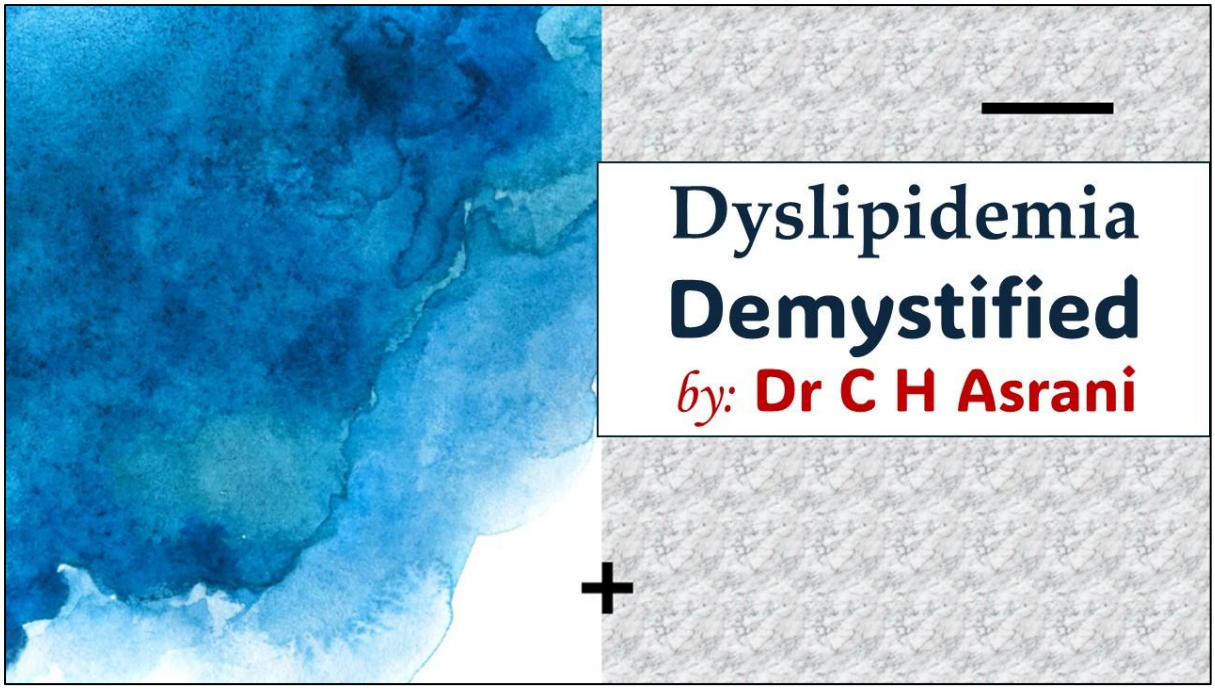

Dyslipidemia means having abnormal levels of fats (lipids) in our blood, such as too much "bad" (LDL) cholesterol or triglycerides, or too little "good" (HDL) cholesterol, significantly increasing the risk for heart attacks, strokes due to atherosclerosis (plaque buildup in arteries). It's often silent but diagnosed with a blood test – Lipid profile. It is managed through diet, exercise, and very often medication. It usually is due to lifestyle and very small percentage of cases, it is genetic.

The lipid profile has multiple parameters:

- Total Cholesterol,
- LDL (Low-Density Lipoprotein),
- HDL (High-Density Lipoprotein),
- VLDL (Very Low-Density Lipoprotein) and
- Triglycerides.

What patterns of above are health risks

- Total Cholesterol – high levels
- LDL (Low-Density Lipoprotein) – high levels are independent risk factors for cardiovascular disease,
- HDL (High-Density Lipoprotein) – considered as good cholesterol; low levels are independent risk factors for cardiovascular disease
- VLDL (Very Low-Density Lipoprotein) – usually go hand in hand with Triglyceride levels
- Triglycerides - high levels are independent risk factors for cardiovascular disease

Why dyslipidaemia is a problem?

- Atherosclerosis: High LDL and triglycerides can build up plaque in arteries, narrowing them and restricting blood flow. Plaque is a sticky substance made up of cholesterol, fat, blood cells, calcium and other substances found in the blood. Over time, plaque hardens and causes affected arteries to narrow. That limits the flow of oxygen-rich blood to the target organs (heart & brain)
- Cardiovascular Risk: This plaque buildup leads to serious conditions like coronary artery disease (CAD), peripheral artery disease (PAD), heart attacks, strokes and gangrene.

Who is more at risk for dyslipidaemia?

Dyslipidaemia risk factors include lifestyle choices (poor diet selection viz. high in saturated/trans fats, inactivity, smoking, excessive alcohol), underlying health conditions (obesity, diabetes, hypothyroidism, chronic kidney/ chronic liver disease, hypertension), genetics (family history), age, and gender (post-menopause).

LDL targets:

LDL (Low-Density Lipoprotein) targets for cholesterol vary significantly by comorbidity, with stricter goals for conditions like diabetes, chronic kidney disease (CKD), and established cardiovascular disease (CVD), often requiring LDL levels

- below 70 mg/dL, or even
- below 50 mg/dL or
- below 30 mg/dL for very high-risk individuals, compared to general guidelines for healthy adults.

Higher comorbidities, such as diabetes with multiple risk factors, push targets lower, emphasizing reducing LDL to the lowest feasible level to minimize cardiovascular risk, though extremely low levels might warrant monitoring.

Why is HDL good cholesterol?

HDL (High-Density Lipoprotein) is "good" cholesterol because it acts like a scavenger, picking up excess bad cholesterol from the arteries and taking it back to the liver for removal, thus preventing plaque buildup and reducing the risk of heart disease and stroke, unlike LDL ("bad") cholesterol which contributes to blockages. Higher HDL levels are linked to better heart health, as it cleans out our arteries while LDL clogs the arteries.

Tips while testing & frequency:

1. Needs 12-14 hour overnight fasting (water is allowed). 12-hour fasting, is needed, for a lipid profile because eating, especially fats, temporarily elevates triglycerides and can skew LDL cholesterol readings, giving an inaccurate picture of baseline heart health; fasting ensures a stable, accurate measurement of body's fat processing for better risk assessment.
2. No alcohol for 48 hours prior testing (may affect Triglyceride levels)
3. Thyroid tablets can be taken before testing
4. All hypertensive, diabetic, dyslipidemic patients must check annually or as

per treating physician's recommendation.

5. Previous 2-3 days meal / feasting may affect Triglycerides but will not affect HDL & LDL levels.