

Appendix 8: Impact of different regimens for insulin initiation on vascular outcomes, lipid profile and quality of life

Vascular outcomes: We found no randomized controlled trials that compared the relative efficacy of contemporary insulin initiation regimens in the prevention of cardiovascular disease. However, one retrospective cohort study compared incidence rates of heart failure, stroke and acute myocardial infarction among patients taking different types of insulin.¹ There was a reduced incidence of acute myocardial infarction in the glargine group (incidence rate ratio = 0.81, 95% confidence interval 0.65 to 1.21); however, this difference disappeared after adjustment for duration of diabetes. There was also a reduced incidence of stroke in the glargine group, although the clinical significance of this finding is uncertain owing to limitations of observational studies.

Lipid profile: A small randomized trial showed that insulin therapy reduced serum triglyceride levels compared with metformin and sulfonylurea combination therapy (-0.55 mmol/L v. +0.84 mmol/L, $p < 0.05$) independent of glycemic control.² However, there appears to be no difference in efficacy of different insulin regimens.^{3,4}

Quality of life: We identified only one trial comparing treatment satisfaction with different insulin initiation regimens.⁴ This small trial showed that satisfaction was greater with intermediate-acting insulin twice daily than with short-acting insulin three times daily, because of convenience.

References

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