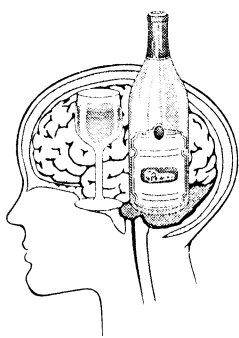


Alcohol and brain

(Courtesy: Applied Medicine)



Alcohol is widely used by the majority of the population on a relatively regular basis without any detrimental neurological effect. There is no convincing evidence that it is harmful to the brain in modest quantities and some would argue that it has a positive effect on society, facilitating communication and relaxation. Nevertheless, a significant proportion of the population are vulnerable to this drug which can have devastating neurotoxic effects.

Entire populations will stop eating beef because of the remote possibility and inconclusive evidence suggesting possible neurological consequences, and yet thousands die from alcohol related neurological damage every year. Because alcoholism is considered to be a social or psychological problem, most believe that they will not allow themselves become dependent.

There is very little that the medical profession can do to accurately identify vulnerable individuals on any significant scale. It is nonetheless unfortunate that most patients with alcohol-related problems go undiagnosed until some unpleasant social disaster befalls them or their brains become so damaged as to cause marked impairment of functioning. Not only is it essential to recognize the symptoms and signs of alcohol-related neurological disease, but also practitioners should develop the habit of routinely taking a comprehensive alcohol history.

Possibly of more significance is the attitude of the profession to alcoholism. The evidence suggests that anyone can develop a dependency problem if they have sufficient neurological vulnerability factors. Alcohol's ready availability makes addiction extremely difficult to avoid and once dependency has occurred it may not be possible to prevent eventual neurotoxic damage.

The long-term prognosis for those with alcohol dependency is bleak, with possibly no more than 12% able to sustain abstinence for any significant period (Edwards, 1982).

Continuing support and often frequent, repeated emergency intervention from the profession are possibly the best that most alcoholics can hope for. There is a great need for both clinicians and scientists to coordinate research strategies in order to identify predictive measures and treatment possibilities, as there would seem to be little likelihood of the problem of neurotoxic alcoholic brain damage significantly declining in the foreseeable future.

*Alcoholism is seen as a social or psychological problem, so most believe that they will not allow themselves to become dependent.

*Dependence is not merely a social disease, but a brain disorder possibly mediated by a combination of genetic factors, neurochemical deficits and underlying congenital or acquired cerebral dysfunction.

*Recognition of an underlying brain disorder enables practitioners to appreciate the complexity of dependency and the difficulties experienced by alcohol-dependent patients.

*The direct neurotoxic effects of acute alcohol intoxication are unpredictable.

*Wernicke's encephalopathy is a serious medical emergency, but multiple atypical presentations mean that as few as 20% of cases reaching autopsy are positively diagnosed in life.

*Alcohol accounts for at least 10% of all cases of end-stage dementia.

*Generalized cerebral atrophy is not uncommon and some cognitive impairment has been seen in up to 50% of chronic alcoholics over 45 years of age.

*Seizures following withdrawal of alcohol are not spontaneous, and are therefore inappropriately diagnosed as epilepsy. True withdrawal seizures should not be treated with long-term anti-epileptics.

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