Wellness Snapshot

Hyperlipidemia (High Cholesterol)



Hyperlipidemia is the clinical term for high cholesterol as measured by total cholesterol, low density lipoprotein (LDL) cholesterol and triglyceride levels in the blood. Cholesterol levels are tightly regulated in the body through a balance of endogenous synthesis, excretion and dietary intake. A disruption in this balance can lead to hyperlipidemia.

Risk factors for hyperlipidemia

Many risk factors for high cholesterol are modifiable including diet, body weight and tobacco use. Other risk factors including genetics and physiologic conditions (pregnancy and perimenopause) are fixed. Diets high in ultra-processed food (fast foods, packaged baked goods, refined carbohydrates), fatty meats and full-fat dairy can raise LDL cholesterol. Excess alcohol consumption and diets high in refined carbohydrates can also raise triglyceride levels. Medical conditions that can lead to hyperlipidemia include diabetes, hypothyroidism, kidney disease, Cushing's syndrome and obesity. Certain medications can raise cholesterol including antipsychotic medications, steroids, hormone therapies, HIV therapies and others.

Health consequences of high cholesterol

Excess LDL cholesterol increases risk for atherosclerosis by sticking to the walls of arteries and forming plaques. This can lead to heart attacks, stroke, heart failure, kidney disease and peripheral arterial disease. High triglycerides can lead to pancreatitis and increase risk for cardiovascular disease. Dyslipidemia can also increase risk of metabolic dysfunction–associated steatotic liver disease (previously known as fatty liver disease).

Management of hyperlipidemia

Treatment of hyperlipidemia includes lifestyle modifications for all patients with the addition of lipid-lowering medication for those at higher overall cardiovascular risk. Lifestyle modification includes following a diet low in saturated fats with increased emphasis on fruits, vegetables, nuts, fiber, legumes and whole grains. Saturated fats (found in red meat, full fat dairy, butter, coconut oil and palm oil) should be replaced with polyunsaturated fats (found in fish, nuts, flax and chia seeds) or monounsaturated fats (found in olive oil, avocados and nuts). Pharmacologic measures to reduce LDL cholesterol include medications such as statins, ezetimibe and newer agents including the injectable biologics (PCSK9 inhibitors). Reduction in triglyceride levels focuses mainly on lifestyle modifications, including reduction in refined carbohydrates, sugars, ultra processed foods and alcohol consumption.