

BLOOD GLUCOSE DISTRIBUTION IN INDIAN POPULATION

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Various studies on Diabetes Conducted during 1959-75 shown that at least 2% of the Indian population suffer from Diabetes (1). Some recent studies have reported even higher rates of age specific prevalence nearing 12 % among Indian populations (2). One of the major problems in estimating true prevalence of diabetes in India was lack of uniform accepted criteria.

Although National Diabetes Data Group (NDDG) of USA (3) in 1979 and World Health Organisation (WHO) in 1980 (4) have endeavored to define the criteria for diagnosing diabetes mellitus: WHO has cautiously suggested that each nation should evolve such diagnostic criteria independently among their own population groups.

In India, a few prospective studies, to follow Hyperglycemic individuals, often in small samples were undertaken, but without any conclusive inferences on the diagnosing criteria. So far there has been only one national survey for diabetes which was supported by the Indian Council of Medical Research (ICMR) during the period 1972-75 (1). Here the diagnostic criteria was based upon the reports of European Diabetes Epidemiology Study Group of 1970 (5).

In this study persons > — 15 years of age (both sex from rural & urban areas) were selected from six centres (Ahmedabad, Calcutta, Cuttack, Delhi, Poona and Trivandrum). Each subject received 50 grams of glucose orally and two hours later, capillary blood specimen were collected for estimation of glucose concentration. While analysing the behaviour of the frequency distribution of blood glucose values, it was observed that this distribution fits well with the diagnosing criteria as suggested by Fajans-Conn (7), where the cut-off point was greater than 'MEAN+2SD). This value for the above distribution comes around 130 mg/dl, which is in agreement with the Cut-off point followed in this study before the Collection of data.

This Distribution has been used to workout the prevalence rate as per the latest Criteria being followed in Europe and USA. This prevalence falls below the assumed prevalence in India. The statistics reveals the validity of the data and stresses the need of redefining the present diagnostic criteria by conducting long-term community based large scale studies in Indian populations.

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