

### Serum Bilirubin Test

- Measures bilirubin levels in the blood, indicating liver's ability to process waste products.

Bilirubin is a standard by-product resulting from the degradation of hemoglobin. It travels through the bloodstream attached to albumin and is absorbed by hepatocytes in the liver. Inside these liver cells, bilirubin undergoes conjugation with glucuronic acid, a reaction facilitated by uridine diphosphoglucuronate-glucuronyltransferase (UDP-GT). The conjugated (direct) bilirubin is then excreted into bile. This mechanism is typically very effective, ensuring that plasma levels of unconjugated (indirect) bilirubin remain low. Hyperbilirubinemia may arise from conditions that predominantly lead to unconjugated hyperbilirubinemia or those that result in predominantly conjugated hyperbilirubinemia. Disorders that enhance bilirubin production (such as hemolysis and dyserythropoiesis), impair hepatic bilirubin uptake (for instance, certain medications like gemfibrozil, irinotecan, and the protease inhibitors atazanavir and indinavir, as well as portosystemic shunts), or decrease the conjugation rate of bilirubin (such as Gilbert syndrome) can lead to elevated levels of indirect bilirubin.<sup>1,2</sup>

### References

1. VanWagner LB, Green RM. Evaluating elevated bilirubin levels in asymptomatic adults. *JAMA*. 2015 Feb 3;313(5):516-7. doi: 10.1001/jama.2014.12835.
2. Fretzayas, A., Moustaki, M., Liapi, O. *et al*. Eponym. *Eur J Pediatr* **171**, 11–15 (2012). <https://doi.org/10.1007/s00431-011-1641-0>.