

## Clinical and Lab Progress

### A. Metabolic Health

- HOMA-IR (Insulin Resistance Index):
  - Before: 2.07 (borderline insulin resistance)
  - Now: 1.69 (improved, below 2 threshold, consistent with lower metabolic risk)
- Fasting Glucose: Decreased from 108.6 (pre-protocol) → 101.3 mg/dL (near-normal, still at higher normal)
- HbA1c: 5 to 4.9% (good glycaemic control)
- Lipid Profile:
  - Total Cholesterol: 135 → 169 mg/dL, remains <200 mg/dL
  - HDL: Remains low at 34 but increased from 31
  - Triglycerides: Excellent (50–65 mg/dL)
- Homocysteine: Reduced significantly from mildly high (19.98) to normal (13.85, <15 µmol/L)
- CRP / hs-CRP: Stable at 1.77 → 1.58–1.77 (average CVD risk)
- Testosterone: Within suboptimal range

### B. Micronutrients / Anti-Aging

- Vitamin B12, Folate, D: All normalized and mid-range after supplementation (was borderline at baseline)
- Stable renal and liver function: Creatinine, eGFR, LFTs within normal

### Future Recommendations

#### Near Term:

- Continue maintenance supplements: Multivitamin, probiotic, magnesium, omega-3s
- Step up dietary compliance: Emphasis on high-fiber, high-antioxidant, healthy fat/protein, plant-rich Mediterranean-style diet; minimum processed carbs/sugars
- Exercise: Target 150+ min/week (mix of aerobic, resistance)
- Nutrition: Follow phase 1 guidelines with a 20% calorie deficit and cut down on processed food items completely