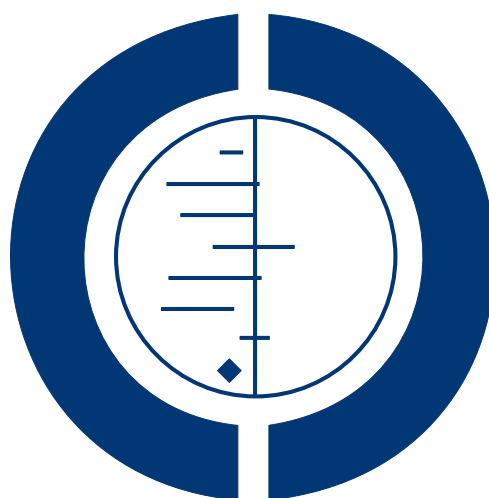


# Education programmes for people with diabetic kidney disease (Review)

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[Intervention Review]

# Education programmes for people with diabetic kidney disease

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## ABSTRACT

### Background

Adherence to complex regimens for patients with diabetic kidney disease (DKD) is often poor. Interventions to enhance adherence require intensive education and behavioural counselling. However, whether the existing evidence is scientifically rigorous and can support recommendations for routine use of educational programmes in DKD is still unknown.

### Objectives

To evaluate the benefits and harms of education programmes for people with DKD.

### Search methods

In January 2010 we searched the Cochrane Renal Group's Specialised Register, CENTRAL, MEDLINE, EMBASE and four Chinese medicine databases (CBM-disc, Chinese Science and Technique Journals Database, China National Infrastructure and WanFang).

### Selection criteria

All randomised controlled trials (RCTs) and quasi-RCTs studying the benefits and harms of educational programmes for people with DKD.

### Data collection and analysis

Two authors independently searched the literature, determined study eligibility, assessed quality, extracted and entered data. We expressed dichotomous outcomes as risk ratios (RR) with 95% confidence intervals (CI) and continuous data as mean difference (MD) or standardised mean differences (SMD). Data were pooled using the random effects model.

### Main results

Two studies (207 patients) were eligible. The methodological quality was not high. Compared with no educational programmes, educational programmes for patients with diabetes on dialysis improved patients' knowledge for the following outcomes: diagnosis (SMD 1.14, 95% CI 0.93 to 1.90); monitoring (SMD 1.51, 95% CI 1.0 to 2.01); hypoglycaemia (SMD 1.67, 95% CI 1.16 to 2.17), hyperglycaemia (SMD 0.80, 95% CI 0.35 to 1.25); medication with insulin (SMD 1.21, 95% CI 0.74 to 1.68); oral medication (SMD 0.98, 95% CI 0.52 to 1.43); personal health habits (SMD 1.84, 95% CI 1.33 to 2.36); diet (SMD 0.53, 95% CI 0.09 to 0.97);

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exercise (SMD 1.13, 95% CI 0.67 to 1.60); chronic complications (SMD 1.28, 95% CI 0.80 to 1.75) and living with diabetes and coping with stress (SMD 0.71, 95% CI 0.26 to 1.15). For patients with diabetes and microalbuminuria, educational programmes improved general knowledge for the following outcomes: diabetes (SMD 0.84, 95% CI 0.43 to 1.26); patients' total self-efficacy (MD 19.00, 95% CI 12.58 to 25.42) and patients' changes in beliefs on treatment effectiveness (MD 0.25, 95% CI 0.07 to 0.43) at the end of treatment, and general knowledge (MD 14.39, 95% CI 7.45 to 21.33); specific self-efficacy in home blood glucose monitoring (HBGM) (MD 11.28, 95% CI 1.92 to 20.64) and changes of beliefs on personal control (MD 0.31, 95% CI 0.01 to 0.61) at the end of three-months follow-up. For patients with diabetes on dialysis, educational programmes also showed improvement in the following self-management behaviours: checking feet (RR 1.63, 95% CI 1.01 to 2.63); using lotion (RR 9.71, 95% CI 2.45 to 38.56) and wearing appropriate shoes and socks (RR 4.39, 95% CI 1.87 to 10.32). For patients with diabetes and microalbuminuria, educational programmes improved the following behaviours: general diet (MD 0.73, 95% CI 0.10 to 1.36), specific diet (MD 1.02, 95% CI 0.42 to 1.62) and HBGM (MD 2.13, 95% CI 1.18 to 3.08) at the end of treatment; and specific diet (MD 0.62, 95% CI 0.18 to 1.06) and HBGM (MD 1.48, 95% CI 0.48 to 2.48) at the end of three-months follow-up. No data were available on changes in kidney function, incidence of cardiovascular events, change of patients' attitude or adverse events.

### **Authors' conclusions**

Education programmes appear to have beneficial effects on improving patients' knowledge of diabetes and some self-management behavioural changes for patients with diabetes on dialysis or with microalbuminuria. Educational programmes appear to have beneficial effects on improving patients' self-efficacy and result in some beliefs changes for patients with diabetes and microalbuminuria. However, only two studies with small sample sizes and inadequate quality were included in this review. There is, therefore, inadequate evidence to support the beneficial effects of education programmes for people with DKD.

## **PLAIN LANGUAGE SUMMARY**

### **Education programmes for people with diabetic kidney disease**

Adherence to complex regimens is often poor in patients with diabetes and chronic kidney disease (DKD). Interventions to enhance adherence require both intensive education and behavioural counselling. This review looked for randomised trials (RCTs) comparing education programmes with other strategies in patients with DKD. Only two studies involving patients with DKD were identified. Although education programmes seemed to have some beneficial effects on improvement of patients' knowledge of diabetes, self-efficacy, belief changes and self-management behavioural changes, the small (207) numbers of patients enrolled in the two identified studies and their low methodological quality resulted in cautious assessment. Larger, high-quality RCTs are needed.