

Title	Clinical usefulness of vitamin B1 testing
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Aim

The National Health Insurance asked the HAS to determine whether reimbursement of vitamin B1 testing, currently only applying to public hospitals, should be extended to other care structures or not. This assessment is therefore carried out in the context of controlling medical expenditure.

Two main subjects were selected for assessing the clinical usefulness of vitamin B1 testing:

- Subject 1: Is there a consensual reference interval for defining vitamin B1 deficiency? Is having a vitamin B1 result lower than the reference interval an indicator of an increase in the risk of deficiency-related complications?
- Subject 2: Where a reference interval exists, does vitamin B1 supplementation guided by the test result improve the benefit/risk ratio compared to supplementation initiated without this data?

Conclusions and results

The data collected for this assessment do not make it possible to determine the satisfactory clinical usefulness of vitamin B1 testing justifying its reimbursement by the regional authorities.

In effect, the analysis of the literature and the experts' position show that:

- there is no consensual and clinically-relevant reference interval to date for defining vitamin B1 deficiency;
- there are no studies having compared the effect of supplementation prescribed without testing vitamin B1 to supplementation guided by testing, whether for the neurological risk and/or the cardiac risk in vitamin B1-deficient patients. The experts consider however that despite the absence of a consensual reference interval and conclusive data, vitamin B1 testing may be useful in clinical practice to determine the aetiology of certain neurological diseases, and for starting preventive or curative supplementation, in particular in difficult medico-social contexts.

Also, concerning the toxicity of vitamin B1, the little literature identified and the position of the experts show that the safety profile of vitamin B1 appears satisfactory, regardless of the method of administration (PO, IM, IV). Also, good practice recommendations and the technological assessment reports analysed are heterogeneous and on the whole have reservations as to the usefulness of testing vitamin B1 routinely in these patients.

As the complications of vitamin B1 deficiency are serious, it is necessary to remain attentive to high risk situations and to the clinical signs of deficiency, in view of empirical routine vitamin B1 supplementation, the risk of toxicity being low.

Methods

The conclusions of this report are based on:

- critical analysis of data from the literature identified after a systematic literature search and selection on the basis of explicit criteria;
- the position of a multidisciplinary group of individual experts;
- collection of the collective viewpoint of bodies of professionals and patients' associations, questioned as stakeholders.

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