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74 insulin–dependent diabetic patients with background retinopathy were randomised to continue with usual diabetic care (group U) or to a more intensive programme (group A) using ultralente insulin as basal cover and soluble insulin at mealtimes. Group A attended the clinic more frequently, received closer dietary supervision, and were taught home blood glucose monitoring. Group A had a significantly lower mean glycosylated haemoglobin level during the study, although the mean level also fell in group U towards the end of year 2. Renal and sensory–nerve function were significantly better preserved in group A than in group U. Significant improvements were also seen in low–density–lipoprotein–cholesterol and whole–blood low–shear viscosity. The rate of progression of retinopathy was similar in both groups. It appears that a modest improvement in diabetic control, obtainable in most clinics, has been associated with a reduction in the progression of diabetic tissue damage.