Update of the Canadian Cardiovascular Society Guidelines for the Diagnosis and Treatment of Dyslipidemia for the Prevention of Cardiovascular Disease in the Adult

**Who to Screen**

Men ≥ 40 years of age, and women ≥ 50 years of age or postmenopausal (consider earlier in ethnic groups at increased risk such as South Asians or First Nations individuals) or All patients with any of the following conditions, regardless of age:

- Current cigarette smoking
- Diabetes
- Arterial hypertension
- Family history of premature CVD
- Family history of hyperlipidemia
- Erectile dysfunction
- Chronic kidney disease
- Inflammatory disease
- HIV infection
- Chronic obstructive pulmonary disease
- Clinical evidence of atherosclerosis or abdominal aneurysm
- Clinical manifestation of hyperlipidemia
- Obesity (body mass index > 27)

**How to Screen**

For all: History and examination, LDL, HDL, TG, non-HDL (will be calculated from profile), glucose, eGFR

Optional: apoB (instead of standard lipid panel), urine albumin:creatinine ratio (if eGFR < 60, hypertension, diabetes)

- **Framingham Risk Score < 5%**
  - Repeat every 3-5 years

- **Framingham Risk Score ≥ 5%**
  - Repeat every year

Figure 1. Approach on who and how to screen for dyslipidemia. CVD, cardiovascular disease; eGFR, estimated glomerular filtration rate; HDL, high-density lipoprotein; LDL, low-density lipoprotein; TG, triglyceride
Figure 2. Risk stratification by Framingham Risk Score (FRS) and phenotype.*Not all subjects with diabetes are at high 10-year risk; included for treatment based on randomized studies and high long-term risk.

Figure 3. Risk stratification for intermediate risk subjects; subjects with intermediate risk and low-density lipoprotein (LDL) 3.5 mmol/L have the option of health behaviour modification or additional risk stratification based on alternate targets (apolipoprotein [Apo] B or non-high-density lipoprotein cholesterol [HDL-C]) or secondary testing.
<table>
<thead>
<tr>
<th>Risk level</th>
<th>Initiate therapy if</th>
<th>Primary target LDL-C</th>
<th>Alternate target</th>
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</thead>
<tbody>
<tr>
<td>High FRS ≥ 20%</td>
<td>Consider treatment in all (Strong, High)</td>
<td>≤ 2 mmol/L or ≥ 50% decrease in LDL-C (Strong, High)</td>
<td>≥ Apo B ≤ 0.8 g/L or Non-HDL-C ≤ 2.6 mmol/L (Strong, High)</td>
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<tr>
<td>Intermediate FRS 10%-19%</td>
<td>LDL-C ≥ 3.5 mmol/L (Strong, Moderate)</td>
<td>≤ 2 mmol/L or ≥ 50% decrease in LDL-C (Strong, Moderate)</td>
<td>≥ Apo B ≤ 0.8 mg/dL or Non-HDL-C ≤ 2.6 mmol/L (Strong, Moderate)</td>
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<tr>
<td>Low FRS &lt; 10%</td>
<td>LDL-C ≥ 5.0 mmol/L or Familial hypercholesterolemia (Strong, Moderate)</td>
<td>≥ 50% reduction in LDL-C (Strong, Moderate)</td>
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Figure 4. Summary of treatment thresholds and targets based on Framingham Risk Score (FRS), modified by family history. HDL-C, high-density lipoprotein C; LDL-C, low-density lipoprotein cholesterol

References