

Measure LDL-C

Universal Lipid Screening

Children
9–11 Years

Young Adults
17–18 Years

Adults
19+ Years

Additional Lipid Screening Intervals

4–12 Weeks

After initiating LLT or dose change to assess response & adherence.

6–12 Months

On stable LLT to monitor response & adherence to therapy

Young Children
2+ Years

Children with a family history of (1) hypercholesterolemia or (2) early CVD should have lipids tested as early as 2 years of age.

Assess ASCVD Risk & Set LDL-C Goal

ASCVD Risk Factors

☐ Sex (male)

☐ Age (65+)

☐ Smoking/nicotine use

☐ Hypertension

☐ Diabetes

☐ LDL-C elevation

☐ Triglyceride elevation

☐ Lp(a) elevation

☐ Family history of ASCVD and/or genetic predisposition

Individuals with Very Elevated LDL-C

(severe hypercholesterolemia: LDL-C ≥ 190 mg/dL)

☐ LDL-C ≥ 190 mg/dL

LDL-C Goal
<100 mg/dL

☐ HeFH (clinical/genetic diagnosis)

☐ 1+ ASCVD risk factor

☐ Subclinical atherosclerosis

LDL-C Goal
<70 mg/dL

Individuals with LDL-C 70–189 mg/dL

(calculate 10-year PREVENT-ASCVD risk)

☐ <3% (low risk) + LDL-C 160–189 mg/dL

☐ 3–5% (borderline risk)

☐ 5–10% (intermediate risk)

☐ $\geq 10\%$ (high risk)

LDL-C Goal
<100 mg/dL &
>30–49% LDL-C ↓

LDL-C Goal
<70 mg/dL &
 $\geq 50\%$ LDL-C ↓

Individuals Living with Diabetes

☐ Diabetes

LDL-C Goal
<100 mg/dL

☐ 1+ ASCVD risk factor

LDL-C Goal
<70 mg/dL

Healthy behavior counseling*

Initiate statin therapy

to achieve LDL-C goal & % reduction

Add ezetimibe, PCSK9 inhibitor, and/or bempedoic acid

for further LDL-C lowering & % reduction

Continue LDL-C lowering therapies

to maintain LDL-C goal, keep managing cardiovascular risk, and prevent future events.

Healthy behavior counseling*

Initiate statin therapy

to achieve LDL-C goal & % reduction

Add ezetimibe or PCSK9 inhibitor

for further LDL-C lowering

*Healthy behavior counseling on healthy dietary approaches, attainment & maintenance of a healthy weight & physical activity

Unsure Whether to Start Statin Therapy?

Statin Therapy Recommendations for Specific Comorbidities to Reduce ASCVD Risk

☐ Diabetes (moderate-intensity statin)

☐ CKD stage 3 or 4 (moderate-intensity statin $\pm$ ezetimibe)

☐ HIV* (start statin therapy)

Consider Risk Enhancing Factors

to Improve Risk Assessment & LDL-C Goal Setting

☐ LDL-C persistently ≥ 160 mg/dL

☐ Lp(a) ≥ 125 nmol/L (≥ 50 mg/dL)

☐ ApoB persistently ≥ 120 mg/dL

☐ hsCRP ≥ 2 mg/L on 2+ occasions

☐ TG persistently elevated (≥ 175 mg/dL - non-fasting, ≥ 150 mg/dL - fasting)

☐ History of premature ASCVD in a parent or sibling

☐ Higher risk ancestry (e.g., South Asian, Filipino)

☐ Chronic inflammatory diseases, including systemic lupus, rheumatoid arthritis, advanced psoriasis, inflammatory arthritis

☐ Reproductive risk markers, including premature menopause, preeclampsia, gestational diabetes, gestational hypertension, preterm delivery

Consider a Coronary Artery Calcium Score*

to Improve Risk Assessment & LDL-C Goal Setting

☐ CAC 1–99 AU & <75 percentile for age, sex & race

LDL-C Goal
<100 mg/dL

☐ CAC ≥ 100 –299 AU

☐ CAC 300–999 AU

☐ CAC ≥ 75 th percentile for age, sex, or race

LDL-C Goal
<70 mg/dL

☐ CAC ≥ 1000 AU

LDL-C Goal
<55 mg/dL

*Men: 40+ Years, Women: 45+ Years

Consider starting statin therapy for individuals with CAC > 0 AU at:

☐ Borderline risk (10-Year PREVENT-ASCVD risk)

☐ Intermediate risk (10-Year PREVENT-ASCVD risk)

Manage LDL-C

How Low Can You Go? LDL-C?

Healthy infants are generally born with LDL-C levels between 30–70 mg/dL. Evidence suggests LDL-C levels between 10–40 mg/dL are safe & that there is an incrementally lower risk of ASCVD events with LDL-C levels below 30 mg/dL.

10–40 mg/dL

Healthy Diet & Lifestyle Habits

Guidelines & best practices emphasize the importance of a heart healthy diet and lifestyle habits for the management of LDL-C. The typical reduction in LDL-C from healthy diet and lifestyle is usually limited to 5–15%, a combination of measures can achieve 22–37%.

5–15% ↓ (typical)
22–37% (achievable)

Statin Medicines		
Medicine	% LDL-C Reduction*	MACE Benefit
Low-Intensity Statins*	<30%	Yes
Moderate-Intensity Statins** ☐ Atorvastatin 10–20 mg ☐ Rosuvastatin 5–10 mg	30–49%	Yes
High-Intensity Statins ☐ Atorvastatin 40–80 mg ☐ Rosuvastatin 20–40 mg	≥50%	Yes
*Real world evidence suggests that individual response to medication may vary +Other low-intensity statins: fluvastatin 20–40 mg, pravastatin 10–20 mg, simvastatin 10 mg ++Other moderate intensity statins: fluvastatin XL 8- mg, fluvastatin 40 mg BID, lovastatin 40 mg-80 mg, pitavastatin 1–4 mg, pravastatin 40–80 mg, simvastatin 20–40 mg		

Initiating Non-Statins Medicines

Non-statin medicines may be required for individuals who cannot reach their LDL-C goal with diet, lifestyle, and maximally tolerated statin therapy.

Non-Statins Medicines to add to statin therapy for additional LDL-C lowering		
Medicine	% LDL-C Reduction*	MACE Benefit in CVOT
Ezetimibe ☐ Ezetimibe	25%	Yes
Bempedoic acid ☐ Bempedoic acid ☐ Bempedoic acid + ezetimibe	17–18% ⁺ , 21–24% ⁺ 35–48%	Yes
PCSK9 inhibitor ☐ Alirocumab 75 mg Q2W [^] (mAb) ☐ Alirocumab 150 mg Q2W [^] (mAb) ☐ Enlicotide ☐ Evolocumab 140 mg Q2W [^] (mAB) ☐ Inclisiran (siRNA) ☐ Lerodalcibep	47% 58% 56% 60% 48–52% 48–52%	Yes Yes In Progress Yes In Progress No
*Real world evidence suggests that individual response to medication may vary [^] Every 2 weeks +Bempedoic acid in combination with statin therapy -Bempedoic acid in individuals with statin associated side effects		

Key Points

1.LDL-C must be measured regularly
2.LDL-C is managed based on ASCVD risk
3.Low LDL-C is generally safe
4.Lipid lowering medicines are safe
5.Lipid specialists are available for support and referral

Lower (LDL-C) for Longer is Better!

Statin Safety & Tolerability

Statins are safe & generally well-tolerated. Most patients can tolerate some of statin therapy (agent, dose, and/or regimen).

Partial Statin Intolerance

Partial statin intolerance is the ability to tolerate a dose of statin that is lower than that required to reach the LDL-C goal.

Complete Statin Intolerance

Complete statin intolerance is the inability to take any statin dose or regimen. It is estimated that <5% of people are completely statin intolerant.

Consider Referral to a Lipid Specialist

Familial Hypercholesterolemia
☐ Homozygous familial hypercholesterolemia
☐ Heterozygous familial hypercholesterolemia in individuals who do not achieve LDL-C goal despite max. tolerated statin + non-statin therapy

ASCVD or High-Risk of ASCVD

☐ Premature ASCVD (onset age <40 years)
☐ Individuals who do not achieve ≥50% LDL-C reduction & LDL-C goals despite maximally tolerated statin + non-statin therapy
☐ Individuals with statin-attributed side effects on >2 statins, including the lowest doses with alternate dosing regimens
☐ Lp(a) ≥200 nmol/L (or 75 mg/dL)
☐ <40 years old with diabetes & dyslipidemia

Complex Medication Regimes with ASCVD or at High-Risk for ASCVD

☐ Cancer
☐ HIV
☐ Prevention of transplant rejection

Individuals considering pregnant, are pregnant, or breastfeeding

☐ Familial hypercholesterolemia
☐ ASCVD or at high risk of ASCVD requiring lipid-lowering therapy

Patients who may be a candidate for treatment with:

☐ Evinacumab
☐ Lomitapide
☐ Lipoprotein apheresis

Patients with inherited hyperlipidemias who may require genetic testing for diagnosis

Lipid Specialists - Support & Referral

A Lipid Specialist is a clinician with advanced expertise in lipid management, certified by the American Board of Clinical Lipidology. Find a Lipid Specialist at learnyourlipids.com/find-a-clinician/.



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ACS: acute coronary syndromes; ApoB: apolipoprotein B ; ASCVD: atherosclerotic cardiovascular disease; AU: Agatston Units; CAC: coronary artery calcium; CKD: chronic kidney disease; CVD: cardiovascular disease; CVOT: cardiovascular outcomes trial; HeFH: heterozygous familial hypercholesterolemia; HIV: human immunodeficiency virus; HoFH: homozygous familial hypercholesterolemia; hsCRP: high-sensitivity C-reactive protein; LDL-C: low-density lipoprotein cholesterol; LLT: lipid-lowering therapy; Lp(a): lipoprotein(a); mAb: monoclonal antibody; MACE: major adverse cardiovascular events; MI: myocardial infarction; PAD: peripheral artery disease; PCSK9: proprotein convertase subtilisin/kexin type 9; PREVENT: Predicting Risk of cardiovascular disease EVENTS; RNA: ribonucleic acid; siRNA: small interfering RNA; TG: triglycerides.