Multivariate Cox analyses found that the sulfonylurea cohort ($n=3,340$) had a significantly greater risk of cancer-related death than the metformin cohort ($n=6,969$) did (hazard ratio 1.3, 95% CI 1.1–1.6, $P=0.012$). In addition, insulin use was independently associated with a higher risk of cancer-related death (hazard ratio 1.9, 95% CI 1.5–2.4, $P<0.0001$).

This study had several limitations: firstly, data on glycemic control, weight, BMI, and smoking status were not available, and could not be adjusted for during analysis; secondly, only fatal cancers were included; and thirdly, the small number of cancer-related deaths ($n=407$) in the study population meant that dose-dependent relationships or the effect of graded insulin exposure could not be examined.

The authors concluded that those patients whose therapy (sulfonylureas or insulin) increased circulating insulin levels had a greater risk of cancer-related death. Future studies should investigate further whether sulfonylureas and exogenous insulin have detrimental effects, or whether metformin has a protective effect.

Katherine Sole

Original article Bowker SL *et al.* (2006) Increased cancer-related mortality for patients with type 2 diabetes who use sulfonylureas or insulin. *Diabetes Care* **29:** 254–258

Black coffee, no sugar, please

Results from two studies that enrolled participants from the same well-characterized population illustrate the complex interplay between diet, inflammation, and type 2 diabetes.

Qi *et al.* identified 902 women with type 2 diabetes but no pre-existing cardiovascular disease from the Nurses Health Study cohort. They found that women who had high intakes of whole grains, bran, and cereal fiber had markedly lower levels of inflammatory markers (C-reactive protein and TUMOR NECROSIS FACTOR RECEPTOR 2). Women with a high glycemic index diet had elevated levels of these markers. They suggest that patients with type 2 diabetes could reduce their cardiovascular risk by increasing their intake of whole grains while maintaining a low overall glycemic index diet.

Van Dam *et al*. evaluated coffee and caffeine consumption in 88,259 nondiabetic women aged 26–46 years at baseline from the Nurses Health Study cohort. Interestingly, women who consumed at least two cups of coffee a day had a markedly lower risk of developing type 2 diabetes over 10 years of follow-up, compared with women who did not consume coffee. This association was not affected by the method of preparing coffee or by caffeine intake (decaffeinated coffee had similar effects). Caffeine reduces short-term insulin sensitivity, but these results suggest that in the long-term, the contribution of other constituents of coffee might be more important. They note that high-calorie additives could negate these beneficial effects of coffee.

Caroline Barranco

Original articles Qi L *et al.* (2006) Whole-grain, bran, and cereal fiber intakes and markers of systemic inflammation in diabetic women. *Diabetes Ca*re **29:** 207–211
van Dam RM *et al.* (2006) Coffee, caffeine, and risk of type 2 diabetes. *Diabetes Care* **29:** 398–403

Glucose mediates cognitive dysfunction in type 2 diabetes

Older adults with type 2 diabetes are known to be at an increased risk for cognitive dysfunction. It is unknown if this is related to chronically elevated glucose levels or insulin levels; however, the available evidence suggests that elevated insulin levels might be to blame. A US team has compared the effects of rosiglitazone (which increases insulin sensitivity) and glibenclamide (which encourages insulin production, and is also known as glyburide) on cognition in older patients with type 2 diabetes.

In total, 145 patients (mean age 60 years) were randomly assigned to 24 weeks of daily therapy with either rosiglitazone or glibenclamide. Doses were titrated throughout the study to achieve equal glycemic control for all patients (range 4–8 mg for rosiglitazone and 2.5–15 mg for glibenclamide). The patients completed seven cognitive tests at baseline and again at week 24. The tests fell into three categories: working memory, learning ability, and cognitive efficiency.

Performance changed significantly only on one of the three tests that assessed working memory, the CANTAB PAL TEST. Both rosiglitazone and glibenclamide were associated with similar improvements in patient performance from baseline ($P<0.0001$ and $P<0.001$, respectively). No relationship was observed between circulating insulin levels and performance;