

# Should lifestyle advice come before pharmacotherapy?



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In May 2009, NICE issued guidance on the clinical management of type 2 diabetes (NICE, 2009) and more recently SIGN has produced its own guideline on the management of diabetes (SIGN, 2010). The SIGN guideline states that at diagnosis, medication should be prescribed “in addition to” lifestyle measures, compared with “after a trial of” lifestyle interventions from NICE. Although a subtle difference in wording, there will be those practitioners and people with diabetes alike who will be either for or against giving lifestyle measures a chance before commencing medication.

So what is the argument for medication being prescribed after a trial of lifestyle change before initiating therapy to reduce blood glucose levels? The UKPDS (UK Prospective Diabetes Study; UKPDS Group, 1998) did show that initial dietary advice given at diagnosis has a major impact on weight and blood glucose control, but in most people at 3 months it was not possible to reduce fasting blood glucose to lower than 7 mmol/L with diet and exercise alone.

Some could argue that giving an initial trial of lifestyle changes reinforces the role of the individual in the self-management of their diabetes. Others might suggest that these findings support the view that “diet doesn’t work” and that a pill is easier to take. However, evidence suggests that not only do people with diabetes find it hard to stick to a diet (Toobert et al, 2000), but also they find it hard to collect enough medication or insulin from the pharmacy to meet their prescribed dose (Morris et al, 1997; Donnan et al, 2002).

An argument could be made for initiating lifestyle change earlier than at diagnosis. Numerous intervention studies have shown the efficacy of lifestyle behaviour change programmes at reducing the progression to type 2 diabetes in high-risk populations (Gillies et al, 2007). Follow-up data from both the Finnish Diabetes Prevention Programme (Lindström et al, 2006) and the Da Quing Prevention study (Li et al, 2008)

demonstrate a glycaemic legacy effect of early lifestyle intervention. Both show that in individuals at high risk of type 2 diabetes, the effect of active lifestyle intervention continues long after the intervention ceases. The 20-year follow-up to the China Da Quing Prevention study shows that group-based lifestyle interventions longer than 6 years can prevent or delay diabetes for up to 14 years after the active intervention (Li et al, 2008). Perhaps the time when lifestyle measures are most effective is before the person presents with type 2 diabetes. However, whether these early lifestyle interventions lead to reduced cardiovascular disease and mortality remains unclear.

SIGN (2010) recommends that medication should be prescribed from diagnosis in addition to lifestyle measures. This supports the findings of the 10-year follow-up of the UKPDS (Holman et al, 2008), which demonstrate that intensive glucose control starting at the time of diagnosis is associated with a significantly decreased risk of myocardial infarction and death from any cause, in addition to a reduction in microvascular complications. From these results, the UKPDS steering group suggests that metformin is introduced at diagnosis. Some healthcare professionals may take this to mean that lifestyle measures are unimportant, but without some thought to lifestyle measures, however much pharmacotherapy you throw at someone, they will never achieve good glycaemic control in the long run.

NICE recommends that, where possible, healthcare professionals give people with diabetes an opportunity to make an informed decision about their care and treatment. Similarly, SIGN places great emphasis on the person with diabetes being involved in their treatment choices, suggesting that the final treatment plan should be arrived at following discussion with the individual about the treatment options available. We should always remember that evidenced-based guidelines are produced to treat populations, not individuals. ■