

Testing Vitamin B12 Levels in Neuropathy, Alopecia, Dizziness, and Fatigue: OHTAC Recommendation

Ontario Health Technology Advisory Committee

February 2014

Suggested Citation

This report should be cited as follows:

Ontario Health Technology Advisory Committee (OHTAC). Testing vitamin B12 levels in neuropathy, alopecia, dizziness, and fatigue: OHTAC recommendation [Internet]. Toronto: Queen's Printer for Ontario; 2014 February. 9 p. Available from: <http://www.hqontario.ca/evidence/evidence-process/appropriateness-initiative#B12-other-conditions>.

Permission Requests

All inquiries regarding permission to reproduce any content in Health Quality Ontario reports should be directed to EvidenceInfo@hqontario.ca.

How to Obtain OHTAC Recommendation Reports From Health Quality Ontario

All OHTAC reports are freely available in PDF format at the following URL:
<http://www.hqontario.ca/evidence/publications-and-ohtac-recommendations/ohtac-recommendations>.

Conflict of Interest Statement

All reports prepared by the Evidence Development and Standards branch at Health Quality Ontario are impartial. There are no competing interests or conflicts of interest to declare.

About Health Quality Ontario

Health Quality Ontario (HQO) is an arms-length agency of the Ontario government. It is a partner and leader in transforming Ontario's health care system so that it can deliver a better experience of care, better outcomes for Ontarians, and better value for money.

Health Quality Ontario strives to promote health care that is supported by the best available scientific evidence. The Evidence Development and Standards branch works with advisory panels, clinical experts, developers of health technologies, scientific collaborators, and field evaluation partners to provide evidence about the effectiveness and cost-effectiveness of health interventions in Ontario.

To conduct its systematic reviews of health interventions, the Evidence Development and Standards branch examines the available scientific literature, making every effort to consider all relevant national and international research. If there is insufficient evidence on the safety, effectiveness, and/or cost-effectiveness of a health intervention, HQO may request that its scientific collaborators conduct economic evaluations and field evaluations related to the reviews. Field evaluation partners are research institutes focused on multicentred clinical trials and economic evaluation, as well as institutes engaged in evaluating the safety and usability of health technologies.

About the Ontario Health Technology Advisory Committee

The Ontario Health Technology Advisory Committee (OHTAC) is a standing advisory subcommittee of the Board of Directors of Health Quality Ontario. Based on the evidence provided by Evidence Development and Standards and its partners, OHTAC makes recommendations about the uptake, diffusion, distribution, or removal of health interventions within the provincial health system. When making its recommendations, OHTAC applies a unique decision-determinants framework that takes into account overall clinical benefit, value for money, societal and ethical considerations, and the economic and organizational feasibility of the health care intervention in Ontario.

Publishing Health Quality Ontario Research

When the evidence development process is nearly completed, draft reviews, reports, and OHTAC recommendations are posted on HQO's website for 21 days for public and professional comment. For more information, please visit: <http://www.hqontario.ca/evidence/evidence-process/evidence-review-process/professional-and-public-engagement-and-consultation>.

Once finalized and approved by the Board of Directors of Health Quality Ontario, the research is published as part of the *Ontario Health Technology Assessment Series*, which is indexed in MEDLINE/PubMed, Excerpta Medica/Embase, and the Centre for Reviews and Dissemination database. Corresponding OHTAC recommendations and associated reports are also published on the HQO website. Visit <http://www.hqontario.ca> for more information.

When sufficient data are available, OHTAC tracks the ongoing use of select interventions it has previously reviewed, compiling data by time period and region. The results are published in the Ontario Health Technology Maps Project Report.

Disclaimer

This report was prepared by the Evidence Development and Standards branch at Health Quality Ontario or one of its research partners for the Ontario Health Technology Advisory Committee and was developed from analysis, interpretation, and comparison of scientific research. It also incorporates, when available, Ontario data and information provided by experts and applicants to HQO. The analysis may not have captured every relevant publication and relevant scientific findings may have been reported since the development of this recommendation. This report may be superseded by an updated publication on the same topic. Please check the Health Quality Ontario website for a list of all publications: <http://www.hqontario.ca/evidence/publications-and-ohtac-recommendations>.

Table of Contents

Background	5
Conclusions.....	6
OHTAC Recommendations	7
References.....	8

Background

The Evidence Development and Standards branch at Health Quality Ontario conducted a rapid review* (1) to answer the following research question:

- What is the clinical utility of serum vitamin B12 testing in cases of neuropathy, alopecia, dizziness, or fatigue?

*Rapid reviews are developed in response to an urgent need to provide evidence, and in some cases develop OHTAC recommendations, in support of provincial initiatives. Rapid reviews are usually completed within a 2-week timeframe and therefore are not as comprehensive as other evidence reports prepared by the Evidence Development and Standards branch at Health Quality Ontario.

Conclusions

- There is very low quality evidence that there is no association between vitamin B12 levels and neuropathy.
- There is very low quality evidence that there is no association between low vitamin B12 levels and alopecia.
- There were no studies identified on the clinical utility of serum vitamin B12 testing in cases with dizziness or fatigue.

OHTAC Recommendations

OHTAC recommends serum vitamin B12 testing be restricted to those with macrocytic anemia or malabsorption.

OHTAC recommends against serum vitamin B12 testing for the purpose of investigating dementia or cognitive impairment and for vague presentations such as alopecia, dizziness, and fatigue.

OHTAC recommends that oral vitamin B12 be used instead of intramuscular vitamin B12 unless there is evidence of malabsorption.

References

- (1) Health Quality Ontario. Testing vitamin B12 levels in cases of neuropathy, alopecia, dizziness, and fatigue: a rapid review. Toronto: Health Quality Ontario; February 2014. 20 p. Available from: <http://www.hqontario.ca/evidence/evidence-process/appropriateness-initiative#B12-other-conditions>.

Health Quality Ontario
130 Bloor Street West, 10th Floor
Toronto, Ontario
M5S 1N5
Tel: 416-323-6868
Toll Free: 1-866-623-6868
Fax: 416-323-9261
Email: EvidenceInfo@hqontario.ca
www.hqontario.ca

© Queen's Printer for Ontario, 2014