

## Preface

# Diabetes Mellitus in Children



Mark A. Sperling, MD  
*Guest Editor*

Diabetes mellitus is a complex disorder with profound consequences, both acute and long-term, for the health of the affected individual and for the cost of health care in society at large. The classical type 1 diabetes mellitus (T1DM)—also known as insulin-dependent diabetes mellitus (IDDM) and formerly called juvenile diabetes mellitus—is an autoimmune disease that is increasing in frequency worldwide, most rapidly in children under 5 years of age. Type 2 diabetes mellitus (T2DM), formerly considered a disease of those over the age of 40 years and a rarity in youth, now constitutes a sizable fraction of diabetes in older children and adolescents, with an incidence of 50% or more in some areas. The increase in T2DM clearly is related to the epidemic of obesity sweeping both the developed and developing world. The ability to predict T1DM is highly advanced, but preventing or delaying its clinical appearance is a problem that remains to be solved. By contrast, T2DM probably is preventable, though how and why obesity and lifestyle exert such a profound effect remains enigmatic.

However, much light has been shed on our understanding of the entities that constitute clinical diabetes mellitus and their management via newer insulins, newer devices for insulin delivery, newer oral agents, newer means to identify and treat complications, and newer directions for research to prevent and cure this disease.

The purpose of this issue of the *Pediatric Clinics of North America* is to bring these newer developments, so exciting to those of us working in the field, to the general reader working in the broad field of pediatrics. To do so, we have

assembled a team of nationally recognized experts to cover 12 topics beginning with a conceptual framework for classification and concluding with a look to the future including cure by islet transplantation and stem cell therapy. In between are comprehensive and contemporary yet readable reviews of T1DM and T2DM; diabetic ketoacidosis and nonketotic hyperosmolar states; monogenic forms of diabetes, which, although rare, provide insight into the more common forms of diabetes mellitus; new insulins; pump therapy; oral agents; and the major clinical, psychosocial, and long-term complications of diabetes mellitus in children.

I am grateful to Elsevier for the opportunity to edit this issue and to my colleagues who acted as contributors. I can only hope that you, the reader, will enjoy and learn as much from them as I did and that this knowledge will be translated to the benefit of children who have diabetes mellitus.

Mark A. Sperling, MD  
*University of Pittsburgh School of Medicine*  
*Division of Endocrinology, Diabetes, and Metabolism*  
*Department of Pediatrics*  
*Children's Hospital of Pittsburgh*  
*3705 Fifth Avenue, DeSoto 4A-400*  
*Pittsburgh, PA 15213, USA*  
*E-mail address: masp@pitt.edu*