

Self-Monitoring of Blood Glucose in Type 2 Diabetes: Recent Studies

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Abstract

The increasing role for structured and personalized self-monitoring of blood glucose (SMBG) in management of type 2 diabetes has been underlined by randomized and prospective clinical trials. These include Structured Testing Program (or STeP), St. Carlos, Role of Self-Monitoring of Blood Glucose and Intensive Education in Patients with Type 2 Diabetes Not Receiving Insulin, and Retrolective Study Self-Monitoring of Blood Glucose and Outcome in Patients with Type 2 Diabetes (or ROSSO)-in-praxi follow-up. The evidence for the benefit of SMBG both in insulin-treated and non-insulin-treated patients with diabetes is also supported by published reviews, meta-analyses, and guidelines. A Cochrane review reported an overall effect of SMBG on glycemic control up to 6 months after initiation, which was considered to subside after 12 months. Particularly, the 12-month analysis has been criticized for the inclusion of a small number of studies and the conclusions drawn. The aim of this article is to review key publications on SMBG and also to put them into perspective with regard to results of the Cochrane review and current aspects of diabetes management.

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Abbreviations: (BMI) body mass index, (DiGEM) Diabetes Glycaemic Education and Monitoring Trial, (DST) decision support tool, (HbA1c) glycosylated hemoglobin, (PRISMA) Prospective, Randomized Trial on Intensive Self-Monitoring of Blood Glucose Management Added Value in Non-Insulin-Treated Type 2 Diabetes Mellitus Patients, (ROSSO) Retrolective Study Self-Monitoring of Blood Glucose and Outcome in Patients with Type 2 Diabetes, (SMBG) self-monitoring of blood glucose, (STeP) Structured Testing Program, (T2DM) type 2 diabetes mellitus, (ZODIAC) Zwolle Outpatient Diabetes project Integrating Available Care

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