Prescribing guidance: B vitamins

Summary

Nutrient	Indication	Dose	Review
Thiamine (Vitamin B_1)	Wernicke-Korsakoff syndrome/ Deficiency related to chronic alcoholism	300mg per day (in divided doses) whilst the patient is undergoing assisted withdrawal, or is drinking excessively.	Following successful alcohol withdrawal, thiamine should be continued for 6 weeks. If after this time the patient remains abstinent and has regained adequate nutritional status, thiamine should be discontinued. Thiamine should be restarted if the patient starts drinking again. Continuing need for thiamine should be reviewed at appropriate intervals which may depend on individual patient circumstances. With chronic alcohol dependence/Wernicke-Korsakoff, oral thiamine may need to be continued indefinitely.
	Beriberi	Mild deficiency: 25-100mg daily Severe deficiency: 200mg-300mg daily in divided doses.	
Vitamin B Compound Strong	Proven clinical and sub-clinical deficiency	Vitamin B Compound **Strong** Treatment of deficiency (Adult) 1–2 tablets 3 times a day Prophylaxis of deficiency **(Over-the-Counter)** 1–2 tablets daily	De-prescribe when clinical manifestations resolve.
Vitamin B compound/ complex	Not recommended		

Approved by: East Kent Prescribing Group *(Representing Ashford CCG, Canterbury and Coastal CCG, South Kent Coast CCG and Thanet CCG)*
Date: January 2020
Contact: accg.eastkentprescribing@nhs.net

1. Dental Patients

It is unjustifiable to treat stomatitis or glossitis with mixtures of vitamin preparations; this delays diagnosis and correct treatment (1)

Most patients who develop a nutritional deficiency despite an adequate intake of vitamins have malabsorption and if this is suspected the patient should be referred to a medical practitioner (1).

2. Thiamine

For the treatment of thiamine deficiencies due to increased dietary requirements, reduced intakes, reduced absorption or increased excretion. Also for treatment of Wernicke-Korsakoff syndrome, beriberi and thiamine deficiency related to chronic alcoholism.

Unless clinically indicated due to severe deficiency, patients should be encouraged to have a balanced diet or purchase an over-the-counter A-Z multivitamin and mineral supplement.

For those with an identified severe deficiency, the appropriate dose is 200-300mg per day in divided doses.

3. Vitamin B Co Strong / Vitamin B Complex tablets

Vitamin B compound and vitamin B compound strong tablets are licensed for the prophylaxis and treatment of deficiency respectively (1). However, deficiency of the B vitamins, other than vitamin B12 and thiamine in harmful or dependent drinkers, is rare in the UK (1, 4). The BNF regards these products as less suitable for prescribing possibly due to their questionable clinical benefit - they should not be considered as drugs of first choice, but may be justifiable in certain circumstances (7). The exceptions in the NHS England guidance that allow vitamins to be prescribed are noted in the blue box below. Maintenance or preventative treatment is not considered an exception (5).

Clinical indications for vitamin B co strong include treatment of clinical and sub-clinical vitamin B deficiency states (manifestations of which include glossitis, stomatitis, cheilosis, the heart manifestations of beriberi, the skin manifestations of pellagra, corneal vascularisation and polyneuritis). It is not recommended for prescribing to harmful or dependant drinkers (see section 4). If the prescribing of vitamin B complex is considered justifiable based on the circumstances described above, vitamin B compound strong tablets should be prescribed as they represent better value for money compared to vitamin B compound tablets with little difference in nutritional content as shown below:

Tablet	Nicotinamide	Pyridoxine	Riboflavin	Thiamine	Price for 28 tabs
Vitamin B Co Strong	20mg	2mg	2mg	5mg	£2.18
Vitamin B Complex	15mg	-	1mg	1mg	£26.63

4. Alcohol misuse and Wernicke's encephalopathy

Wernicke's encephalopathy (WE) is a state of mental confusion, ataxia and ophthalmoplegia that may develop in problem drinkers. People who are alcohol-dependent are often malnourished and deficient in vitamins, particularly in thiamine, due to poor diet, poor absorption, and a high demand for the vitamin – thiamine has a role as a co-enzyme in alcohol metabolism (2).

If vitamin supplementation is being initiated in primary care, GPs may follow RMOC guidance (6):

- In line with NICE guidance, oral thiamine should be prescribed for the prevention of WE to harmful or dependent drinkers in whom any of the following apply:

  - They are malnourished or at risk of malnourishment
  - They have decompensated liver disease
  - They are in acute alcohol withdrawal
  - Before and during a planned medically-assisted alcohol withdrawal
- Within east Kent the higher dose within the RMOC recommended range is advised: 300 mg daily in divided doses.
- Thiamine should be continued for as long as malnutrition is present and/or during periods of continued alcohol consumption.
- Following successful alcohol withdrawal, thiamine should be continued for 6 weeks. If after this time the patient remains abstinent and has regained adequate nutritional status, thiamine should be discontinued. Thiamine should be restarted if the patient starts drinking again.
- Continuing need for thiamine should be reviewed at appropriate intervals which may depend on individual patient circumstances.

Vitamin B compound & vitamin B compound strong tablets are combinations of various B vitamins, including thiamine. They have been used historically in patients with alcohol-use disorder. However, NICE (CG 100) makes no reference to the use of these preparations due to a lack of evidence (3) – neither of these products contains enough thiamine for treatment/prophylaxis of Wernicke's encephalopathy (1mg thiamine per Vit B co tab, 5mg thiamine per Vit B co strong tablet) and hence they are not recommended for prescribing for this indication.

Note:
Vitamins and minerals are included in the NHSE 'Conditions for which over the counter items should not routinely be prescribed in primary care: Guidance for CCGs' as items of limited clinical effectiveness that should not routinely be prescribed.

Exceptions are:

- Medically diagnosed deficiency, including for those patients who may have a lifelong or chronic condition or have undergone surgery that results in malabsorption. Continuing need should however be reviewed on a regular basis. NB maintenance or preventative treatment is not an exception.
- Calcium and vitamin D for osteoporosis.
- Malnutrition including alcoholism (see NICE guidance)
- Patients suitable to receive Healthy Start vitamins for pregnancy or children between the ages 6 months to their fourth birthday. (NB this is not on prescription but commissioned separately)

References:

1. BNF. Vitamins and Minerals with Trace Elements. 2018
2. Department of Health. Dietary Reference Values for Food Energy and Nutrients for the United Kingdom: Report of the Panel on Dietary Reference Values of the Committee on Medical Aspects of Food Policy. Report on Health and Social Subjects 41. Report on Health and Social Subject. London : HMSO, 1991.
3. NICE CG100 Alcohol-use disorders: diagnosis and management of physical complications
4. NICE CKS – Alcohol – Problem drinking
5. NHS England. Items which should not be routinely prescribed in primary care: Guidance for CCGs. 2017

6. Regional Medicines Optimisation Committee (RMOC) Position Statement – Oral vitamin B supplementation in alcoholism November 2019
7. PrescQIPP. Bulletin 107: The prescribing of vitamins and minerals including vitamin B preparations (DROP-List), August 2015. Accessed via: https://www.prescqipp.info/our-resources/bulletins/bulletin-107-vitamins-and-minerals-drop-list/ on 01/10/2019.