

The Indian Council of Medical Research–India Diabetes (ICMR–INDIAB) Study: Methodological Details

Ranjit Mohan Anjana, M.D.,¹ Rajendra Pradeepa, Ph.D.,¹ Mohan Deepa, Ph.D.,¹
Manjula Datta, M.D.,¹ Vasudevan Sudha, M.Sc.,¹ Ranjit Unnikrishnan, M.D.,¹
Lalith M. Nath, M.D.,² Ashok Kumar Das, M.D., Ph.D., FAMS,³ Sri Venkata Madhu, D.M.,⁴
Paturi Vishnupriya Rao, M.D., Ph.D.,⁵ Deepak Kumar Shukla, Ph.D.,⁶ Tanvir Kaur, Ph.D.,⁶
Mohammed K. Ali, M.D.,¹ and Viswanathan Mohan, M.D., Ph.D., D.Sc., FRCP, FNASc¹

Abstract

Background:

Currently available estimates of diabetes prevalence in India are based on published data derived from very few studies. The Indian Council of Medical Research–India Diabetes (ICMR–INDIAB) study is a community-based survey conceived with the aim of obtaining the prevalence rates of diabetes in India as a whole, covering all 28 states, the National Capital Territory of Delhi, and two of the union territories in the mainland of India, with a total sample size of 124,000 individuals.

Methods:

A stratified multistage sampling design has been used. In all study subjects, a structured questionnaire was administered and anthropometric parameters and blood pressure were measured. Fasting capillary blood glucose was first determined using a glucose meter. An oral glucose load was then administered to all subjects except those with self-reported diabetes, and the 2 h post-load capillary blood glucose was estimated. In every fifth subject, a fasting venous sample was collected for measurement of lipids and creatinine, a resting 12-lead electrocardiogram was performed, and dietary assessment questionnaire was administered. In all diabetic subjects, an additional diabetes questionnaire was used and a fasting venous sample drawn for glycosylated hemoglobin.

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Author Affiliations: ¹Madras Diabetes Research Foundation, Dr. Mohan's Diabetes Specialities Centre, WHO Collaborating Centre for Noncommunicable Diseases Prevention and Control, IDF Centre of Education, Chennai, India; ²Consultant in Community Medicine, New Delhi, India; ³Jawaharlal Institute of Post-Graduate Medical Education and Research, Puducherry, India; ⁴University College of Medical Sciences and GTB Hospital, Delhi, India; ⁵Nizam Institute of Medical Sciences, Hyderabad, India; and ⁶Indian Council of Medical Research, New Delhi, India

Abbreviations: (HbA1c) glycated hemoglobin, (CAD) coronary artery disease, (CEB) census enumeration block, (ECG) electrocardiogram, (FFQ) food frequency questionnaire, (ICMR–INDIAB) Indian Council of Medical Research–India Diabetes, (MDRF) Madras Diabetes Research Foundation, (NCT) National Capital Territory, (OGTT) oral glucose tolerance test, (PSU) primary sampling unit, (UT) union territory, (WHO) World Health Organization

Keywords: coronary artery disease, diabetes, hypertension, India, prevalence, state-wise, urban rural

Corresponding Author: Viswanathan Mohan, M.D., Ph.D., D.Sc., FRCP, FNASc, Director & Chief of Diabetes Research, Madras Diabetes Research Foundation & Dr. Mohan's Diabetes Specialities Centre, 4 Conran Smith Road, Gopalapuram, Chennai 600 086, India; email address drmohans@vsnl.net

Abstract cont.

Results:

All biological samples collected were analyzed in a central laboratory. All data collected were stored electronically. Quality control was achieved through multiple tiers of checks.

Conclusions:

The ICMR–INDIAB study is the first of its kind attempting to provide accurate and comprehensive state- and national-level data on diabetes prevalence in India.

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