

DID NATURAL SELECTION PROMOTE ALCOHOLISM ?

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ABSTRACT: Ewing's recent hypothesis (1989, AM.J. Drug Alcohol Abuse, 93-99) that the predisposition to alcoholism will gradually be outbred in any society that continues to use beverage alcohol, is based on observations limited to the civilization history of man. However, from an evolutionary standpoint, what might have happened in prehistory is important, and the fact that the genetic predisposing factors for alcoholism (considered deleterious) have come to fixation, remains to be explained. Historically alcoholism in man has always been associated with sexual indulgence. In men alcohol is known to increase sexual desire but reduce sexual performance. Some recent surveys have shown that a majority of sexual intercourses in teenagers that have taken place following the consumption of alcohol were unplanned. These findings suggest that the disinhibition and the libidinous drives caused by alcohol ingestion may compromise optimal sexual performance, thereby increasing the frequency of intercourse in the teenagers. Such consequences were more probable in the less organised primitive society. Certain effects of alcohol on fecundity that result from chronic drinking were of no consequence in the prehistoric societies, as the life-expectancy as such was far less, and any factor that increased the frequency of copulations in the limited years available should have been favoured by natural selection. Spontaneous abortions were reported in the alcoholic women and there exists the fetal alcohol syndrome. However it is of interest to note that alcoholism is less common in women. In the light of the foregoing discussion, assuming that alcohol in some form was available to the prehistoric man, it may be concluded that beverage alcohol over a period of time helped produce more human beings than it actually killed and was therefore promoted by natural selection. If this is so then alcoholism represents a case of antagonistic pleiotropy involving the interaction of genetic factors with an environmental agent.

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