

### Long-term Metformin Use and Vitamin B12 Deficiency in the ...

Context: Vitamin B12 deficiency may occur with metformin treatment, but few studies have assessed risk with long-term use. Objective: To assess the risk of B12 deficiency with metformin use in the Diabetes Prevention Program (DPP)/DPP Outcomes Study (DPPOS). Design: Secondary analysis from the DPP/DPPOS. Participants were assigned to the placebo group (PLA) (n = 1082) or the metformin ...  
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Publish Year: 2016

### Long-term Metformin Use and Vitamin B12 Deficiency in ... 9 mins read

<https://academic.oup.com/jcem/article/101/4/1754/2804585>

Abstract Subjects and Methods Results Discussion Ackn

In 1969, Berchtold et al (1) reported evidence of vitamin B12 malabsorption in patients who had been treated with metformin for as little as 3 months. As early as 1971, Tomkin et al (2) recommended that all patients on long-term metformin therapy have annual serum B12 testing, based on a cross-sectional evaluation. Since then, cross-sectional, retrospective, and longitudinal observational studies (3–14), as well as case reports (15, 16), have suggested a clinical association between long-term metformin use a...

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## Vitamin B12 Deficiency

Medical Condition

A condition characterized by low levels of vitamin B12.

Common (More than 200,000 cases per year in US)

Requires lab test or imaging

Treatment from medical professional advised

Can last several weeks or months

Occurs due to decreased intake of the vitamin, increased requirements or poor absorption. Include signs of anemia like breathlessness, yellowing of skin and neural dysfunction evident in mood changes. Depend on the cause and involves changes in diet, and vitamin B12 supplementation.

### Symptoms

- Skin pallor and yellowing of skin
- Extreme weakness and fatigue
- Sensations of pins and needles due to nerve damage
- Glossitis and mouth ulcers
- Breathlessness and dizziness
- Mood changes: depression, psychosis and irritability
- Some loss in sense of touch, walking and vision problems
- Symptoms of dementia
- Loss of appetite and weight loss

### Long-term Metformin Use and Vitamin B12 Deficiency in the ... <https://pubmed.ncbi.nlm.nih.gov/26900641>

Context: **Vitamin B12 deficiency** may occur with **metformin** treatment, but few studies have assessed risk with long-term use. Objective: To assess the risk of **B12 deficiency** with **metformin** use in the Diabetes Prevention Program (DPP)/DPP Outcomes Study (DPPOS). Design: Secondary analysis from the DPP/DPPOS. Participants were assigned to the placebo group (PLA) (n = 1082) or the **metformin** ...

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### Long-term Metformin Therapy and Monitoring for Vitamin B12 ... <https://pubmed.ncbi.nlm.nih.gov/28182265>

Objective: To examine the association between long-term **metformin therapy** and serum **vitamin B12** monitoring. Design: Retrospective cohort study. Setting: A single Veterans Affairs Medical Center (VAMC), 2002-2012. Participants: Veterans 50 years or older with either type 2 diabetes and long-term **metformin therapy** (n = 3,687) or without diabetes and no prescription for **metformin** (n = 13,258).

Cited by: 15 Author: Vijaya Kancharla, John L. Elliott, Birju B. Pa...  
Publish Year: 2017

#### PEOPLE ALSO ASK

- Can metformin cause vitamin B12 deficiency? ▾
- Can metformin cause malabsorption? ▾
- Can metformin cause neuropathy? ▾

Name of Journal: *World Journal of Diabetes*

Manuscript NO: 63533

Manuscript Type: FIELD OF VISION

**Long-term metformin therapy and vitamin B12 deficiency: An association to bear in mind**

Metformin and vitamin B12 deficiency

**Abstract**

To date, metformin still represents the first-line oral glucose-lowering drug used for the treatment of type 2 diabetes thanks to its well-established long-term efficacy and safety profile. Indeed, metformin is the most widely used oral insulin-sensitizing agent, being prescribed to more than 100 million people worldwide, including patients with prediabetes, insulin resistance and polycystic ovary syndrome. However, over the last decades several observational studies and meta-analyses have reported a significant association between long-term metformin therapy and a higher prevalence of vitamin

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#### PEOPLE ALSO ASK

Can metformin cause vitamin B12 deficiency? ▾

Can metformin cause malabsorption? ▾

Can metformin cause neuropathy? ▾

How does metformin affect the liver? ▾

Feedback

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