

Additional ingredients in alcoholic beverages

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It is often claimed that different types of alcoholic beverages cause different kinds of intoxication, hangover or some other effect. Almost as often we are told that these differences are due to the hundreds of additional ingredients in alcoholic beverages. These popular beliefs have seldom been proved under laboratory conditions. A study published in England did, however, verify that red wine was liable to cause migraine.

The severity of hangover depends on how much alcohol has been consumed. The type of alcohol and therefore the additional ingredients have no influence. Still, many blame their hangover on additional ingredients. All alcoholic beverages include, in addition to "normal alcohol" i.e. ethanol, also methanol and fusels, i.e. higher alcohols like propanol, butanol and amyl alcohol. In large doses they have an intoxicating effect, just like ethanol. The amount of other alcohols is, however, very small, only about 1/1000 of the ethanol content. It is therefore unlikely that the higher alcohols or even their toxic metabolic residuals could be responsible for causing the hangover.

Some strong wines, like sherry, contain lactones that may have a paralysing effect as they hinder the functioning of certain nerve cells of the brain. The lactone extracts of sherry have, in large doses, an effect on the behaviour of laboratory animals. But when they are taken orally, no effect can be detected. Apparently the substances are destroyed in the digestive process.

Often people claim that different alcoholic beverages cause different kinds of intoxication. Mild beverages have been contrasted with strong drinks, and "clear" beverages with "coloured" beverages. This belief is supported by the findings of a study made in Finland. Those who drank beer did not feel as aggressive as those who drank strong liquors. A more viable explanation is, however, found in the alcohol content of the beverages rather than in the other differences of composition. Because of beer's high liquid content, the alcohol in it is absorbed slowly. Therefore it takes longer to become intoxicated. The blood alcohol content may also stay at a lower level than when the same amount of alcohol is drunk in strong liquors. Strong liquors are small in volume and this is why the alcohol absorbs quickly, causing the blood alcohol content to rise sharply and the intoxication to develop quickly. It is easy to understand that a fast incipient intoxication has different effects and arouses different feelings than an intoxication that develops slowly.

No differences have been found in the effects of vodka and whisky. The additional ingredients probably have no effect on intoxication, but whether a drink is taken short or mixed and what it is mixed with may matter.

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