

Debate & Analysis

Should GPs prescribe vitamin B compound strong tablets to alcoholics?

INTRODUCTION

Many medicine management committees are advising their GPs not to prescribe vitamin B compound strong tablets to alcoholics as they believe it is not recommended by the National Institute for Health and Care Excellence (NICE). The NICE guidelines for the management of alcohol problems that they quote do not discuss the use of vitamin B supplements other than thiamine (vitamin B1).^{1,2} This is not surprising because the clinical guideline is advising about the prevention and treatment of Wernicke–Korsakoff syndrome (WKS) in which just thiamine and not other B vitamin deficiency is implicated. There are many other diseases that can be caused by other B vitamin deficiency.

RECOGNISING B VITAMIN DEFICIENCY AND DISEASE

B vitamins are a group of chemically different water-soluble co-factors, co-enzymes, and precursors that are important for many metabolic processes. A range of B vitamin deficiencies have been reported in chronic excessive and regular alcohol drinkers, and these deficiencies are associated with a wide range of disease involving the central and peripheral nervous system, heart, skin, bone marrow, and gastrointestinal system as summarised in Table 1.^{3–5}

These conditions vary in severity, and affected patients may have non-specific and intermittent symptoms and signs, making diagnosis difficult.^{3–6} A high degree of suspicion is needed. Diagnosis is further made difficult as, other than for serum folate and vitamin B12, diagnostic tests are not available. However, because they have similar paths of absorption, metabolism, and clearance, depletion in serum folate implies deficiency in other B vitamins (though vitamin B12 deficiency may result from intrinsic factor deficiency rather than from malabsorption due to chronic drinking).

CHRONIC ALCOHOL DRINKERS AND VITAMIN B DEFICIENCY

Chronic drinkers are particularly likely to have vitamin B deficiency. The groups at higher risk are:^{3–5}

- older patients with a long history of regular and excessive drinking and dependence;

Table 1. Diseases caused by vitamin B deficiencies

Vitamin	Disease	Effect
Vitamin B1 (thiamine)	Wernicke–Korsakoff syndrome (WKS)	Acute and chronic brain syndrome
	Beri-beri	Cardiomyopathy, with or without cardiac failure
Vitamin B2 (riboflavin)	Dementia	Chronic brain syndrome
	Anaemia	
	Dermatitis and glossitis	
Vitamin B3 (nicotinic acid/niacin)	Pellagra	Irritable skin rashes, glossitis
	Encephalopathy	Lower seizure threshold, disturbed higher mental executive functions and memory
	Enteropathy	Diarrhoea
Vitamin B6 (pyridoxine)	Peripheral neuropathy	Sensory, often painful
	Cardiomyopathy	Reduced heart function, heart failure
	Dermatitis	Irritable skin rashes
Folic acid	Anaemia	Including peripheral neuropathy, subacute degeneration of spinal cord, cerebral atrophy
	Neural tube defects in foetus	
	Neuropathy and encephalopathy	
Vitamin B12	Macular degeneration	Reduced central vision
	Anaemia	Peripheral neuropathy, subacute combined degeneration of the spinal cord, cognitive impairment
	Neuropathy and encephalopathy	
Psychiatric syndromes	Anxiety and irritability Depression Psychosis	
	Cardiomyopathy	Reduced heart function, heart failure

- patients who have generally poor nutrition, who are losing weight, have low body weight, and who have diarrhoea suggesting intestinal malabsorption; and
- patients with evidence of deficiency for one type of B vitamin deficiency. This implies they are likely to have deficiency in others, for example:
 - peripheral neuropathy, which may be associated with vitamin B6 deficiency;
 - cardiomyopathy from deficiency in vitamin B1 or B6;
 - persistent skin rashes, glossitis, and mucosal membrane ulcers, which may be associated with vitamin B2, B6, and niacin deficiency; or

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“... it is generally recommended that generic vitamin B compound strong tablets are given two tablets twice daily or one tablet four times daily in addition to encouraging a normal diet rich in B vitamins.”

—low serum folic acid levels.

Oral vitamin B compound strong tablets contain these B vitamins in greater than normal dietary requirements. They are relatively cheap and there are no reported serious adverse effects from them.⁴⁻⁶ Higher-dose oral vitamin B supplements appear better absorbed than lower-dose oral preparations, and they will correct vitamin B deficiencies without causing adverse effects.⁴⁻⁶ There are no known major interactions with other drugs. There is insufficient thiamine in vitamin B compound strong tablets to correct thiamine deficiency in chronic drinkers, so additional thiamine supplements are necessary for the prevention of WKS.^{1,2}

It is also likely that, similar to thiamine, where there is a sudden increase in body metabolism, such as from re-feeding, acute illness, infection, and assisted withdrawal, there is an increased demand for these vitamins from stores already depleted, thus exacerbating deficiency diseases.

RECOMMENDATIONS

Vitamin B compound strong should be prescribed to a problem drinker in addition to thiamine if:

- there are signs and symptoms suggestive of B vitamin deficiency (as outlined above);
- there is evidence of poor nutrition and malabsorption, such as low body mass index (<18.5) or significant weight loss

over the last 6 months (>5%), and the patient has a low serum folate level;

- the patient has diseases likely to combine with chronic drinking to cause vitamin deficiencies, such as malabsorption syndromes (for example, Crohn's and coeliac disease), severe chronic organ disease (for example, severe chronic liver disease, chronic kidney disease, severe chronic heart and lung disease), and severe chronic infection (for example, tuberculosis);
- in preparation for assisted withdrawal, where body demand for B vitamins is likely to increase; or
- there is uncertainty about the optimum dose of these B vitamins in deficiency states. However, it is generally recommended that generic vitamin B compound strong tablets are given two tablets twice daily or one tablet four times daily in addition to encouraging a normal diet rich in B vitamins.⁷

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Provenance

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Competing interests

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