

Carbon-Di-Sulphide an Environmental Issue with Reference to Health and Concentration in Study

Dr. Archana Kushwaha

Professor and Head of Chemistry Department, Government College Nagda (MP) 456331

E-mail:archanakushwaha17@gmail.com

Abstract- Carbon disulfide is a colorless volatile liquid with the formula CS_2 . It is widely used in the synthesis of organosulfur compounds. It is commonly used in the production of the soft fabric viscose. At high levels, carbon disulfide may be life-threatening because it affects the nervous system. Nagda is a city in Ujjain district in the Indian state of Madhya Pradesh. It is an industrial town in the Malwa region and is situated on the bank of Chambal River. Nagda is a major industrial town having manufacturing unit of Viscose fiber, Viscose is a solution of cellulose xanthate made by treating a cellulose compound with sodium hydroxide and carbon disulfide. The viscose solution is used to spin the fiber viscose rayon, or rayon, a soft man-made fiber commonly used in dresses, linings, shirts, shorts, coats, jackets, and other outer wear. It is also used in industrial yarns (tyre cord), upholstery and carpets. During the production of viscose carbon-di-sulphide is released. In present work the effect of carbon-di-sulphide was studied on the students of Nagda. The students of graduate level were observed. It was found that the students living in area where exposure of gas is more are not doing well in the class room as well as they feel fatigue readily in lab during practical. The students living in remote area from the exposure of gas affected area they perform well. Although the IQ level of students is good who are living in Grasim premises but physical level and working capacity is less comparative to the students of village background. In present study three categories of students were taken. (1) Higher middle class (2) lower middle class (3) lower class. The areas were categorized 1 rural 2 Grasim township 3 Vidhya nagar (gas affected area) 4 main city 5 Mehidpur road. It was found that economic condition does not affect on studies but affects stamina but area where the students live is more important.

Key words; Carbon disulfide, Nagda, students, viscose

INTRODUCTION

Carbon disulfide is a colorless volatile liquid with the formula CS_2 . It is widely used in the synthesis of organosulfur compounds; it is commonly used in the production of the soft fabric viscose. At high levels, carbon disulfide may be life-threatening because it affects the nervous system. Nagda is a city in Ujjain district in the Indian state of Madhya Pradesh. It is an industrial town in the Malwa region and is situated on the bank of Chambal River. Nagda is a major industrial town having manufacturing unit of Viscose fiber, Viscose is a solution of cellulose xanthate made by treating a cellulose compound with sodium hydroxide and carbon disulfide. The viscose solution is used to spin the fiber viscose rayon, or rayon, a soft man-made fiber commonly used in dresses, linings, shirts, shorts, coats, jackets, and other outer wear. It is also used in industrial yarns (tyre cord), upholstery

and carpets. During the production of viscose carbon-di-sulphide is released. At high levels, carbon disulfide may be life-threatening because it affects the nervous system. Significant safety data comes from the viscose rayon industry, where both carbon disulfide as well as small amounts of H_2S may be present. Carbon disulfide breaks down into other chemical substances after it enters the body. Medical tests can measure levels of these substances in urine and blood, but the tests are not reliable indicators of total exposure. There are many effects of carbon di sulphide some of them are given bellow.

ACUTE EFFECTS

At very high levels, carbon disulfide may be life-threatening because of its effects on the nervous system or heart. Exposure can be through inhalation, absorption through the skin, ingestion, or skin or eye contact. In acute poisoning, early excitation of the central nervous system

resembling alcoholic intoxication occurs, followed by depression, stupor, restlessness, unconsciousness, and possible death. If recovery occurs, narcosis, nausea, vomiting, and headache can occur.

CHRONIC EFFECTS

In chronic poisoning, there are sensory changes such as a crawling sensation in the skin, sensations of heaviness and coldness, and "veiling" of objects so that they appear indistinct. Exposure can cause changes in breathing, chest pains, muscle pain, weakness, loss of feeling in the hands or feet, eye problems, skin blisters, chronic fatigue, loss of memory, personality changes, irritability, dizziness, anorexia, weight loss, psychosis, polyneuropathy, gastritis, kidney and liver damage, dermatitis, mental deterioration, Parkinsonian paralysis, and insanity.

Carbon disulfide may damage the developing foetus. It may decrease fertility in men and women, causing sperm abnormalities and spontaneous abortions.

Entering the body Probable routes of human exposure to carbon disulfide are inhalation, ingestion, and skin contact. Govt. College Nagda is situated 6km away from main city and 10km away from Grasim town ship .The students belong to local area and villages around Nagda. In present study the effect of carbon di sulphide on the student of graduate level has been studied.

EXPERIMENTAL

a survey has been taken out of 100 students of different streams like B.Sc. B. Com. and B. A. The following criteria were taken to study them.

- 1 There residential area were located
- 2 Economic conditions were monitored
- 3 % of marks were tabulated
- 4 Physical stamina
- 5 General awareness
- 6 Overall performance

Area	1 residential area	2 Economic conditions Average	3 % of marks	4 Physical stamina	5 General awareness	6 Overall performance
1 Rural	20%	lower	58 +	good	average	good
2 Grasim township	05%	Higher middle	72 +	average	excellent	excellent

3 Vidhy a nagar	30%	lower	55 +	bad	good	average
4 Main city	35%	middle	62 +	average	good	good
5 Mehi dpur road	10%	lower	66 +	good	bad	good

Individually students were asked some questions regarding their study family background and what they feel regarding effect of gas and far from affected area what changes they find were discussed in many sessions. Overall performance was also monitored during NSS and NCC camps sports activity and GK tests. The marks obtained in CCE and fourth semester were tabulated and average of them were taken.

RESULTS AND DISCUSSION

The students come from Grasim township belong to economically strong family due to so many facilities provided by their parents they perform good but physically not strong. Overall performance of students of rural background is good they live in good environment .The students come from vidhya nagar are not only physically strong but do not perform well in exam and other activities also. Students reside in main city and Mehidpur road live in crowd area but less affected from gas so they are good in study and take participation with interest in other activity.

Finally it was found economically weak residents of Nagda live in Vidhya nagar because land value is less because that area is affected from gas . The students of graduate level supposed to be growing age they need more to improve their personality as well as brain unfortunately they are not provided much facilities and environmental condition is not also favorable .That is the main reason for their always lagging behind. It also proves that the economical condition is not the reason but environmental condition affects the body as well as mental health and physical stamina.

SUGGESTION

The town and country planning of industrial town should be strict to save our future generation. Counseling must be given to parents of weak students to improve their children and teacher should be familiar and friendly to such students though their placed cannot be changed but some

remedies to change their life style, personality and overall performance can be improved by giving some more facilities in home and in institution.

CONCLUSION

Future of India depend on the youth. Our youth must be looked after carefully .In present paper it was found that effect of carbon di sulphide causes decrease in health as well decrease the concentration in studies . our society needs more awareness regarding place where we live. How children are doing in studies and other activity .The environmental condition must be checked. S

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