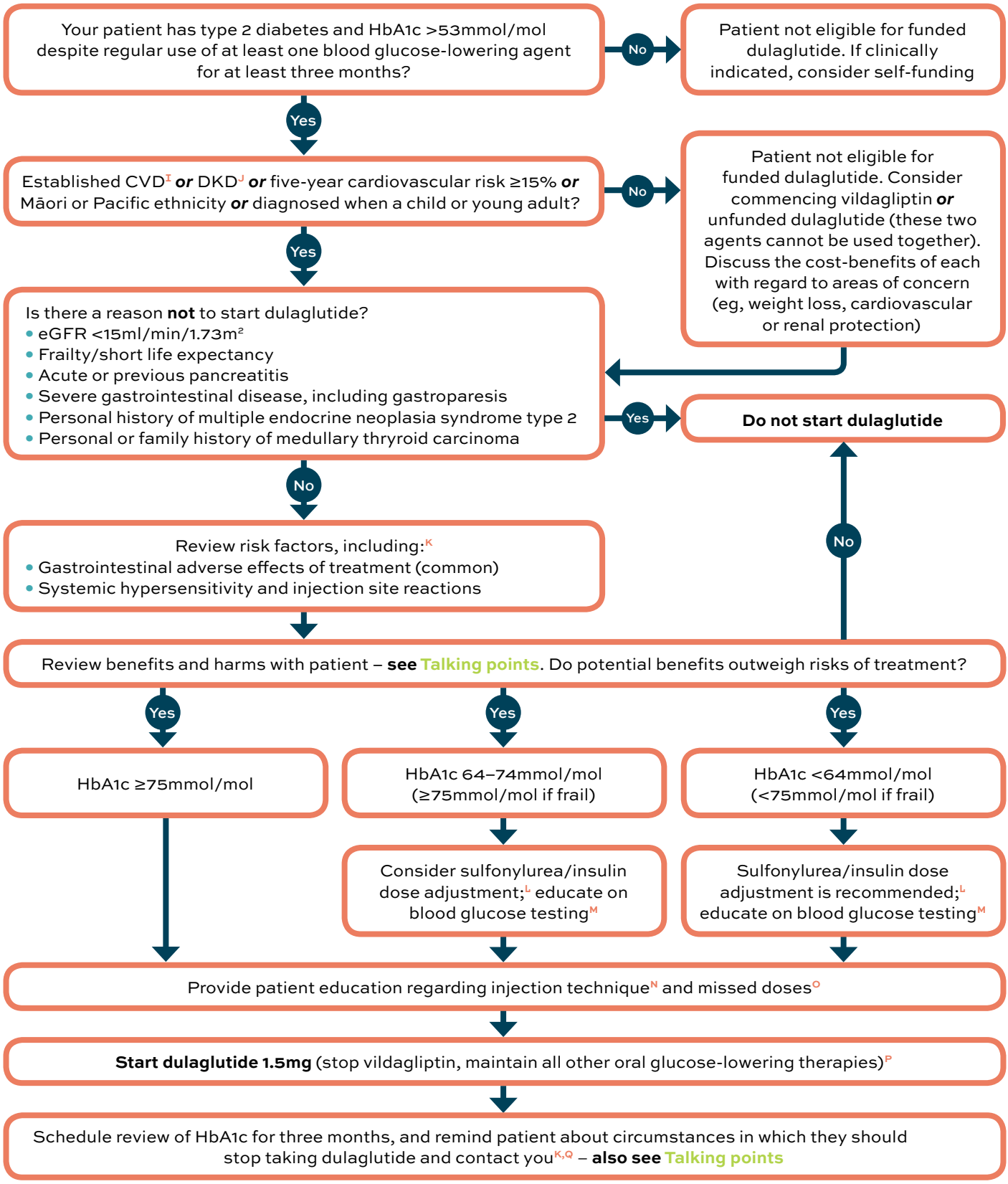
F. **The dose of dulaglutide** is 1.5mg once per week* subcutaneously (delivered with a single-use pen), given at any time of the day and independently of meals. No dosage adjustment is required for the elderly or for hepatic or renal impairment; however, dulaglutide is not recommended for use in patients with eGFR <15ml/min/1.73m^2. Safety and efficacy in individuals who are pregnant or lactating or are younger than 18 years have not been established.
**1.5mg is the only dose available for use in New Zealand.*[11]

G. **The risk of hypoglycaemia is low** when a patient is not on a sulfonylurea or insulin; no dosage adjustment of other medicines is usually required when starting dulaglutide; however, the cessation of vildagliptin is essential.[10]

H. **For sick day management** refer to NZSSD Type 2 Diabetes Management Guidelines: Sick day management in patients with diabetes:[10] tinyurl.com/nzssd-sick-day

Algorithm 2 – dulaglutide

For type 2 diabetes patients using a sulfonylurea or insulin



Algorithm 2: Additional prescribing notes

I. **Established CVD** (cardiovascular disease) is defined as prior CVD event (ie, angina, myocardial infarction, percutaneous coronary intervention, coronary artery bypass grafting, transient ischaemic attack, ischaemic stroke, peripheral vascular disease), congestive heart failure or familial hypercholesterolaemia.[11]

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  - *Monitor for dehydration and deteriorating renal function:* Ensure the patient is aware of the signs of dehydration and how to manage it; this can occur with illness or adverse effects. Monitor renal function in patients with renal impairment reporting severe adverse GI reactions.
  - *Stopping dulaglutide:* The patient should suspend dulaglutide use during an acute GI illness and stop it if they develop gastroparesis or symptoms suggesting pancreatitis.[10]
- **Injection site reactions** such as redness, soreness and swelling, or transient nodules.
- **Systemic hypersensitivity reactions** (eg, urticaria, oedema) can occur – a previous hypersensitivity reaction to a GLP-1 receptor agonist is a contraindication for starting dulaglutide. There are rare, documented cases of anaphylaxis.[5]

L. **Consider dosage adjustment of sulfonylurea and insulin based on patient's HbA1c**
- **HbA1c <64mmol/mol (<75mmol/mol if frail):** 15–20% insulin dose reduction and 50% sulfonylurea dose reduction (or stop sulfonylurea) recommended when starting dulaglutide.[10]
- **HbA1c 64–74mmol/mol (≥75mmol/mol if frail):** consider insulin and sulfonylurea dose adjustments based on variability in glycaemic control (if patient monitors blood glucose) or expected reduction and hypoglycaemia risk.[10]

M. **Blood glucose monitoring** is discussed in detail at tinyurl.com/nzssd-target
In summary, test for:
- Fasting glucose levels when on nocte basal insulin. Check for three days before a dose change.[10]
- Pre and two hours post glucose levels at meals with sulfonylurea or bolus/premixed insulin. Check for three days before a dose change.[10]

N. **Good injection technique** involves choosing appropriate injection sites. Inject dulaglutide subcutaneously into the abdomen or thigh, or a partner/carer may inject it into the upper arm. Change (rotate) the injection site each week – the patient may use the same area of their body providing they choose a different injection site within that area. If also injecting insulin, administer this separately into a different injection site.[10,12]

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**1.5mg is the only dose available for use in New Zealand*[11]

Q. **For sick day management** refer to NZSSD Type 2 Diabetes Management Guidelines: Sick day management in patients with diabetes:[10] tinyurl.com/nzssd-sick-day

Credits

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Intended users: This resource is intended to guide prescribers through the process of starting dulaglutide in adult patients with type 2 diabetes

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