



RESPONSE TO COMMENT ON BALKAU ET AL.

Factors Associated With Weight Gain in People With Type 2 Diabetes Starting on Insulin. *Diabetes Care* 2014;37:2108–2113

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We very much concur with Nick Finan that weight is not everything (1). Finan argues that changes in body composition and not just change in weight are important, and he concludes that in any case, the benefits of insulin therapy on metabolic control must be balanced against penalties from weight gain.

The improvement seen in HbA_{1c} after treatment of people with type 2 diabetes by insulin is of fundamental importance. In the CREDIT study, the decrease in the median HbA_{1c} between baseline and 1 year varied between 1.6 and 2.4% units (17 and 26 mmol/mol) depending on the weight gain over 1 year (2) (see Tables 1 and 2); the groups gaining the most weight had the greatest decrease in HbA_{1c}.

Further, over the 4 years of treatment, we found that weight gain had a minimal effect on glucose control: a weight gain of 2.6 kg was associated with a 0.005% unit (0.05 mmol/mol) higher HbA_{1c} at year 4 (3).

Indeed, the main aim of the CREDIT study was to investigate the relation between glycemic control and cardiovascular events over a 4-year period in people with type 2 diabetes, starting treatment with insulin, in routine care.

Clearly, in the large CREDIT study, it was not possible to have sophisticated measures of body composition, as in Finan's own work of people newly treated with insulin (4). We have only body weight, which is the most readily perceived anthropometric change by both the clinician and the person with type 2 diabetes, following treatment by drugs or changes in lifestyle. It is widely recognized as being perceived of importance to people with diabetes.

Duality of Interest. B.B. is on advisory boards for Bristol-Myers Squibb, Boehringer Ingelheim, Eli Lilly & Company, and Sanofi and has received a research grant from Servier. P.D.H. or institutions with which he is associated receive funding for his research, advisory, and lecturing activities from all major

insulin manufacturers including Sanofi. M.V. is an employee of Sanofi. N.F. has received research grants and served as consultant to Eli Lilly & Company, Medtronic, Novo Nordisk, Pfizer, and Sanofi and has served on speaker bureaus for Novo Nordisk and Sanofi. No other potential conflicts of interest relevant to this article were reported.

References

1. Finan N. Comment on Balkau et al. Factors associated with weight gain in people with type 2 diabetes starting on insulin. *Diabetes Care* 2014;37:2108–2113 (Letter). *Diabetes Care* 2014;37:e265. DOI: 10.2337/dc14-1916
2. Balkau B, Home PD, Vincent M, Marre M, Freemantle N. Factors associated with weight gain in people with type 2 diabetes starting on insulin. *Diabetes Care* 2014;37:2108–2113
3. Balkau B, Freemantle N, Calvi-Gries F, Pilorget V, Vincent M, Home P. Relationship of HbA_{1c} with body weight change over 4 years from starting insulin therapy in people with type 2 diabetes – the CREDIT Study. *Diabetologia* 2014;57(Suppl. 1):S53
4. Packianathan IC, Fuller NJ, Peterson DB, Wright A, Coward WA, Finan N. Use of a reference four-component model to define the effects of insulin treatment on body composition in type 2 diabetes: the 'Darwin study'. *Diabetologia* 2005;48:222–229

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