

Vitamin B12 deficiency is a widespread public health issue across many Arab communities, primarily due to poor dietary intake and compounded by economic and political instability that limits access to B12-rich foods. These observations demonstrate that serum transcobalamin-bound B12 (Active B12), methylmalonic acid and total homocysteine levels are useful in diagnosis. This study aims to measure the level of awareness among healthcare professionals and medical students regarding the importance of employing multiple diagnostic tests for the accurate detection of Vitamin B12 deficiency, with particular focus on their understanding of the limitations of Total B12 as a standalone marker and their awareness of the role of complementary tests in enhancing diagnostic precision and identifying subclinical functional deficiency.

symptoms of Vitamin B12 deficiency :

- Neuropsychiatric symptoms: anxiety, depression, and impaired memory,
- Central nervous system disturbances: imbalance and visual problem,
- Sensory symptoms: numbness and burning sensations,
- Muscular atrophy: progressive loss of muscle mass and strength and
- Hematological abnormalities: , megaloblastic anemia.

This issue is particularly pronounced in Palestine, where the ongoing occupation and harsh living conditions—including blockades and enforced food shortages—have significantly impacted the population's nutritional health. Vitamin B12 Deficiency is caused by either inadequate intake, inadequate bioavailability or malabsorption.