

**UNIFORM POPULATION-BASED APPROACH TO CASE ASCERTAINMENT,  
TYPOLOGY, SURVEILLANCE, AND RESEARCH ON CHILDHOOD  
DIABETES: THE SEARCH FOR DIABETES IN YOUTH STUDY**

<http://www.searchfordiabetes.org>

**Description of project**

- The SEARCH study is a 5-year, multi-center effort designed to identify prevalent and incident cases of diabetes among individuals under age 20 years in the U.S. with the goals to:
  - Estimate the population prevalence and incidence rates for type 1, type 2, and other types (or hybrids) of diabetes by age, gender, and race/ethnicity.
  - Develop efficient and practical approaches to classification of diabetes type.
  - Describe and compare clinical presentation and course of type 1, type 2, and other types (or hybrids) of diabetes.
- In order to facilitate ancillary studies and long-term follow-up, SEARCH has developed system(s) to maintain contact with study participants and it has established a repository for long-term storage of biologic specimens.
- The study is attempting to identify and enroll all eligible cases of diabetes that are: a) prevalent in the year 2001; and b) newly diagnosed (incident) on and after January 1, 2002 through 2005. Moreover, incident cases will be followed on a yearly basis.
  - Both prevalent and incident cases of diabetes participate in the study examination, which includes: interview, physical examination, blood draw, and questionnaire.
  - The interview collect information on medical history, use of medications, processes of care, socioeconomic status, determinants of health, family history of diabetes, and quality of life. In youth aged 10 years and older, standardized questionnaires are used to assess physical activity, smoking habits, diabetes-related counseling, diet and eating disorders, and depression.
  - The physical examination includes anthropometric measures (height, weight, and waist circumference), blood pressure measurement, and examination for acanthosis nigricans.
  - SEARCH includes measurement of diabetes autoantibodies, hemoglobin A1c, fasting glucose and fasting C-peptide, lipids (total cholesterol, total triglycerides, HDL, and calculated LDL), urine albumin and creatinine. In a subgroup of participants stimulated C-peptide test is being performed.

**Accomplishments**

SEARCH study has three operational phases:

- The goals of phase I were to develop an organizational framework, define study objectives, develop the study protocol, develop systems for communication and data management, develop a manual of procedures, identify a central laboratory and

coordinating center, develop staff training systems, and apply for institutional review board approval. This phase was completed, as scheduled, by the spring of 2002.

- The goals of phase II were to conduct complete ascertainment, recruitment, in-person visits and laboratory analyses of all prevalent cases of diabetes of the year 2001. As of April 2004, 6,059 prevalent cases have been identified and registered. For those cases, in-person visits are in progress.
- The goals of phase III are to conduct complete ascertainment, recruitment, baseline and follow-up in-person visits and laboratory analyses of incident cases of diabetes occurring in year 2002 to 2005. This phase began in the summer of 2002. For the year 2002 and 2003, 1,238 and 1,029 incident cases of diabetes, respectively, were identified and registered.

### **Future directions**

- Describe the distribution of risk factors for selected micro- and macrovascular complications and how they differ by diabetes type.
- Describe the distribution of selected acute and chronic complications and how they differ by diabetes type.
- Describe the health care utilization, processes of care, and quality of life of youth with diabetes.

### **Materials to be made available to researchers**

SEARCH investigators recognize the value of sharing materials/samples produced and/or collected as part of SEARCH study. In light of this, they have already prepared for publication a manuscript containing the study protocol.

Biological samples are collected and stored as part of the SEARCH protocol. The SEARCH central laboratory functions as SEARCH repository. The SEARCH investigators are willing to make SEARCH samples available to other investigators that do not compromise their ability to answer the primary and secondary research aims of SEARCH. A process is in place to submit requests to a SEARCH sub-committee to request access to materials/samples produced and/or collected as part of SEARCH study.

### **Participants**

Sponsors:       Centers for Disease Control and Prevention  
                      National Institute of Diabetes and Digestive and Kidney Diseases

#### Participating Institutions

##### *Research Centers*

Kaiser Permanente Southern California, Pasadena CA  
University of Colorado Health Sciences Center, Denver CO  
Pacific Health Research Institute, Honolulu HI  
Children's Hospital Medical Center, Cincinnati OH

University of South Carolina School of Public Health, Columbia SC  
Children's Hospital and Regional Medical Center, Seattle WA

*Coordinating Center*

Wake Forest University School of Medicine, Winston-Salem NC

*Central Laboratory*

Northwest Lipid Research Laboratories, University of Washington, Seattle, WA