



## Vitamin B12 Deficiency in the Type 2 Diabetes Patients: A Comprehensive Guide

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### Description

Vitamin B12 plays an important role in the proper functioning of the body's nerve and blood cells, as well as the synthesis of DNA. It is typically found in animal-based foods such as meat, fish, and dairy products. However, recent studies have shown a link between type 2 diabetes and vitamin B12 deficiency. Research suggests that patients with type 2 diabetes are at a higher risk of developing vitamin B12 deficiency than the general population. This is due to several factors, including poor dietary intake, impaired absorption, and the use of certain medications to manage diabetes. One study found that over 20% of patients with type 2 diabetes had vitamin B12 deficiency. Another and it is and Metabolism found that metformin, a common medication used to manage diabetes, can reduce the absorption of vitamin B12 in the gut. Vitamin B12 deficiency can lead to a range of health complications, including anemia, neurological problems, and increased risk of cardiovascular disease. It can also worsen the symptoms of type 2 diabetes, such as nerve damage and diabetic retinopathy.

To prevent vitamin B12 deficiency in patients with type 2 diabetes, healthcare providers may recommend dietary changes and vitamin B12 supplements. Patients who are taking metformin may require higher doses of vitamin B12 to compensate for the medication's effects on absorption.

### Symptoms of vitamin B12 deficiency

In Type 2 Diabetes Patients symptoms such as fatigue and weakness will be observed due to the decreased production of red blood cells, which are responsible for carrying oxygen to the body's tissues. It plays an important role in nerve function, and a deficiency can cause neurological symptoms such as tingling, numbness, and difficulty with

balance. It can also lead to digestive issues such as constipation, diarrhea, and loss of appetite. Pale Skin complexion observed due to the decreased production of red blood cells.

### Treatment options for vitamin B12 deficiency in type 2 diabetes patients

The treatment of vitamin B12 deficiency in type 2 diabetes patients depends on the severity of the deficiency and its underlying cause. Treatment options include:

**Vitamin B12 supplements:** Vitamin B12 supplements can be taken orally, sublingually, or via injection. Oral supplements may not be as effective for individuals with malabsorption issues, and sublingual or injection forms may be necessary.

**Dietary changes:** Individuals who follow a vegan or vegetarian diet may need to incorporate vitamin B12-fortified foods or supplements into their diet.

**Gut bacteria rebalancing:** Some individuals with malabsorption issues may benefit from probiotics or other gut bacteria rebalancing treatments.

**Treating underlying conditions:** If vitamin B12 deficiency is caused by an underlying condition such as pernicious anemia or celiac disease, treating the underlying condition can help resolve the deficiency.

### Preventing vitamin B12 deficiency in type 2 diabetes patients

Preventing vitamin B12 deficiency in type 2 diabetes patients is crucial for maintaining overall health and preventing serious complications. Prevention methods include:

**Regular vitamin B12 testing:** Individuals with type 2 diabetes should have their vitamin B12 levels tested regularly, especially if they take metformin or have malabsorption issues.

**Supplementation:** Individuals with vitamin B12 deficiency or at risk of deficiency may benefit from vitamin B12 supplements.

**Dietary changes:** Incorporating vitamin B12-rich foods such as meat, dairy, and eggs into the diet can help prevent vitamin B12 deficiency

In conclusion, vitamin B12 deficiency is a common concern among patients with type 2 diabetes. Patients with diabetes should be regularly screened for vitamin B12 deficiency, and appropriate interventions should be taken to prevent and manage this condition. By addressing this issue, healthcare providers can help improve the quality of life for patients with type 2 diabetes and reduce their risk of complications.

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