

UK Prospective Diabetes Study 7: response of fasting plasma glucose to diet therapy in newly presenting type II diabetic patients, UKPDS Group.

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The response to diet of 3,044 newly diagnosed diabetic patients with a fasting plasma glucose (mean  $\pm$  1 SD) of 12.1  $\pm$  3.7 mmol/L, age 52  $\pm$  8 years, and body weight 130%  $\pm$  26% ideal body weight has been studied. The reduction in the fasting plasma glucose was greater in those presenting with a high initial fasting plasma glucose and in those who lost more weight, but was not related to the degree of obesity. There was considerable variation in the response to dieting, but on average, patients presenting with a fasting plasma glucose of 10 to 12 mmol/L needed to lose 28% ideal body weight (18 kg) to attain a fasting plasma glucose less than 6.0 mmol/L. Sixteen percent of all patients achieved a near-normal (less than 6 mmol/L) fasting plasma glucose after 3 months' dieting, ranging from 50% of those presenting with fasting plasma glucose of 6 to 8 mmol/L to 10% of those with fasting plasma glucose of 16 to 22 mmol/L. In those who achieved less than 6.0 mmol/L, in the second 3 months the fasting plasma glucose increased by a mean of 0.4 mmol/L even though there was a further mean weight reduction of 2.1% ideal body weight (1.4 kg) in addition to their loss of 11.6% ideal body weight (8 kg) in the initial 3 months. This confirms that the decrease in fasting plasma glucose is determined more by the restriction of energy intake than by the body weight. Those who maintained their fasting plasma glucose at less than 6.0 mmol/L in the year following the initial 3-month dietary period lost a further 3% (2 kg) ideal body weight. The data confirm the value of dieting, but in view of the large weight loss and equivalent large reduction in energy intake required in most patients, it is not surprising that few patients achieve near-normal fasting plasma glucose concentrations by diet alone.