AN EXPERT CLINICAL CONSENSUS FROM THE NATIONAL LIPID ASSOCIATION:

Dyslipidemia Management in Women of Reproductive Potential:

Overview: Cardiovascular disease (CVD) is the leading cause of death in women. Rates are increasing among younger women < 55 years. Increased rates of disease track with a worrisome trend of an increasing prevalence of cardiovascular risk factors among young adults over the past decade. Given the overwhelming evidence from genetic, observational, and interventional studies that low-density lipoprotein cholesterol (LDL-C) and other apolipoprotein B (apoB)-containing particles are causally related to atherosclerotic CVD (ASCVD) pathogenesis, lipid management remains a central tenet for ASCVD prevention across major professional society guidelines.7Despite this, female patients, particularly young women, are less likely to be treated with statin therapy and less likely to achieve their LDL-C therapeutic targets based on their calculated risk for CVD.9

The CV health (CVH) of pregnant women is declining in the United States (U.S.) with less than 1 in 10 pregnant women having high or optimal CVH. One of the biggest risk factors for an adverse pregnancy outcome (APO) is starting a pregnancy with suboptimal CVH; thus improving the CVH in reproductive age adolescent and young women should therefore be a high priority for the health of the mother and her offspring. Optimizing dyslipidemia in women of reproductive potential can play a large role in mitigating CV risk in pregnancy and beyond. Women with high pre-pregnancy levels of total cholesterol (TC), LDL-C, and triglycerides (TG) are more likely to develop an APO, such as preeclampsia, gestational diabetes mellitus (GDM), and/or a pre-term delivery.

In this National Lipid Association Expert Clinical Consensus, we review the approach to lipid management among women of reproductive age, with a special focus on consideration of pharmacologic treatment of dyslipidemia during preconception planning, pregnancy, and

Nutrition and Lifestyle Considerations for Dyslipidemia During the Reproductive Years

- Cardioprotective dietary pattern (Mediterranean, DASH, vegan)
- Moderate- to vigorous-intensity physical activity weekly
- Appropriate weight gain during pregnancy
- Shared decision-making and a team-based approach to implement strategies to reduce ASCVD risk

Birth Control Methods Recommended for Women of Child-Bearing Age with Dyslipidemia

- Oral contraceptives
- Transdermal patches
- Intrauterine devices
- Barrier methods

Birth Control Methods to Avoid in Women Who Use Tobacco *(especially older than 35 years of age)*

- Estrogen-containing contraceptives
- Estrogen-based therapies should also be avoided in women with severe hypertriglyceridemia

5As and Counseling Strategies

Arrange referrals to resources and follow up visits	**S** Specific
Assist with barriers using problem-solving	**M** Measurable
Agree on ***SMART*** goals using shared decision-making	**A** Achievable
Advise on risks and benefits of behaviors using an open-ended conversation	**R** Realistic
Assess current lifestyle behaviors using ***OARS***	**T** Timely

O Open-ended questions	**A** Affirm what patient shares	**R** Respectfully listen and pharaphrase	**S** Summarize

Conclusion: In summary, all women of reproductive potential should have a baseline lipid panel as part of ASCVD risk screening, as pre-pregnancy dyslipidemia and an adverse cardiometabolic risk profile are associated with adverse pregnancy outcomes. Pregnancy involves timely counseling around dyslipidemia management. A patient-clinician discussion and shared decision-making are essential for determining appropriate lifestyle interventions and pharmacotherapy for women with dyslipidemia. Delays in treatments in women of reproductive potential affect their long-term ASCVD risk. It is imperative to minimize time off treatment for women at high ASCVD risk, such as those with FH.

For in-depth details of the nutrition interventions summarized above, please read the National Lipid Association's Expert Clinical Consensus in the *Journal of Clinical Lipidology*.

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