

Home blood sampling for plasma glucose assay in control of diabetes.

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Estimation of plasma glucose in home blood samples is needed to improve diabetic control. Sufficiently precise measurements on capillary blood were obtained by (a) storing Reflotest glucose-oxidase strips in a desiccant container before reading and (b) collecting blood samples into a simple vacuum bottle containing potassium fluoride (assay of sodium content indicating volume of plasma collected). The precision of the methods (± 1 SD) was ± 0.35 mmol/l (± 6.3 mg/100 ml). Clinical reliability was assessed by measuring the basal plasma glucose concentration at home on different mornings in patients with maturity-onset diabetes, the day-to-day variation (± 1 SD) being ± 0.73 and ± 0.92 mmol/l (± 13.2 and ± 16.6 mg/100 ml) respectively. The mean basal plasma glucose concentration in all 84 patients with maturity-onset diabetes from three general practices was 8 mmol/l (144 mg/100 ml), 44 of the values exceeding 6 mmol/l (108 mg/100 ml). Improving control by monitoring the basal plasma glucose concentration in maturity-onset diabetes might help to prevent diabetic complications.