Effect of alcohol in our body

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EDITORIAL

Alcoholism is a global problem. It not only affects the person who is consuming the alcohol but also to the person's family and ultimately, his/her society. The effect can be so severe that may lead to the killing of family member/friend even.

Ethanol is the active ingredient in all types of alcoholic beverages such as wine, beer, whiskey, brandy etc. It is a component in medicinal elixirs. Ethanol is a non-specific depressant in the central nervous system. EEG recordings show low frequency and high amplitude of alpha activity under ethanol-induced CNS depression. Ethanol-induced positional nystagmus, dizziness and nausea are probably due to its effects on the vestibular function in the semicircular canal of the inner ear. The other effects of ethanol induces excessive activity and increased electrical activity of the cerebral cortex caused by the inhibition of the few subcortical structures that helps in cortical activity. The overdose of ethanol depresses cortical, brainstem and spinal neurons.

Prolong consuming of alcohol affect the motor functions such as loss of righting reflex, eyes and speech movements even the complex motor skills. The taste or odor sensation is impaired even at a lower dose of ethanol. Visual motor coordination is usually impaired after consuming moderate amount of alcohol. The process of learning becomes slow and various behavioral functions are altered. Ethanol influences the memory and emotion. It is evidenced that ethanol has been shown to increase sociability, self-esteem and concentration as well as faculties of judgment and discrimination are impaired under the influence of alcohol. It increases the aggressiveness in the person's behavior and continued high blood ethanol levels promote homicide.

The acute effects of ethanol on blood pressure are conflicting. Cutaneous blood vessels are dilated whereas splanchnic vessels are constricted. Perivascular, intracarotid or systemic administration of its graded doses has been reported to cause vasoconstriction of rat cortical arteries. Acute exposure to moderate doses of ethanol can predispose to cardiac arrhythmias in alcoholic patients with heart diseases.

Gastric acid secretion is stimulated by low concentration of ethanol, mediated by release of gastrins from the antral region possibly by histamine release. Saliva flow and intestinal motility are also stimulated by ethanol at a low dose but at high doses these functions are depressed. In high concentration, there is an initial increase of mucous secretion followed by congestion and irritation of gastric mucosa. A sense of well-being and stimulation of end organs for taste are believed to be the mechanism for te appetite-stimulating property of ethanol. Chronic alcoholic subjects may have blood sugar levels lower than the normal. However, true hypoglycemia may occur in malnourished persons and heavy drinkers. Both chronic and acute alcoholism increase triglycerides in blood and that may lead to fatty liver and pancreatitis. Ethanol also interferes with the renal excretion of uric acid resulting in elevation of serum uric acid level that may lead to gout.

Ethanol causes a fall in body temperature due to loss of heat from increased sweating and cutaneous vasodilatation. It exerts a direct effect on bone marrow cells. Blood platelet counts and serum iron levels are both decreased by ethanol. Ethanol affects sexual activity in both the sexes even overdose of ethanol changes the structure of spermatozoa and slowing their motility. In woman uterine contractions are inhibited during the child birth. Women who are alcoholic are often seen to suffer from amenorrhoea, infertility and miscarriage.

Ethanol is rapidly absorbed from the gastrointestinal tract though a number of factors interferes the absorption that may include the concentration of ethanol, presence of food, low body temperature, physical exercise. Ethanol is also absorbed through skin and that is quite commonly used in medical purpose. Ethanol is detected in the blood in less than 6 minutes of ingestion and that's the reason it can easily be detected if drinking and driving mix together.

The seeds of *Strychnos nuxvomica* are known to have potential anti-alcoholic effects in human and animals when it is extracted with ethanol. It is a drug of choice in homeopathy while treating patients with alcohol addiction. *Nux vomica* , the name of the medicine in homeopathy, used for anti alcoholics being prepared with serial dilution with succession or downward jerks.

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