

Clinician Quick Reference Table

Micronutrient	Why It Matters	Who Is at Higher Risk of Deficiency	Preconception Screening Considerations	Key Preconception Actions
Folic Acid (Folate)	Prevents neural tube defects; supports early fetal neural development	Previous neural tube defect pregnancy, obesity, diabetes, antiepileptic medications, malabsorption	Assess supplement use and diet	Recommend ≥ 400 mcg folic acid daily before conception; higher doses for high-risk patients
Iron	Supports maternal hemoglobin, oxygen transport, and fetal growth	Heavy menstrual bleeding, vegetarian/vegan diets, adolescents, prior anemia	Consider CBC and ferritin if risk factors present	Screen for anemia and provide supplementation if deficient
Vitamin D	Supports bone health, immune function, and fetal skeletal development	Northern climates, darker skin pigmentation, limited sun exposure, obesity	Consider risk-based screening	Encourage vitamin D supplementation if deficiency risk present
Iodine	Essential for thyroid function and fetal brain development	Individuals with low iodized salt intake, restrictive diets, iodine-deficient regions	Assess diet and prenatal vitamin content	Ensure prenatal vitamin contains iodine where recommended
Vitamin B12	Supports neurological function and red blood cell production	Vegan/vegetarian diets, malabsorption disorders, bariatric surgery	Consider testing in high-risk patients	Supplement if deficient; ensure adequate intake prior to conception

Quick Clinical Reminders

- Micronutrient deficiencies can affect early fetal development before pregnancy recognition.
- Most individuals planning pregnancy should take a prenatal multivitamin that includes folic acid and other essential micronutrients.
- Dietary counselling should accompany supplementation, emphasizing:
 - Vegetables and leafy greens
 - Whole grains and fortified foods
 - Legumes and protein sources
 - Identify higher-risk patients early to allow time for correction of deficiencies before pregnancy.

Clinical Pearl

Because organ development begins in the earliest weeks of pregnancy, micronutrient status should be optimized before conception rather than waiting until pregnancy is confirmed.