Blood Glucose-lowering Therapies (Type 2 Diabetes)

At diagnosis of type 2 diabetes

Start healthy behaviour interventions (nutritional therapy, weight management, physical activity) +/- metformin

<table>
<thead>
<tr>
<th>A1C &lt;1.5% above target</th>
<th>A1C ≥1.5% above target</th>
<th>Symptomatic hyperglycaemia and/or metabolic decompensation*</th>
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<tbody>
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<td>If not at glycemic target within 3 months, Start immediate metformin</td>
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<td>If not at glycemic target, Consider a second antihyperglycaemic agent</td>
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<td>Initiate insulin +/- metformin</td>
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Add additional antihyperglycaemic agent best suited to the individual based on the following:

**Clinical Considerations**

Avoidance of hypoglycaemia and/or weight gain with adequate glycemic efficacy

**Choice of Agent**

Gastrointestinal effects

Glulose intolerance

Gallstone disease

Contraindicated with personal/family history of hypothyroidism or MEN 2

Requires subcutaneous injection

Add another antihyperglycaemic agent from a different class and/or add/intensify insulin regimen

Make timely adjustments to attain target A1C within 3-6 months

Add additional antihyperglycaemic agent best suited to the individual by prioritizing patient characteristics (Classes listed in alphabetical order)

**Class**

**Effect on CVD outcomes**

**Hypoglycaemia**

**Weight**

**Relative A1C lowering when added to metformin**

**Other therapeutic considerations**

**Cost**

GLP-1 receptor agonists

Liraglutide: Superiornity in people with type 2 diabetes with clinical CVD or moderate/severe renal dysfunction

Neutral

Neutral

GI side-effects

Gallstone disease

Contraindicated with personal/family history of hypothyroidism or MEN 2

Requires subcutaneous injection

$555

SGLT2 inhibitors

Canagliflozin: Superiority in people with type 2 diabetes with clinical CVD

Neutral

Neutral

GI side-effects

Gut infection, dehydration, DKA, HHS

Increased risk of fractures and amputations with canagliflozin

Requires subcutaneous injection

$555

DPP-4 Inhibitors

Neutral (for saxagliptin in heart failure)

Rare

Neutral

Cautions with saxagliptin in heart failure

No dose ceiling; flexible regimen

Requires subcutaneous injection

Insulin

Nateglinide

Neutral

Neutral

Neutral

Rare

Neutral

No dose ceiling, flexible regimen

Requires subcutaneous injection

Thiazolidinediones

Pioglitazone: Cardiovascular controversy

Neutral

Neutral

Neutral

Neutral

Neutral

Neutral

Neutral

No dose ceiling, flexible regimen

Requires subcutaneous injection

$5

Alpha glucosidase inhibitors (acarbose)

Neutral

Neutral

Neutral

Neutral

Neutral

No dose ceiling, flexible regimen

Requires subcutaneous injection

$5

Insulin secretagogue Meglitinide

Neutral

Neutral

Neutral

Neutral

Neutral

No dose ceiling, flexible regimen

Requires subcutaneous injection

$5

Sulfonylurea

Neutral

Neutral

Neutral

Neutral

Neutral

Neutral

Neutral

No dose ceiling, flexible regimen

Requires subcutaneous injection

$5

Weight loss agent (orlistat)

Neutral

Neutral

Neutral

Neutral

Neutral

No dose ceiling, flexible regimen

Requires subcutaneous injection

$5

May include dehydration, DKA, HHS

Used by Eficode data

Insulin may be required at any point for symptomatic hyperglycaemia/metabolic decompensation or if unable to achieve glycemic targets with other antihyperglycaemic agents

Avoid in people with prior lower extremity amputation

See product monographs