

**Type 2 Diabetes Mellitus Adult Treatment Pathway - Medication**

<p><b>At Diagnosis</b></p>	<p>Set individual HBA1c target Aim for &lt;58 mmol/mol</p> <p>Provide encouragement and guidance to attend Diabetes Education and Weight Management Refer to <b>Desmond and/or weight management</b> via SCI-Gateway</p>																													
<p><b>At 3 months</b></p>	<p>If HbA1c target &lt;58 mmol/mol not achieved <b>after 3 months</b></p> <ol style="list-style-type: none"> <li>Add First line agent</li> <li>Revisit Desmond/Weight management</li> </ol>	<table border="1"> <tr> <td colspan="2"><b>First line agent Metformin standard release</b></td> </tr> <tr> <td>Dose</td> <td>Titrate slowly up to max tolerated dose (2g)</td> </tr> <tr> <td>Hypoglycaemia risk</td> <td>Low</td> </tr> <tr> <td>Weight</td> <td>Reduction</td> </tr> <tr> <td>Main Adverse Events</td> <td>Gastrointestinal (Consider MR and/or reduce dose)</td> </tr> <tr> <td>In CKD Stage 3A</td> <td>eGFR &lt; 45 MAX 1g daily; eGFR &lt; 30 STOP</td> </tr> <tr> <td>CV benefit</td> <td>Yes</td> </tr> </table>	<b>First line agent Metformin standard release</b>		Dose	Titrate slowly up to max tolerated dose (2g)	Hypoglycaemia risk	Low	Weight	Reduction	Main Adverse Events	Gastrointestinal (Consider MR and/or reduce dose)	In CKD Stage 3A	eGFR < 45 MAX 1g daily; eGFR < 30 STOP	CV benefit	Yes														
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<p><b>At 6 months</b></p>	<p>If HbA1c target &lt;58 mmol/mol not achieved <b>after 6 months</b></p> <ol style="list-style-type: none"> <li><b>Review</b> adherence and <b>Revisit Desmond/Weight Management</b></li> <li><b>Add one of following Medication</b></li> </ol> <p style="text-align: center;"><b>Guided by patient profile add one of:</b></p> <table border="1" style="width: 100%;"> <tr> <td style="background-color: #e6e6fa; text-align: center;"> <p><b>SGLT2 Inhibitor</b> <i>Canagliflozin, or Empagliflozin</i></p> </td> <td style="background-color: #add8e6; text-align: center;"> <p><b>DPP-4 Inhibitor</b> <i>Alogliptin, Sitagliptin or Linagliptin</i></p> </td> <td style="background-color: #ffff00; text-align: center;"> <p><b>Sulphonylurea</b> <i>Gliclazide</i></p> </td> <td style="background-color: #d8bfd8; text-align: center;"> <p><b>Pioglitazone</b> <i>Thiazolidinedione</i></p> </td> </tr> <tr> <td>Dose</td> <td>Dose</td> <td>Dose</td> <td>Dose</td> </tr> <tr> <td>Hypoglycaemia risk</td> <td>Hypoglycaemia risk</td> <td>Hypoglycaemia risk</td> <td>Hypoglycaemia risk</td> </tr> <tr> <td>Weight</td> <td>Weight</td> <td><b>Weight</b></td> <td><b>Weight</b></td> </tr> <tr> <td>Main Adverse Events</td> <td>Main Adverse Events</td> <td>Main Adverse Events</td> <td>Main Adverse Events</td> </tr> <tr> <td>In CKD Stage 3A</td> <td>In CKD Stage 3A</td> <td>In CKD Stage 3A</td> <td>In CKD Stage 3A</td> </tr> <tr> <td>CV benefit</td> <td>CV benefit</td> <td>In CKD Stage 3A</td> <td>CV benefit</td> </tr> </table>		<p><b>SGLT2 Inhibitor</b> <i>Canagliflozin, or Empagliflozin</i></p>	<p><b>DPP-4 Inhibitor</b> <i>Alogliptin, Sitagliptin or Linagliptin</i></p>	<p><b>Sulphonylurea</b> <i>Gliclazide</i></p>	<p><b>Pioglitazone</b> <i>Thiazolidinedione</i></p>	Dose	Dose	Dose	Dose	Hypoglycaemia risk	Hypoglycaemia risk	Hypoglycaemia risk	Hypoglycaemia risk	Weight	Weight	<b>Weight</b>	<b>Weight</b>	Main Adverse Events	Main Adverse Events	Main Adverse Events	Main Adverse Events	In CKD Stage 3A	In CKD Stage 3A	In CKD Stage 3A	In CKD Stage 3A	CV benefit	CV benefit	In CKD Stage 3A	CV benefit
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<p><b>At 9 months</b></p>	<p>If HbA1c target &lt;58 mmol/mol not achieved <b>after 9 months</b></p> <ol style="list-style-type: none"> <li>Add an additional oral agent(s) from a different class as above</li> <li><b>Continue</b> medication at each stage if either individualised target achieved or if HbA1c falls more than <b>5.5 mmol/mol in 3 months.</b></li> <li><b>Discontinue</b> medication if ineffective or not tolerated</li> <li><b>If BMI &gt;30kg/m<sup>2</sup></b> add ORAL GLP-1 Agonist</li> <li>Refer to secondary care for assessment if <b>BMI &lt;30kg/m<sup>2</sup></b></li> </ol>	<table border="1"> <tr> <td colspan="2" style="background-color: #ffff00;"><b>If BMI &gt;30kg/m<sup>2</sup> ORAL GLP-1 Agonist (Semaglutide) 6 month trial</b></td> </tr> <tr> <td>Dose</td> <td>3mg OD for 4 weeks, 7mg OD for 4 weeks Increase to 14mg OD if req.</td> </tr> <tr> <td>Hypoglycaemia risk</td> <td>Low</td> </tr> <tr> <td>Weight</td> <td>Loss</td> </tr> <tr> <td>Main Adverse Events</td> <td>Gastrointestinal ↓ after a few weeks</td> </tr> <tr> <td>In CKD Stage 3A</td> <td>Dose unchanged.</td> </tr> </table> <ul style="list-style-type: none"> <li>Stop DPP-4 inhibitor</li> <li>Consider ↓ Sulphonylurea</li> <li>Continue Metformin</li> <li>Can continue Pioglitazone</li> <li>Can continue SGLT2 inhibitor</li> </ul>	<b>If BMI &gt;30kg/m<sup>2</sup> ORAL GLP-1 Agonist (Semaglutide) 6 month trial</b>		Dose	3mg OD for 4 weeks, 7mg OD for 4 weeks Increase to 14mg OD if req.	Hypoglycaemia risk	Low	Weight	Loss	Main Adverse Events	Gastrointestinal ↓ after a few weeks	In CKD Stage 3A	Dose unchanged.																
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<p><b>At 12 months</b></p>	<p>If HbA1c target &lt;58 mmol/mol not achieved <b>after 12 months</b></p> <ol style="list-style-type: none"> <li><b>Refer to secondary care</b> for further assessment either injectable GLP-1 or insulin</li> <li><b>Revisit Desmond/Weight Management</b></li> </ol>																													

## Type 2 Diabetes Mellitus Adult Treatment Pathway Education and Weight Management

### Referral Process via SCI-Gateway

Intervention/Programme Type 2 Diabetes Education	Description	Who	Format	Additional Comments
Diabetes UK Type 2 Magazine	Magazine	Newly diagnosed with type 2 diabetes	Paper format with links to website	Provide to all newly diagnosed
<b>DESMOND</b>	Desmond is a structured education programme specifically for people with Type 2 diabetes	Recommended for everyone diagnosed	2 x 3 hour sessions— <b>Face to Face</b> or 3 x 2 hour sessions— <b>Virtual</b> or My Desmond app— <b>Self learning</b>	What format would be preferred? Meet Desmond leaflet Available from local co-ordinator
<b>My Diabetes My Way</b>	Digital platform to access personal bloods and screening results Educational material available	Recommended for everyone diagnosed who can access digital platforms	App and web based	Self sign up online Or Complete SCI-Diabetes sign up with email under demographics
Intervention/Programme Weight Management	Description	Who	Format	Additional Comments
<b>Diabetes UK Type 2 Diabetes Remission</b>	Diabetes UK Type 2 Diabetes Remission Summary of weight management options	Recommended for everyone diagnosed with Type 2 diabetes	Paper format with links to website	Provide to all newly diagnosed
<b>Second Nature</b>	A habit change programme via an app with 12 weeks coaching and life long access to the app	BMI >25kg/m <sup>2</sup>	App based Written materials Health Coach	<ul style="list-style-type: none"> <li>• Check can they use whats app</li> <li>• Available in 12 languages (written)</li> <li>• Sent Tech from company which feeds back into App and to coaches – Scales and Activity Monitor</li> </ul>
<b>Counterweight Plus</b>	Total Diet replacement for 12 weeks 2 weekly appointments Food reintroduction for 12 weeks Weight Maintenance for 18 months	BMI >27kg/m <sup>2</sup>  Type 2 diabetes <6 years	Face to Face assessment Virtual Groups Dietitian	<ul style="list-style-type: none"> <li>• Aim to achieve remission of type 2 diabetes</li> </ul>
<b>Tier 3 Weight Management</b>	Assessment consultation with a dietitian 8 weeks of weekly coaching and then 10 months of monthly support Clinical Psychology if required	BMI ≥35 wth co-morbidites  BMI ≥40	Face to Face Virtual Group Dietitian and Psychology	<ul style="list-style-type: none"> <li>• Aim 10-15% weight loss</li> </ul>
<b>Bariatric Surgery</b>	Triaged via NHS Ayrshire and Arran Bariatric Surgery multidisciplinary team (Surgeon, specialist dietitian and clinical psychologist) Pre surgery sessions Local follow up for 2 years post op	Aged 18-44 years  Type 2 diabetes diagnosed in the last 5 years  BMI: 35-50kg/m <sup>2</sup>	Assessment with NHS Ayrshire and Arran MDT Pre-op group Follow up 2 years post op	<ul style="list-style-type: none"> <li>• Aim 30-40% weight loss</li> <li>• Aim to achieve remission of type 2 diabetes</li> </ul>

# TYPE-2 Diabetes Medication choice

## Decision Aid

Which issue would you like to discuss next?	HbA1c Reduction mmol/mol	Daily Routine	Low Blood Sugar Risk	Weight Change	Risks and Side Effects
<b>METFORMIN</b>	10	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">24H </div> <div style="text-align: center;">AM </div> <div style="text-align: center;">PM </div> </div>	<p>No Severe Risk      ● Minor = 0 - 1%</p>	<p>Weight Neutral</p>	<ul style="list-style-type: none"> <li>• Digestive Problems Seen in 100 people in every 1000</li> <li>• Changes in taste buds Seen in 10 to 100 people in every 1000</li> <li>• Discontinue temporarily if experiencing vomiting and/or diarrhoea</li> </ul>
<b>SGLT-2 i</b> <i>Canagliflozin, or Empagliflozin</i>	6	<div style="text-align: center;">  24H         </div>	<p>No Severe Risk      ● Minor = 3 - 4%</p>	<p>3-4 lbs Loss</p>	<ul style="list-style-type: none"> <li>• Digestive problems, urinary infections and thrush Seen in 10 to 100 people in every 1000</li> <li>• Low blood pressure Seen in 1 to 10 people in every 1000</li> <li>• Diabetic ketoacidosis Seen in 5 to 8 people in every 100</li> <li>• Report urgently if experiencing vomiting sleepy and sweet smell of breath</li> <li>• Discontinue temporarily if experiencing vomiting and/or diarrhoea</li> <li>• Not suitable if you have had a recent foot ulcer</li> </ul>
<b>DPP-4 i</b> <i>Alogliptin, Sitagliptin or Linagliptin</i>	6-7	<div style="text-align: center;">  24H         </div>	<p>No Severe Risk      ● Minor = 0 - 1%</p>		<ul style="list-style-type: none"> <li>• Digestive problems, urinary infections, rash/itching Seen in 10 to 100 people in every 1000</li> <li>• Possible pancreatitis (inflammation of the pancreas)</li> </ul>
<b>SUPHONYLUREAS</b> Gliclazide	10	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">24H </div> <div style="text-align: center;">AM </div> <div style="text-align: center;">PM </div> </div>	<p>● Severe = Less than 1%      ● Minor = 21%</p> <p> Monitor Blood Glucose 2-5 times/week</p>	<p>3-4 lbs Gain</p>	<ul style="list-style-type: none"> <li>• Low blood sugar</li> <li>• Some patients can get nausea, rash and/or diarrhoea when first starting taking this</li> <li>• Monitor before and during driving</li> <li>• Inform DVLA when starting</li> </ul>
<b>GLP-1 RA</b> Oral – Rybelsus  Injection – Ozempic (Semaglutide) Bydureon (Exenatide) Victoza Liraglutide)	7-13	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">24H </div> <div style="text-align: center;">24H </div> <div style="text-align: center;">WEEKLY </div> </div>	<p>No Severe Risk      ● Minor = 0 - 1%</p> <p> Monitor Blood Glucose 2 times daily with Sulphonylureas</p>	<p>3-8 lbs Loss</p>	<ul style="list-style-type: none"> <li>• Common side effect: • Nausea, diarrhoea. Vomiting, indigestion, lumpiness at injection site</li> <li>• Severe allergic reaction (anaphylaxis) Seen in 1 in 10,000</li> <li>• Possible pancreatitis (inflammation of the pancreas)</li> <li>• Evidence of thyroid cancer in animal but not humans</li> </ul>
<b>INSULIN</b>	Unlimited	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">24H </div> <div style="text-align: center;">AM </div> <div style="text-align: center;">PM </div> </div>	<p>● Severe = 1 - 3%      ● Minor = 30 - 40%</p> <p> Monitor Blood Glucose 1-2 times daily</p>	<p>4-6 lb Gain</p>	<ul style="list-style-type: none"> <li>• Low Blood Sugar</li> <li>• Rash, lumpy and itchy at injection site</li> <li>• Weight gain</li> <li>• Monitor before and during driving</li> <li>• Inform DVLA when starting</li> </ul>