



Title	Systematic Review of Use of Blood Glucose Test Strips for the Management of Diabetes Mellitus
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Reference	Optimal therapy report; vol. 3 no.2. 2009 May

Aim

To identify and synthesize the available clinical evidence on the efficacy, safety, and optimal frequency of self-monitoring of blood glucose (SMBG) in patients with type 1, type 2, and gestational diabetes.

and application of SMBG results could provide valuable information to optimize the use of blood glucose test strips.

Conclusions and results

Within the limitations of available evidence, this report concludes the use of SMBG appears to be associated with improvements in glycemic control among patients with insulin-treated type 2 diabetes. Use of SMBG in patients with type 2 diabetes who are not using insulin is associated with a statistically significant, albeit clinically modest, improvement in glycemic control. Performing SMBG may reduce the number of symptomatic hypoglycemic events in patients using sulfonylureas. There was little or no evidence that SMBG provides other benefits, eg, improved quality of life, or greater patient satisfaction. Longer-term studies are needed to determine whether or not SMBG reduces diabetes-related clinical endpoints or mortality. Studies of specific subgroups within this population who may be more likely to benefit from SMBG are also warranted. The effect of using SMBG in women with gestational diabetes requires further investigation.

Methods

A systematic review encompassed randomized controlled trials and observational studies comparing SMBG with no SMBG, or comparing different SMBG frequencies. Studies were identified through electronic databases, grey literature, reference lists, and stakeholder consultation. Meta-analyses were conducted to pool trial results, when appropriate.

Further research/reviews required

No studies attempted to measure the degree to which subjects actually implemented the advice given on appropriate implementation of SMBG results. Future studies should explore this area. Also, future trials reporting patient compliance with self-interpretation