

Effects of alcohol on population groups

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What is alcohol?

Alcohol (ethanol or ethyl alcohol) is the ingredient found in beer, wine and spirits which causes drunkenness. Alcohol is formed when yeast ferments (breaks down without oxygen) the sugars in different foods; for example, wine is made from the sugar in grapes, beer from the sugar in malted barley (a type of grain), cider from the sugar in apples, and vodka from the sugar in potatoes, beets or other plants.

Introduction

Alcohol is a regular or occasional drink enjoyed at social occasions that causes no apparent harm. However, even moderate alcohol use carries some risks, as alcohol causes breast cancer even at low doses, can damage the developing foetus before a woman even knows she is pregnant and can lead to addiction and dependence in any individual.

When drunk regularly over time and in a pattern of heavy single drinking sessions, alcohol can cause a variety of health conditions. These include cancers and other conditions such as alcoholic liver disease, which can range from reversible to permanent liver damage due to alcohol. The risks of alcohol-related cancers and other health conditions caused by alcohol are greatest in those who are dependent on alcohol or drink heavily, and the risks increase with the average amount of alcohol drunk.

Women

Women have higher blood alcohol levels after drinking the same amount of alcohol as men, so can get drunk faster and can suffer the toxic and lethal effects of alcohol poisoning at a lower dose. This is because women on average:

- Are smaller than men so have less fluid in their bodies to distribute alcohol around (having a higher fat to water ratio)
- Probably have less of the enzyme needed to break down alcohol in the liver.

Women who drink alcohol are at increased risk of developing breast cancer and drinking while pregnant increases the risk of harm to the unborn baby.

Men

Patterns of alcohol use differ between men and women in Haryana, with men still being overall more likely to drink compared with women.

Among drinkers, men are more likely to drink daily or several times a week, drink heavily on a single occasion and drink heavily more often. Men are at higher risk of experiencing harm from their own drinking and physical assault related to alcohol and experience more deaths from alcohol-related causes.

Young People

Children and young adults are more vulnerable to negative impacts of alcohol on memory and learning, as the brain is still developing up until the 20s.

Young people up to the age of 25 years are at a higher risk of harm from alcohol use than older adults. This is because young adults have the greatest risk of injury and accidents related to alcohol use, an increased risk of alcohol dependence and a lower tolerance to alcohol than older adults. Other harms that affect young people more than adults include unprotected and unwanted sex, assault, arrests, and harmful effects on social life, finances or work/study.

Older People

Alcohol use often declines in older age but older people may be at risk of developing problem drinking – alcohol abuse or dependency – often triggered by significant life events such as loss of a loved one, loneliness, retirement, insomnia, illness or pain.

Older people are less tolerant to the effects of alcohol. As a result of aging, alcohol is not broken down by the body as efficiently. The ratio of body water to fat tends to fall and



alcohol has a faster effect on the brain, meaning it takes less alcohol to become drunk and this increases the risk of falls and injury.

Older people who drink alcohol and drive are at much higher risk of traffic accidents than those who do not drink. Alcohol interacts with many common prescription medicines and this may be a reason for many older people to avoid or restrict their alcohol use.

The unborn child

Drinking alcohol at any stage during pregnancy can affect the development of the unborn baby (the foetus) as alcohol passes through the placenta

from the blood of the mother to the foetus. The most extreme consequence of alcohol affecting the foetus is a miscarriage or stillbirth. In other cases, the baby can be born with significant permanent effects. The range of effects on a child caused by alcohol is called foetal alcohol spectrum disorder (FASD). These effects include premature birth, restricted growth,

birth defects, brain damage, developmental delay, and social, emotional, behavioural and mental deficits. In an older child, this can manifest as low IQ, poor social skills, inattention, and problems with aggressive and impulsive behaviour.

As there is no known safe level for using alcohol during any stage of pregnancy, it is advised that any woman who is pregnant or wishing to get pregnant should not drink alcohol. Alcohol is also best avoided while breastfeeding, as alcohol can pass through the milk to the baby and affect development.

Children and families

Children in families where an adult abuses alcohol or drinks heavily are known to be vulnerable to a variety of negative effects. As well as the risk of being affected by FASD, these children, compared with children in families without a parent or caregiver who drinks heavily, are at higher risk of injury, poisoning and hospitalisation, eating disorders (for females), depression and anxiety, conduct disorders, aggression, attention deficit/hyperactivity, lower educational achievement and heavy alcohol use in adolescence.

Some of the reasons for these negative effects include higher rates of conflict between parents, greater absence of parents, violence against children, higher stress and economic deprivation, and less parental supervision.

Alcohol, especially when drunk in large amounts, can also contribute to domestic violence. It seems to do this by increasing aggressiveness, particularly in people already feeling hostile towards their partners, although whether alcohol leads to violence depends on personality, cultural and situational factors. Alcohol abuse has featured in a significant number of homicides involving couples and children in Haryana.

CONCLUSION:

Low risk is not, however, no risk. Even when drinking within the low-risk limits, a range of factors can affect your level of risk, including drinking too quickly, your body type or genetic makeup, your gender, existing health problems, and your age.

References

1. Centres for Disease Control and Prevention. (2010). Alcohol and public health: Frequently asked questions. 2010. From <http://www.cdc.gov/alcohol/faqs.htm>.
2. Alcohol. (2008). In C. Kuhn, S. Swartzwelder & W. Wilson (Eds.), *Buzzed: The straight facts about the most used and abused drugs from alcohol to ecstasy*. New York: WW Norton.
3. Roehrs, T., & Roth, T. (2001). Sleep, sleepiness, and alcohol use. *Alcohol Research & Health*, 25(2), 101–109.
4. Brust, J. C. M. (2005). Alcoholism. In L. P. Rowland (Ed.), *Merritt's neurology* (11th ed.). Philadelphia: Lippincott Williams & Wilkins.
5. Vonghia, L., Leggio, L., Ferrulli, A., Bertini, M., Gasbarrini, G., Addolorato, G., et al. (2008). Acute alcohol intoxication. *European Journal of Internal Medicine*, 19(8), 561–567