

**ALCOHOL AS A “BOON OR BAN”- IT’S ABUSE AND ALCOHOLISM****Jiji Mathew, Salwa Abdul Salam*, Saniya Joseph, Jiju V., Elesy Abraham**

Nazareth College of Pharmacy, Othara, Kerala.

Article Received on 01/12/2017

Article Revised on 20/01/2017

Article Accepted on 14/02/2017

Corresponding Author*Dr. Salwa Abdul Salam**Nazareth College of
Pharmacy, Othara,
Kerala, India.**ABSTRACT**

This journal aims to provide its readers with a better information about alcoholism and it’s abuse. Alcohol is a tonic (medicine or drug) and a poison, which depends on the dose which consume. But nowadays it acts as a social evil in our society. Everyone knows, a drug is any

medicinal substance which causes physiological effect and helps in the curement of diseases. All drugs have side effects. The most dangerous drug of them all is “alcohol”. Because it is a now legal drug and destroy the happiness of most of the families due to it’s over use. This article helps the readers to understand how alcohol plays an important part in our day to day life and it’s consequences and uses as a drug.

KEYWORDS: Alcohol, drug, abuse, addiction.**INTRODUCTION**

Alcohol is the most commonly used drug around the world. Ethanol is commonly called alcohol/drinking alcohol. It is a type of alcohol found in alcoholic beverages and in medicines, produced by the fermentation of sugars by yeasts. It is a neurotoxic and psychoactive drug. Psychoactive drug means a chemical substance that alters brain function and causes changes in perception, mood, consciousness and thinking. Nowadays many people use it to enhance a good mood or change a bad mood. At first, alcohol allows the drinker to feel quite pleasant, with no emotional costs. As his drinking progresses, he takes more and more alcohol to achieve the same high. Eventually this leads to addiction and alcohol abuse. Alcohol is consumed by a large majority of people in the world because it is produced naturally and easy to manufacturing, reinforcement effects is likely to contribute to more morbidity, mortality, and public health costs than all of the illegal drugs.

➤ **Alcohol Use In Medicine**

- Universal solvent for both hydrophilic and lipophilic substances.
- It replaces preservative and stabilizer additives.
- Production of herbal extracts.
- In homoeopathy in the production of liquid potencies.
- Use as a recreational substance in every culture.
- good organic solvent for many extraction procedures ,that is suitable for extraction of plant constituents, drugs, nutrients etc.
- good antiseptic, disinfectant (70%) and sterilizing agent.
- Incorporated in most of the deodorants and antiperspirants (believed to reduce sweating).
- Good preservative, Astringent, acts as a refrigerant by cooling the surface when applied.

➤ **Alcohol Use In Body**

✚ If **consume in small quantities**, some benefits are there, that is:

- It decreases the risk of cardiovascular problems.
- Decreases the possibility of lethal heart attack.
- Sometimes, it reduces the possibility of ischemic or other kind of strokes.
- Diminishes the possibility of gallstone.
- It may reduce the diabetes danger.
- Relieves some mental stress. Alcohol has a sedative effect. So provide better sleep.
- It rises blood flow to the stomach and gut and also a slight irritant locally. This property rises hunger and there by increase in appetite and food consumption.
- It rises blood flow to the skin there by produces warmth and keeps body warm.
- Alcohol produces a high amount of calories by metabolism in the body and there by adds to fat content of the body. Advantageous to those who are slim and helps them to put on weight to those who want. Relieves deep-seated pains.

INTERACTION OF ALCOHOL WITH MEDICINES

Alcohol can interact with medicines in several ways:

- ✓ Alcohol alters the quantity of medicine absorbs by body and causes a toxic amount of the drug to build up in the body.
- ✓ Alcohol can increase the risk of medicine side effects, such as lowered blood pressure and stomach irritation.

- ✓ Alcohol can make the risk of drowsiness and impairs the motor function caused by medicine.

For example,

- 1) Cocaine + Alcohol → Increased heart rate and blood pressure.
- 2) Inhalants+ Alcohol → Increased heart rate and heart failure.
- 3) Sedatives + Alcohol → dangerously slowed breathing and coma.
- 4) Cetirizine+ Alcohol → Drowsiness, dizziness.
- 5) Tolbutamide + Alcohol → Abnormally low blood sugar levels, flushing reactions (nausea, vomiting, headache, rapid heartbeat, sudden changes in blood pressure).



***Antibiotics**:-Antibiotics are used to treat infectious diseases. If antibiotics are taken in combination with alcohol, they interact and mostly it decrease the availability of most of the antibiotics, finally the effectiveness of the medication gets reduced. The antibiotic (erythromycin) may increase alcohol absorption in the intestine by accelerating gastric emptying.

***Anticoagulants**:-The anticoagulant (warfarin)is used for the prevention of blood clots. Its anticoagulant effect is acutely altered by even small amounts of alcohol, that is effects may be stronger than necessary for medical purposes, placing these people at risk for increased bleeding.

***Antidepressants**:-Antidepressants when taken along with the alcohol, the pharmacokinetic and pharmacodynamics interactions occurs. Antidepressants have sedation effects, this effect is increase by alcohol. Alcohol appears to interfere with the first-pass metabolism of tricyclic

antidepressants (amitriptyline) in the liver, resulting in increased amitriptyline levels in the blood.

***Antihistamines:**-These medications, which are available both by prescription and OTC, are used in the management of allergies and colds. Antihistamines may cause drowsiness, sedation and low blood pressure. Through pharmacodynamic interactions, alcohol can substantially enhance the sedating effects of these agents and increase it. First generation antihistamines shown pharmacodynamic effect with alcohol. If a second generation antihistamine with alcohol appears to have little or no adverse effect on psychomotor functioning. This is because the second generation antihistamines don't cross the blood brain barrier the way that the first generation antihistamines (and alcohol) do.

***Beta blockers:**-Beta-blockers slows down heart rate and ensures that heart does not beat with great force. When heart rate is low, blood pressure drops as well. Drinking alcohol can make blood pressure drop even further& feel dizzy and even faint.

***Pain relievers:-** a) Narcotic pain relievers(morphine, codeine) used alleviate moderate to severe pain. With alcohol they intensifies sedation and increased possibility of a fatal overdose.

b) Non narcotic pain relievers(aspirin, ibuprofen)used to alleviate mild to moderate pain. With alcohol they increase risk of stomach bleeding, increased risk of the inhibition of blood clotting, increased effects of consumed alcohol.

***Sleeping pills:**-Alcohol can increase the sedative effects of sleep medications, depressing the parts of the brain and causing severe drowsiness and dizziness, which may increase the risk of falls, injuries and car accidents. Combining sleeping pills with alcohol can increase the sedating effects of both, thus seriously increasing the risk of overdose.

***Medication for diabetes:**-Used to help lower blood sugar levels in diabetic individuals.Acute alcohol consumption prolongs, and chronic alcohol consumption decreases, the availability. The interaction results in reduced drug effectiveness, nausea, headache. increases the risk of lower-regulationthan-normal blood sugar levels (i.e., hypoglycemia). Some like Metformin may cause increased levels of lactic acid in the blood after alcohol consumption.

EFFECTS OF ALCOHOL IN THE BODY

Alcohol is absorbed into the bloodstream via small blood vessels in the walls of the stomach and small intestine. Within minutes of drinking alcohol, it travels from the stomach to the brain, where it quickly produces its effects, slowing the action of nerve cells in brain. Approximately 20% of alcohol is absorbed through the stomach. Most of the remaining 80% is absorbed through the small intestine.

Alcohol is also carried by the bloodstream to the liver, which eliminates the alcohol from the blood through a process called “metabolizing,” where it is converted to a nontoxic substance. The liver can only metabolize a certain amount at a time, leaving the excess circulating throughout the body. Thus the intensity of the effect on the body is directly related to the amount consumed.

When the amount of alcohol in the blood exceeds a certain level, the respiratory (breathing) system slows down markedly, and can cause a coma or death, because oxygen no longer reaches the brain.



➤ ALCOHOL ABUSE

It means the habitual excessive use of alcohol. The effect of alcohol can vary depending upon the type taken, how much is taken, how often it is used, how quickly it gets into brain, what other substances are taken at the same time and also based on the differences in body size, shape and chemistry. Nowadays many people used it as a substance to change the mood, to forget the problems, to relax themselves, or as a stimulant etc. if these individuals continue to consume it continuously by knowing the problems and after effects related to it leads to alcohol dependence. It is also called alcoholism. Finally get alcohol addicted. In this case these individuals mind and body become depend on alcohol for all the time. Those who try to stop drinking have withdrawal effects.

Signs of Alcohol Abuse

- Loss of interest in job or doing things.
- Lack of interest in family matters or dealing with friends.
- Depression, restlessness, decreased involvement in extracurricular activities.
- Erratic behavior, violent behavior, quarelling without reason.
- Inability to control drinking, preoccupation with drinking.
- Loss of responsibility in doing things and tendency to drink always and also don't care about things in life.

➤ ALCOHOLISM AND ALCOHOL ABUSE

Alcoholism means addiction to the consumption of alcoholic drink or it is the continued, uncontrolled and greater than normal use of alcoholic drinks accompanied by physical and mental dependence on alcohol. One of the most alarming things about alcohol addiction is that its presence in all age groups. From the elderly, to college students, to the middle-aged and even adolescents. Alcohol addiction invade and destroy the lives of many people.

Stages of alcoholism**Stage 1: Problem Drinking**

Use alcohol to relieve stress or relax, to escape from problems. Soon they need it to cope with daily life.

Stage 2: Absolute dependence

Feels a constant need to drink. Person develops tolerance for alcohol and become absent from work and activities.

Stage 3: Late stage of alcoholism

Problem is clear to other people. Rapidly loss all dimensions of health, isolated from society, serious health problems like liver and brain damage, malnutrition, cancer, lung and heart diseases, reverse tolerance.

➤ TREATMENT

Treatment for alcoholism begin only when the alcoholic individual accepts that the problem exists and agrees to stop drinking. The individual must understand that alcoholism is curable and must be motivated to change. Here also 3 Stages are there:

1) Detoxification: This may be needed immediately after discontinuing alcohol use and can be a medical emergency, as it can result in withdrawal seizures, hallucinations etc and in some cases may result in death.

2) Rehabilitation: This involves counseling and medications to give the recovering alcoholic the skills needed for maintaining sobriety. This step in treatment can be done inpatient or outpatient. Both are equally effective.

3) Maintenance of sobriety: This step's success requires an alcoholic to be self-driven. The key to maintenance is support, which often includes regular Alcoholics Anonymous (AA) meetings and getting a sponsor.

➤ ANTI-ALCOHOLIC DRUGS

✚ **Acamprosate:** Used to prevent the need for alcohol in people who have stopped drinking alcohol. It reduces the desire to consume alcohol.

✚ **Chlordiazepoxide:** It is a sedative/hypnotic prescribed for anxiety disorders and withdrawal symptoms due to alcoholism.

✚ **Disulfiram:** It is an alcohol antagonist, prescribed for chronic alcoholism. It blocks the processing of alcohol in the body.

✚ **Naltrexone:** It is an opioid antagonist, prescribed for management of alcoholism and addiction to opioid drugs. It is prescribed either alone or with other medications.

➤ CONCLUSION

Alcohol plays an important role in our life. It is used in many pharmaceutical and food industry. It is good if used in small quantities and it has its own medicinal values if concentration used is accurate. Drinking alcohol in small amount is good for our health but some People drink more than required by the to forget about problems, but alcohol has never resolved a single problem for anyone. If anything, drinking only makes problems worse. It is good to make changes in life style. It is not by drinking alcohol without any control or as a habit. The changes that adopt should make our health good, not harm. By this a good healthy life can achieve.

REFERENCE

1. Summary of WHO: Global Status Report on Alcohol 2004.
2. Green Facts: Facts on environment and health.
3. Drug abuse.com
4. PsychCentral.com.

5. Elementsbehavioralhealth.com.
6. Alcohol consumption, related problems, problem drinking and socioeconomic status by J A van Oers, I M Bongers, L A van de Goor, H F Garretsen, Page no 78-88.
7. Alcohol And Effects on the Alcoholic as well as the Family by Jamie Siglow.
8. Alcohol And Medicines –A Dangerous Combination by AAPCC.
9. Article by Timberline Knolls Residential Treatment Center on alcohol addiction treatment.
10. National Institute On Drug Abuse , Alcoholism(2011) And Drug Facts
11. Livestrong.com.
12. Asian Journal of Medical And Pharmaceutical Researches On Advantages And Disadvantages of Alcoholic Beverages by Alireza Abed And Leila Safaeian.
13. Webmd.com, ”Alcohol And Medication Interactions” Education science tips.
14. <https://www.bhpalmbeach.com/program/focus/mixing alcohol-and-drugs>.
15. Alcohol, psychoactive substances and non-fatal road traffic accidents case control study.BMC Public Health 2012.
16. Alcohol abuse-Drug for it’s treatment by Madhumathi Palaniappan.
17. Alcohol and Medication Interactions Ron Weathermon, Pharm.D. And David W.Crabb, M.D.
18. Alcohol-Drug Interactions by University Health Service (UHS).
19. Impact of Alcohol on Drug Metabolism and Alcohol Drug Pharmacokinetic Interactions in Alcoholics By Srividya B.