

## Terms and Definitions

There are several terms that are used to describe the potentially damaging effects of alcohol and related vitamin deficiencies on the brain.

The terms **intoxication** or **drunkenness** are well recognised and usually do not imply any long-standing damage. However, when there is a history of longer term, heavy drinking, sudden cessation of alcohol can result in unpleasant **withdrawal** problems. Multiple withdrawals, over a period of time have been associated with longer term brain damage and changes in intellect (**cognitive damage**).

Long term alcohol dependency is frequently associated with vitamin deficiency (particularly thiamine deficiency). Withdrawal associated with thiamine deficiency may result in a life-threatening condition known as **Wernicke's encephalopathy**. This condition requires immediate hospital treatment. The person presents as confused, hallucinating and experiencing serious neurological changes. When this is not treated (and the person survives) it may be followed by permanent cognitive impairment and neurological problems. This is called Korsakoff's Syndrome. **Korsakoff's Syndrome** is characterised by disabling long term memory loss and the inability to learn new information (short term memory loss). It is often associated with the person experiencing false memories (**confabulations**). There are usually significant neurological problems including unsteadiness and changes in eye co-ordination and double vision. Someone who has suffered brain damage as a result of thiamine deficiency is often referred to as having **Wernicke-Korsakoff's Syndrome (WKS)**.

Thiamine deficiency and WKS is not the only way in which alcohol misuse can damage the brain. For most people, cognitive damage may be much more gradual and subtle in onset. The commonest problems encountered involve changes in the front part of the brain. These include problems in complex reasoning, planning and working things out. Other features include progressive changes in social understanding, anticipating risk, impulse control and making complex decisions. These are often associated with problems in mood including difficulty in initiating things, flattening of mood (lack of reaction in mood to events) or excessive outbursts. These features may be associated with changes in memory, both long term and short term. This more subtle and gradual presentation may last a few months and spontaneously improve if the individual remains abstinent. In more severe cases the brain needs time to regrow, and this can take three or four years of abstinence. Some cases will be left with permanent cognitive problems that will deteriorate if drinking continues.

There are a variety of terms that have been used to describe changes that are not as obvious or as well defined as Korsakoff’s psychosis. These include:

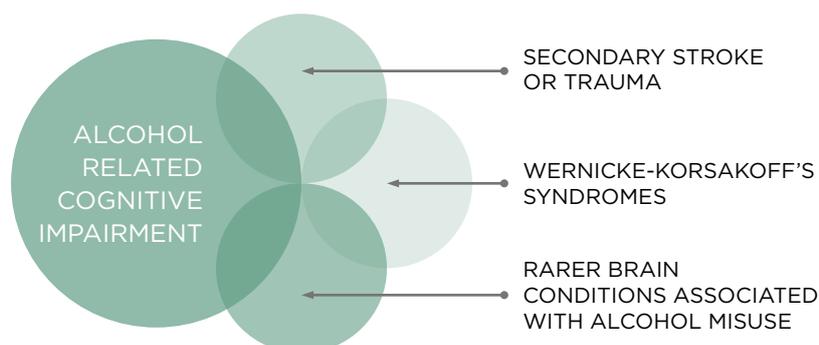
**Alcohol related dementia.** The problem with this term is that the word ‘dementia’ implies a deteriorating, incurable disease such as Alzheimer’s Disease. However, in most cases cognitive change associated with alcohol misuse will improve in the context of abstinence and appropriate help.

**Alcohol related brain Injury (ARBI).** This is a potentially useful term but is easily confused with the term acquired brain injury (ABI). ABI services within the NHS provide services for people who have suffered an acute onset brain injury, often from a trauma (for example, from a road traffic accident), and sudden illnesses such as strokes, or causes of lack of oxygen to the brain. Generally, ABI services do not cater for the need of people who are suffering from cognitive change resulting from alcohol misuse.

The America Diagnostic and Statistical Manual and the World Health Organisation International Classification of Diseases both provide several definitions for all these presentations.

For the sake of simplicity, we have adopted the well-recognised term **Alcohol Related Brain Damage**. This is a general term that covers the varying cognitive problems that may present because of alcohol misuse and associated thiamine deficiency. As an ‘umbrella term’ it has practical use in development of services for the treatment/management of people with these conditions. It includes the transient and/or more permanent Alcohol Related Cognitive Impairment which may be slow and subtle in onset and the more obvious conditions of Wernicke-Korsakoff syndrome. As an ‘umbrella term’ it is flexible and enables the inclusion of some of the rarer conditions associated with long term alcohol misuse and secondary conditions superimposed on the underlying alcohol related changes (such as head trauma or early stroke disease) that are found in up to a quarter of people suffering from primary damage due to alcohol misuse.

## ALCOHOL RELATED BRAIN DAMAGE (ARBD)



A network to raise awareness of **alcohol related brain damage (ARBD)** amongst healthcare professionals and the public through education and **information to improve clinical outcomes**

