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Sustained beneficial metabolic effects 18 months after a 30-day very low calorie diet in severely obese, insulin-treated patients with type 2 diabetes.

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Eighteen insulin-treated obese type 2 diabetic patients were followed for 18 months after they followed a 30-day very low calorie diet (VLCD, 450kCal/day) with the cessation of all glucose-lowering medication. After the 30-day VLCD, caloric intake was slowly increased to eucaloric and glucose-lowering medication was restarted if necessary. On day 0 and 30 of the VLCD and after 18 months follow-up, bodyweight, blood-pressure, glycaemic control and lipid levels were measured. The 30-day VLCD significantly reduced bodyweight (-11.7 ± 0.7 kg, mean \pm S.E.M.) and improved dyslipidaemia, hypertension and glycaemia. As a group, this effect was sustained at 18 months follow-up despite the fact that patients used less lipid-, blood-pressure- and glucose-lowering medication. Especially, the use of insulin was significantly reduced: 18 out of 18 patients on day 0 (mean 137 ± 22 units/day); 5 out of 18 patients at 18 months (86 ± 14 units/day). Patients using insulin at 18 months had regained weight to prediet levels, but still had a better cardiovascular risk profile compared with before the dietary intervention. Thus, a once-only 30-day VLCD leads to a sustained improvement in glycaemia, dyslipidaemia and blood-pressure up to 18 months follow-up in obese type 2 diabetic patients, even, although to a lesser extent, in patients who regained body-weight.