

LIVER ENZYME REFERENCE CHART

Clinical Resource Template

Test	Reference Range (Adult)	Clinical Significance of Elevation
ALT (Alanine Aminotransferase)	7 - 55 U/L	Most specific to liver injury; hepatitis, toxin exposure.
AST (Aspartate Aminotransferase)	8 - 48 U/L	Found in liver, heart, muscle; ratio to ALT (2:1) suggests EtOH.
ALP (Alkaline Phosphatase)	40 - 129 U/L	Biliary obstruction, cholestasis, or bone turnover.
GGT (Gamma-Glutamyl Transferase)	8 - 61 U/L	Biliary disease; highly sensitive for chronic alcohol use.
Albumin	3.5 - 5.0 g/dL	Marker of synthetic function (decreases in chronic failure).
Bilirubin (Total)	0.1 - 1.2 mg/dL	Indicates hemolysis, obstruction, or impaired processing.
PT / INR	INR: 0.8 - 1.1	Acute/chronic liver failure (clotting factor synthesis).

Clinical Reminders:

- Ranges may vary slightly by laboratory and patient gender/age.
- **Hepatocellular pattern:** Significant elevation in ALT/AST relative to ALP.
- **Cholestatic pattern:** Significant elevation in ALP/GGT relative to ALT/AST.
- Monitor trends rather than isolated values for acute changes.