**Activity**
- 150 minutes moderate intensity exercise per week (e.g. 30 minutes 5 days per week)
- Reduce sedentary behaviour

**Diet, lifestyle weight/waist**
- Non-smoker, balanced diet, minimise alcohol and other drug use
- BMi²: 18.5 – 24.9 kg/m²
  - Waist circumference: <94 cm males, <80 cm females

**Socioeconomic resources**
- Socioeconomic status is associated with cardiometabolic health.
  - Ensure adequate access to housing, healthcare, transportation, education and employment opportunities

**Blood pressure**
- For most: <140 mmHg systolic and <90 mmHg diastolic
- For people with diabetes, chronic kidney disease or vascular disease: <130/80 mmHg

**Glucose regulation**
- FPG target: <5.5 mmol/L
- Individualise HbA1c targets for people with diabetes, generally <7% (53 mmol/mol)³
- For aversion to venepuncture see over

**Fasting blood lipids**
- TChol ≤5.5 mmol/L
- LDL ≤4 mmol/L
- For people with high CV risk (e.g. diabetes, hypertension, chronic kidney disease and prior heart disease): consider LDL ≤2 mmol/L
- Trig ≤1.6 mmol/L

**Psychotropic prescription**
- Evidence based prescription to treat symptoms of defined mental illness and/or when challenging behaviours are severe and non-responsive to other interventions
- Minimum effective dose and length of treatment

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### ADAPT YOUR PRACTICE while addressing **STANDARD TARGETS**¹

Plan for: communication adjustments; engagement with support networks; extra time; consent; teamwork.

- **POSITIVE CARDIOMETABOLIC HEALTH FOR ADULTS WITH AN INTELLECTUAL DISABILITY: an early intervention framework**

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**Using a person-centred approach PROVIDE TAILORED LIFESTYLE & NUTRITIONAL INTERVENTIONS:**

If arranging multidisciplinary follow-up falls outside your practice scope make appropriate referrals to the person’s GP and ensure proactive follow-up.

For physical health interventions create a **GP Management Plan** (MBS item: 721) and a **Team Care Co-ordination Plan** (MBS item: 723).

For Mental Health interventions consider using a **Mental Health Treatment Plan** (MBS items: 2700, 2701, 2715 or 2717) and referral to a psychiatrist and/or psychologist.

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1. **Provide a tailored exercise prescription and account for any co-existing physical impairments**¹
   - Consider referral to **dietitian** (MBS item: 10954): **exercise physiologist** (MBS item: 10953); **physiotherapist** (MBS item: 10960)
   - Referral to smoking or D&A cessation program

2. **Consider referral to exercise physiologist** (MBS item: 10953) or **physiotherapist** (MBS item: 10960)

3. **Include social worker in multidisciplinary case conference** (MBS items: 735 – 738). If the person has a diagnosed mental illness they can also receive individual **social worker sessions** (MBS item: 80150)

4. **Consider antihypertensive therapy if lifestyle intervention alone is insufficient**⁴
   - Limit salt in diet
   - Education about blood pressure management

5. **Tailor diabetes education/intervention (diabetes educator MBS item: 10951)**
   - **DIABETES:**
     - FPG ≥7.0 mmol/L; RPG ≥11.1 mmol/L; HbA1c >5.6% (38 mmol/mol) – Endocrine review, monitor HbA1c 3 monthly
     - AT RISK: 5.6 – 6.9 mmol/L – 6 monthly glucose monitoring, consider metformin if lifestyle intervention insufficient

6. **Consider Statin if lifestyle intervention alone is insufficient**⁴. Consider in context of absolute risk stratification
   - Fibrate for triglycerides

7. **Consider switching, decreasing or discontinuing if metabolic side effects emerge; rationalise any polypharmacy; where possible avoid high metabolic liability medication as first line treatment** (Home medicines review – MBS item: 900): provide psychotropic education

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¹ Certain causes of intellectual disability may alter baseline cardiometabolic risk — see over. ² BMi may be inaccurate if person has muscle wasting. If BMi is >30, assume at risk waist circumference. ³ Higher HbA1c levels (e.g. <8.0%, ≤4 mmol/mol) are acceptable in those with reduced ability to detect or treat hypoglycaemia, the elderly, or those with reduced life expectancy. ⁴ Weight gain in first 3 months should be <5 kg (or ≤7% from baseline); ⁵ In people with dietary insufficiencies consider checking folate and Vit B12. ⁶ Consider referral to specialist if additional input required.
**Monitoring:** Annual cardiometabolic monitoring should occur for all people with intellectual disability. If psychotropic medication (excluding stimulants) is commenced please use the following schedule:

*Note: more frequent monitoring should occur if clinically indicated. Some medications such as clozapine have additional monitoring requirements. Consider ECG/cardiology review if concern re. QT prolongation or cardiovascular risk factors present.*

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Weekly for first 6 weeks</th>
<th>3 months</th>
<th>6 months</th>
<th>9 months</th>
<th>Annually</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family Hx</strong> (diabetes, obesity, CVD in first degree relatives, kidney disease)</td>
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<td></td>
</tr>
<tr>
<td><strong>Personal and medication Hx</strong> (cause of ID, polycystic ovary syndrome, past psychotropic medication use – dose, efficacy and side effects, current medications)</td>
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<tr>
<td><strong>Lifestyle review</strong> (smoking, alcohol, physical activity, diet)</td>
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<td>✓</td>
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</tr>
<tr>
<td><strong>Weight/Waist circumference</strong></td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td><strong>Other examinations</strong> (BMI, BP, pulse)</td>
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<td>✓</td>
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<tr>
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<tr>
<td><strong>HbA1c</strong></td>
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</tr>
</tbody>
</table>

*In people with well-controlled diabetes, HbA1c could be performed 3 – 6 monthly.*

**Problem solving fear or refusal of blood tests**

- Tailor communication about blood test rationale and procedure. Accessible information can be downloaded [here](#).
- Involve the person’s support networks. Having someone familiar attend the blood test may make the person feel more at ease.
- Behavioural support staff may be able to conduct rehearsal prior to the appointment.
- Have the family or support worker call ahead and explain the situation to the pathologist. Ask if there is a pathologist who has experience working with people with ID.
- Request an anaesthetic cream or patch.
- If needed, consider single dose prn benzodiazepam prior to blood test.
- If obtaining a fasting sample is too hard, non-fasting samples are satisfactory for most measures excluding triglycerides.
- Clarify and obtain consent. If necessary consider requesting a blood test while the person is under general anaesthetic for another procedure.

**Specific pharmacological interventions**

- Consider metformin if: impaired glucose; polycystic ovary syndrome; obesity or rapid weight gain.
- **Metformin therapy:** start at 250 mg tablet before breakfast and dinner for two weeks then increase to 500 mg bd. Dose can be increased to a maximum of 3 g daily in diabetes or pre-diabetes. For off-label use in obesity and pre-diabetes, consent should be obtained. Side effects of nausea, diarrhoea or abdominal cramps should not be tolerated and dose shifted to after meals and/or reduced (or shift to the XR preparation).
- **Lipid lowering therapy:** use PBS guidelines. *Statin initiation for cholesterol lowering: simvastatin 10 mg nocte; atorvastatin 10 mg nocte; pravastatin 10 mg nocte; rosuvastatin 10 mg nocte.*
- **Antihypertensive therapy:** multiple agents available.
- **Vitamin D:** glucose metabolism, bone and muscle health may all be impacted by Vit D deficiency. For people at high risk of Vit D deficiency (for example due to anticoagulants, residential status) monitor Vit D levels. <$50 nmol/L: replenish stores: cholecalciferol 4,000 IU per day for one month. Maintenance: 1,000 IU. Target >80 nmol/L.*

**Certain genetic causes of intellectual disability may alter the person’s cardiometabolic profile. It is important to identify the cause of ID where possible and to proactively manage individuals at risk to prevent further complications. Syndromes with cardiometabolic risk factors include:**

- **Down**
- **Turner**
- **Tuberous sclerosis**
- **Williams**
- **Angelman**
- **Sotos**
- **Prader-Willi**