Screening

As per the National Guideline Clearing House (NGC) and Agency for Healthcare Research and Quality, U.S. Preventive Services Task Force (USPSTF) the recommended screening guidelines are as follows:

a) Fasting lipid panel screening should be done on men age 35 and older.

b) Fasting lipid panel screening should be done on men age 20 to 35 and women age 20 and older – if at increased risk for CHD.

c) Routine screening for lipid disorders in men aged 20-35 and women aged 20 and older who are not at increased risk for coronary heart disease (CHD), may be screened at the discretion of the practitioner.

d) Repeat screening in five years for those with normal lipids, and shorter intervals for people who have lipid levels close to those warranting therapy. Recommend behavioral dietary counseling for adult patients with hyperlipidemia and other known risk factors for cardiovascular and diet related chronic disease.

Treatment Groups

A. Treatment Groups:

- Four major statin benefit groups; four groups for whom ASCVD risk reduction with statin clearly outweighs the risk of adverse events.

- Patients with:
  - Clinical ASCVD
  - Diabetes Mellitus (type 1 or 2) aged 40 to 75 years and LDL 70 to 189
  - LDL $\geq$ 190
  - No diabetes mellitus, no clinical ASCVD, aged 40 to 75 years, LDL 70 to 189, and estimated 10 year ASCVD risk $\geq$ 7.5%
B. Clinical ASCVD Definition:
- Coronary artery disease
  - acute coronary syndrome
  - history of MI
  - stable or unstable angina
  - history of coronary revascularization
- Stroke or TIA
- Peripheral arterial disease, history of peripheral arterial revascularization

C. Non-treatment groups - statin treatment has not been shown to be of benefit in the following:
- Age under 40 or greater than 75 years with no clinical ASCVD
- Heart failure – NYHA Class II – IV
- CKD on hemodialysis

D. Treatment is of net absolute benefit but does not clearly outweigh the risk of adverse events in patients aged 40 to 75 years with no clinical ASCVD with estimated 10 year ASCVD risk of 5.0% to 7.5%. Moderate intensity statin treatment can be considered can be considered in this group.

E. For those patients not in a statin benefit group, other factors may contribute to an individualized decision to start statin treatment:
- Family history of premature ASCVD (onset under age 55 years in a male relative, or 65 years in a female relative)
- High CRP (over 2 mg/L)
- High coronary calcium score (equal to or over 300 Agatston units or over 75th percentile)
• ABI under 0.9
• Elevated estimated lifetime risk of ASCVD

**Statin Intensity**

A. Statin intensity is recommended based on patient ASCVD risk, not on goal LDL targets:
• High intensity statin lowers LDL by ≥ 50%
• Moderate intensity statin lowers LDL by 30 to 50%
• Low intensity statin lowers LDL by < 30%

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**High- Moderate- and Low-Intensity Statin Therapy** (Used in the RCTs reviewed by the Expert Panel)

<table>
<thead>
<tr>
<th>High-Intensity Statin Therapy</th>
<th>Moderate-Intensity Statin Therapy</th>
<th>Low-Intensity Statin Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily dose lowers LDL–C on average, by approx. ≥50%</td>
<td>Daily dose lowers LDL–C on average, by approx. 30% to &lt;50%</td>
<td>Daily dose lowers LDL–C on average, by &lt;30%</td>
</tr>
<tr>
<td>Atorvastatin (40†)–80 mg Rosuvastatin 20 (40) mg</td>
<td>Atorvastatin 10 (20) mg Rosuvastatin (5) 10 mg Simvastatin 20–40 mg‡ Pravastatin 40 (80) mg Lovastatin 40 mg Fluvastatin XL 80 mg Fluvastatin 40 mg bid Pitavastatin 2–4 mg</td>
<td>Simvastatin 10 mg Pravastatin 10–20 mg Lovastatin 20 mg Fluvastatin 20–40 mg Pitavastatin 1 mg</td>
</tr>
</tbody>
</table>

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B. High intensity statin for patients with:
• Clinical ASCVD present, age ≤ 75 years
• Diabetes mellitus, aged 40 to 75 years and estimated 10-year ASCVD risk ≥ 7.5%
• LDL ≥ 190
• No diabetes mellitus, no clinical ASCVD, aged 40 to 75 years, LDL 70 to 189, and estimated 10-year ASCVD risk ≥ 7.5%. Moderate intensity is optional in this group

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C. Moderate intensity statin for patients with:
• Clinical ASCVD present, age > 75 years
• Diabetes mellitus, aged 40 to 75 years, and estimated 10-year ASCVD risk < 7.5%
• No diabetes mellitus, no clinical ASCVD, aged 40 to 75 years, LDL 70 to 189, and estimated 10-year ASCVD risk ≥ 7.5%. High intensity is optional in this group
• High intensity statin patient who is unable to take high intensity statin due to:
  o drug –drug interaction
  o history of statin intolerance
  o medical conditions influencing statin safety
**Monitoring Therapy/Statin Safety**

A. Avoid statin treatment in women of childbearing potential unless they are using effective contraception and not nursing.

B. Liver tests:
   - Check baseline ALT before starting treatment
   - Routine hepatic monitoring is not needed
   - Check liver tests on treatment if symptoms suggesting hepatotoxicity arise (fatigue/weakness, loss of appetite, abdominal pain, dark-colored urine or jaundice)

C. CK should not be routinely measured in statin treatment – check CK in patients with symptoms (muscle pain/weakness/cramping/stiffness, or generalized fatigue).

D. Decreasing statin dose may be considered when 2 consecutive values of LDL are < 40.

**Non-Statin Treatment Guidelines**

A. There is no data supporting the routine use of nonstatin therapy added to statin therapy to reduce further ASCVD events. Prior to using nonstatin therapy, reinforce intensive lifestyle changes.

B. Consider non-statn therapy in high-risk patients who:
   - have less than anticipated response to statins
   - are unable to tolerate the recommended intensity of a statin
   - are completely statin-intolerant

C. High risk patients:
   - Clinical ASCVD
   - LDL ≥ 190
   - Diabetes mellitus

D. Fibrates:
   - Avoid gemfibrozil use with statin due to risk of rhabdomyolysis (rapid destruction of skeletal muscle or damage)
   - Fenofibrate may be used with low or moderate intensity statin if triglycerides are over 500, or if benefits from ASCVD risk reduction outweigh the risk for adverse event.
References
