

# Vitamin B1



deficiency

## What does it mean?

This educational leaflet is provided by Kyowa Kirin Ltd

# THE BRAIN:

## What does it do and what does it need?

Your brain is the control centre of your body: everything you do, every single day, is controlled by your brain. In order for your brain to work properly, it needs Glucose, Oxygen and essential nutrients, such as vitamins and minerals, including Vitamin B<sub>1</sub>. If one of these elements is out of balance, your brain may become damaged. Drinking too much alcohol can eventually cause permanent damage to your brain, and the following information will help to explain why.

## What happens when you drink too much alcohol over time?

- Difficulty walking
- Blurred vision
- Slurred speech
- Poor memory
- Blackouts
- Slowed reaction times



These symptoms can happen even when you have stopped drinking.

One reason you may suffer from these kinds of symptoms is because your brain is not getting enough vitamin B<sub>1</sub> (also known as thiamine), but what does this actually mean and why is it important?

## Why do we need vitamin B<sub>1</sub>?

Vitamin B<sub>1</sub> is needed in order for your nerves and muscles to work properly so that you can walk, see, talk and remember things. As your body can't make vitamin B<sub>1</sub> itself, it has to come from your diet, so you must get it from foods such as meat, cereals, beans and nuts. Let's now look at the relationship between alcohol and vitamin B<sub>1</sub>.

## How does too much alcohol affect vitamin B<sub>1</sub>?

The body uses vitamin B<sub>1</sub> to help break down carbohydrates, which are a source of energy and can be found in starchy foods like potatoes, pasta or bread. The reason the amount of alcohol you drink is important is because alcohol also contains a lot of carbohydrate, so the more you drink, the more vitamin B<sub>1</sub> you need for your body to be able to break this down. There are two downsides to alcohol in all of this which are important for you to understand:



- Alcohol is full of carbohydrate and vitamin B<sub>1</sub> is low or absent. This means, the more alcohol you drink, the more vitamin B<sub>1</sub> you need
- Alcohol also stops your body from being able to use vitamin B<sub>1</sub> properly, so you need even more vitamin B<sub>1</sub> to take account of this

## Wernicke's encephalopathy (WE)

Although you might think this is 'just' a vitamin, vitamin B<sub>1</sub> is extremely important and your brain won't work properly without it. A lack of vitamin B<sub>1</sub> can lead to Wernicke's encephalopathy, or WE for short. Wernicke's encephalopathy is a condition that affects the brain and is caused by a shortage of vitamin B<sub>1</sub>. People with Wernicke's encephalopathy can suffer from:

- blurred vision
- problems remembering people they have met or things that have happened
- being unsteady on their feet

If this is left untreated, it can get worse very quickly, and may even lead to permanent brain damage and death.

## What can be done to help?

There are treatments available to help manage this condition and one of the treatments your doctor or nurse may decide to give you is vitamin B<sub>1</sub>. Vitamin B<sub>1</sub> can be given either as a tablet or an injection.

Your doctor or nurse may decide you are at risk of developing Wernicke's encephalopathy and may offer treatment to help raise your vitamin B<sub>1</sub> levels quickly.

In addition to any treatment you are given, you will be given advice on your lifestyle and diet. It is important that you have healthy meals on a regular basis in order to keep up your body's store of vitamin B<sub>1</sub>. You should always tell your nurse or doctor how much alcohol you are drinking and how much and what type of food you are eating.

Fill out the drink / food diary using the numbers and letters below and then take this to the next appointment with your nurse or doctor.

Remember, ask your nurse or doctor for help if you have any questions at all about what is happening to you, or if you need more information on what treatment you have been given.

## Food

1. Breakfast
2. Takeaway
3. Sandwich
4. Hot meal with vegetables

## Drink

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>A. Pint of lower strength lager</li> <li>B. Pint of higher strength lager</li> <li>C. Bottle of cider</li> <li>D. Large glass of wine</li> </ol> | <ol style="list-style-type: none"> <li>E. Bottle of wine</li> <li>F. Double spirit</li> <li>G. 1/2 bottle of spirit</li> <li>H. Whole bottle of spirit</li> </ol> |
|---|---|

## DRINK / FOOD DIARY

	Food	Drink
Monday am		
Monday pm		
Tuesday am		
Tuesday pm		
Wednesday am		
Wednesday pm		
Thursday am		
Thursday pm		
Friday am		
Friday pm		
Saturday am		
Saturday pm		
Sunday am		
Sunday pm		