

Prescribing Thiamine in alcohol Users Why, How and When a guide for GPs

Wernicke's encephalopathy results from neural damage triggered by thiamine deficiency

Most cases of Wernicke's encephalopathy are undiagnosed

Post mortem studies suggest over 12% heavy alcohol users have pathological evidence of WE

Undiagnosed or untreated Wernicke's encephalopathy can lead to Korsakoff's syndrome this is due to irreversible brain changes.

Studies show the incidence of this is increasing; about 1:20000 adults

Care costs of someone with Korsakoff's syndrome can be in excess of £500000

Based on 20 years of care at £500 per week

The incidence of Wernicke's encephalopathy can be significantly reduced by provision of adequate thiamine replacement

What does NICE say?

Offer thiamine to people at high risk of developing, or with suspected Wernicke's encephalopathy. Thiamine should be given in doses toward the upper end of the "BNF" range. It should be given orally or parentally as follows:

[200-300mg per day, essential this is in divided doses]

Offer prophylactic oral thiamine to harmful or dependent drinkers:

If they are malnourished or at risk of malnourishment or if they have decompensated liver disease, are in acute withdrawal or before and during planned medically assisted withdrawal.

They also suggest parenteral thiamine for any of the above groups with an acute hospital admission, A/E attendance or suspected Wernicke's encephalopathy.

The Scottish Intercollegiate Guidelines Network [SIGN] go further:

all "at risk" patients detoxifying in the community should be given IM thiamine [Pabrinex 1 pair daily for 3 days] this is a suitable treatment to carry out in a GP surgery.

Risk of anaphylaxis with IM thiamine is estimated at 1 per 5 million administrations about the same as an influenza immunisation.

¹ [Hazell AS](#), [Todd KG](#), [Butterworth RF](#). Mechanisms of neuronal cell death in Wernicke's encephalopathy. *Metab Brain Dis.* 1998 Jun ;13(2):97-122.

¹ Harper C, Dixon G, Sheedy D, et al; Neuropathological alterations in alcoholic brains. Studies arising from the New South Wales Tissue Resource Centre. *Prog Neuropsychopharmacol Biol Psychiatry.* 2003 Sep;27(6):951-61.

¹ Smith ID, Flanigan C; Korsakoff's psychosis in Scotland: evidence for increased prevalence and regional variation. *Alcohol Alcohol Suppl.* 2000 May-Jun;35(1):8-10.

¹ Martin, P. J., Singleton, M. D., & Hiller-Sturmhofel, S. (2003). The role of thiamine deficiency in alcoholic brain. *Alcohol Research and Health*, 27, 134-142.

¹ National Institute for Health and Clinical Excellence Alcohol dependence and harmful alcohol use (CG115)

¹ Scottish Intercollegiate Guidelines Network The management of harmful drinking and alcohol dependence in primary care [SEP] Guideline No 74

¹ Thomson A, Cook C, Touquet R, Henry J (2002) The Royal College of Physicians report on alcohol: guidelines for managing Wernicke's encephalopathy in the accident and emergency department. *Alcohol Alcohol* 37: 513-521