<180/105 mmHg) for a median of 8.4 years benefited from significant risk reductions for any diabetes-related end point, diabetes-related death, stroke or microvascular disease. Now, the researchers reveal the legacy of the blood-pressure control interventions in a 10 year, postintervention, follow-up study.

Participants who were available for post-intervention monitoring (592 and 292, respectively, for the tight and less-tight blood-pressure control groups) attended annual UKPDS clinics for the first 5 years and provided questionnaire responses in years 6–10. No attempt was made to maintain the blood-pressure control regimens assigned during the study.

Blood-pressure differences between the groups disappeared within 2 years post-intervention. The risk reductions seen for the tight blood-pressure control group—for any diabetes-related end point, diabetes-related death, stroke or microvascular disease—diminished over time and were not significant at 10 years postintervention. Risk of myocardial infarction or death from any cause was not different between the groups during the trial or at 10 years postintervention. The only significant risk reduction associated with tight blood-pressure control at 10 years postintervention was for peripheral vascular disease.

The researchers stress the need to maintain tight blood-pressure control in patients with type 2 diabetes to ensure that health benefits persist.

Original article Holman RR *et al.* (2008) Long-term follow up after tight control of blood pressure in type 2 diabetes. *N Engl J Med* **359:** 1565–1576

Chamomile tea might protect against hyperglycemia and diabetic complications

The active components of *Matricaria chamomilla*—which is used to make chamomile tea—have shown some evidence of protective effects against chronic health disorders. Kato *et al.* have investigated whether chamomile hot water extract, and several individual active components of chamomile, have any beneficial effect on hyperglycemia and other features of diabetes mellitus.

In vitro, chamomile hot water extract and the active components esculetin and quercetin inhibited the activity of α-glucosidases. These enzymes are involved in breaking down carbohydrates and might, therefore, contribute to hyperglycemia. The efficacy of these compounds *in vivo* was examined in a sucrose-loading test in mice; all three components lowered the raised blood glucose levels in this model to some degree, although esculetin had the greatest effect.

Chamomile hot water extract, quercetin and luteolin suppressed the activity of enzymes involved in liver glucose production, which could potentially reduce hepatic glucose output and so lower blood glucose levels. The authors then performed a 21-day feed test in rats with streptozotocin-induced diabetes. Administration of chamomile hot water extract or quercetin significantly increased liver glycogen levels and decreased blood glucose levels. A final *in vitro* study demonstrated that several active components inhibited the accumulation of sorbitol in erythrocytes, which is associated with diabetic complications such as cataracts and neuropathy.

The authors suggest that daily consumption of chamomile tea with meals could help to prevent the development or worsening of hyperglycemia and diabetic complications.

Original article Kato A *et al.* (2008) Protective effects of dietary chamomile tea on diabetic complications. *J Agric Food Chem* **56:** 8206–8211

Gut microbiota could protect against type 1 diabetes mellitus

The incidence of spontaneous type 1 diabetes mellitus (T1DM) in nonobese diabetic (NOD) mice is influenced by the microbial environment. To Wen *et al.*, these findings suggested a link between innate immunity, gut microbiota and the development of T1DM. These researchers, therefore, investigated the effect of altering the microbial environment of NOD mice made deficient in innate immunity by knockout of the gene that encodes the Toll-like receptor signal adaptor protein MyD88.

Under specific-pathogen-free conditions (in which mice are kept in an environment free of particular pathogens), the researchers found that lack of MyD88 protected NOD mice from development of T1DM, which demonstrated that innate immunity is important in