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## Stability of Body Weight in Type 2 Diabetes

Response to Chaudhry et al.

In a recent volume in this journal, Chaudhry et al. (1) reported their findings of weight change in 205 men with diabetes. They conclude that over the course of at least 5 years, modest weight gain is the norm in men with diabetes. In contrast, we have previously published data (2) on 816 adult Pima Indians with diabetes, which showed that the general pattern of weight change after a diagnosis of diabetes was weight loss. These apparently discrepant findings may reflect ethnic differences, but there are a number of other potential reasons for the differences.

The Chaudhry et al. study was limited to men, while our study included men and women. We found no difference in patterns of weight change between the sexes; therefore, that does not seem to explain the divergent results. We also found that the pattern of weight change varied at different durations of diabetes, with weight gain being predominant in the first 2 years after diagnosis, followed by continuing weight loss. Diabetes duration was not a factor that was analyzed in the Chaudhry et al. study, but all subjects had a minimum duration of diabetes of 5 years; thus, it seems an unlikely reason for the differing results. A more likely explanation is the difference in treatments reported. In our study, the majority of subjects were receiving no pharmacological agents for diabetes, and there was a greater degree of weight stability among those receiving insulin or oral agents; in fact, among those taking insulin, there was a tendency toward weight gain in some of the duration groups. The Chaudhry et al. study only includes sub-

jects receiving either oral agents or insulin. They reported weight loss among subjects taking metformin. If the majority of our subjects had been receiving metformin, that might explain the weight loss we reported among the subjects taking oral agents. However, at the time of our study, metformin was not as widely used as it is today, and not enough patients received metformin to allow for a subanalysis of this group, which primarily consisted of people taking sulfonylureas. Finally, the criteria for enrollment in the two studies were very different. In the Chaudhry et al. study, only men who had attended annual examinations over the study period were included, with data taken only from the baseline and final examination. In our study, we only required that a subject had attended two or more research examinations (after being diagnosed with diabetes) with no regard to how regularly they attended hospital appointments. It would be interesting to know whether the Chaudhry et al. findings would differ if they had included all possible subjects, regardless of clinic attendance or pharmacologic therapy.

In summary, the pattern of weight change in type 2 diabetes is not well understood and may be quite variable according to patient characteristics.

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We thank Looker et al. (1) for their comments regarding our study (2). We also appreciate the authors calling attention to their study (3) regarding weight change in Pima Indians before and after the diagnosis of diabetes. As Looker et al. point out, the two study populations are very different in regard to age, sex, and genetic background. The study design, the study inclusion criteria, and the treatment categories were all different, and the number of times the subjects were observed during the study period was different. Therefore, it is difficult for us to compare our results with those published previously by Looker et al. Nevertheless, our own data, as well as the data obtained in Pima Indians, indicate that rapid weight gain is not a characteristic of most people with type 2 diabetes.

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