



## **Continuous subcutaneous insulin infusion effective for type 1 diabetes mellitus**

### **Clinical question**

How effective is continuous subcutaneous insulin infusion (CSII) in people with type 1 diabetes mellitus (DM)?

### **Bottom line**

Compared with multiple insulin injections (MII), CSII produced better glycaemic control (as measured by HbA1c) in people with type 1 DM. There were no obvious differences between the interventions for non-severe hypoglycaemia, but severe hypoglycaemia appeared to be reduced in those using CSII. Quality of life measures suggest CSII is preferred over MII. No significant difference was found for weight. Study duration ranged from 6 days to 4 years.

### **Caveat**

Many different scales and units were used to report measures of non-severe and severe hypoglycaemia and quality of life. There were insufficient studies to conduct meta-analyses for each of the scales and units, and, as a result, the interpretation of the overall effects of the interventions on these outcomes is subjective and open to bias. Adverse events were not well reported, and no information was available on mortality, morbidity and costs.

### **Context**

In type 1 DM, insulin therapy may be in the form of conventional therapy of multiple (typically 4) injections per day or CSII. CSII involves attachment (via catheter) to an insulin pump that is programmed to deliver insulin to match the individual's needs, and doses are activated by the individual to cover meals and correct blood glucose fluctuation.

### **Cochrane Systematic Review**

Misso ML et al. Continuous subcutaneous insulin infusion versus multiple insulin injections for type 1 diabetes mellitus. Cochrane Reviews 2010, Issue 1. Article No. CD005103. DOI: 10.1002/14651858.CD005103.pub2.

*This review contains 23 studies involving 976 participants.*

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