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HOOCH TRAGEDY

Significance for Prelims: Alcohol formation

Significance for Mains: Not Much

News: Hooch tragedy in the Saran district of Bihar killed as many as 26 people. This incident created a political furore in Bihar as liquor is banned in the state. Main reason for killing due to hooch in Saran was difference in quality from the standard alcoholic products sold in the market.

About hooch: Common term for poor quality alcohol

- It is derived from the name of a native Alaskan tribe Hoochinoo known for producing very strong liquor.
- Hooch is made in crude settings without any quality checks like branded liquor that is produced with sophisticated equipment and rigorous quality control in factories. Hooch produce alcohol that intoxicate.
- **Problems with Hooch:** If hooch is prepared incorrectly, it can kill another problem is it nearly impossible to tell whether hooch is safe to consume before actual consumption.

Mechanism of alcohol creation:

- Fermentation and Distillation are two basic processes through which alcohol is produced.
- During the heating process, yeast reacts with sugar derived from grain, fruits, sugarcane, etc. for fermentation and then it produces a mixture containing alcohol.
- Through the continued fermentation process, alcohol levels rose with more of the sugar getting converted to alcohol. After some time, the conditions become toxic for the yeast itself. Hence, the process of fermentation eventually ends.
- Distillation is the key process in alcohol formation to make anything stronger than beer or wine (above 14-18% ABV or alcohol by volume).

Production of Hooch:

- **First Step:** Hooch maker heat water, locally available yeast, and sugar or fruit or fruit waste to produce a fermented mixture in a large pot.
- **Second Step:** After sufficient fermentation, through rudimentary setup they distill this fermented mixture to produce concentrated alcohol. This rudimentary setup includes a big vat for boiling fermented mixture, a pipe for capturing and carrying the alcoholic fumes, and pot wrapped in a wet cloth for cooling it, and where concentrated alcohol condenses.
- To increase the alcohol content of the final product repeated distillation is needed.

Risk associated with the methods of hooch production

- The fermented mixture contains methanol which is highly toxic for human beings.
- Both ethanol and methanol are in concentrated form during the distillation. Hence in case of improper distillation the end product can be poisonous as it might have high concentration of methanol instead of ethanol.
- Lack of sophisticated equipment and multiple checks available to Hooch-makers to maintain the accuracy of the process.

- Since the hooch makers have no temperature control hence the process of distillation lacks the accuracy to make it safe and effective.
- **Issue of Adulteration:** Various adulterants such as organic waste, battery acid, and industry grade methanol are added to increase the potency of the liquor to make it more toxic.

Process of Distillation:

- Main Principle driving the distillation process is that different parts of the mixture have different boiling points.
- It is the process of physically separating the alcohol from the rest of the mixture with the help of evaporation and condensation.
- By heating the mixture up to a correct temperature, it became possible to separate only the alcohol from the water and other remnants.
- All spirits such as whiskey, vodka, gin, etc are made using distillation techniques.

Uses of Methanol: Used for industrial purposes.

Harmful effects of Methanol or methyl alcohol:

- It can cause impaired vision.
- It can also cause high toxicity.
- Metabolic acidosis is also caused by methyl alcohol, as it is a condition in which the body produces excessive acid that cannot be flushed out by kidneys.

Source: The Indian Express

Article: Over 20 killed in Bihar: Why can hooch be so deadly?



Sharad