

Lifestyle Therapy Works for Diabetes Prevention

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Both intensive lifestyle changes and metformin can significantly reduce the risk of diabetes in women with impaired glucose tolerance who have had gestational diabetes, a sub-analysis of the Diabetes Prevention Program has concluded.

Both interventions reduced the risk of diabetes progression by about 50% compared with placebo, Dr. Robert Ratner and his colleagues reported in the *Journal of Clinical Endocrinology and Metabolism*.

However, in women without a history of gestational diabetes, lifestyle



Women without GDM who received lifestyle therapy had a 49% risk reduction compared with placebo.

DR. RATNER

changes were significantly more effective than was metformin in preventing diabetes (49% vs. 14%), the investigators wrote (*J. Clin. Endocrinol. Metab.* 2008; 93:4774-9).

“Our data suggest a differential success of the interventions between those with and without a history of gestational diabetes,” wrote Dr. Ratner of the MedStar Research Institute, Hyattsville, Md. Lifestyle changes were probably not as effective in women who had experienced the disorder because the group had a much harder time losing weight and keeping it off than did those who had never had gestational diabetes, thus equalizing the effect of both treatments, the investigators wrote.

The Diabetes Prevention Program study examined the risk of progression to diabetes in women with impaired glucose tolerance. The study randomized patients to placebo, metformin, or intensive lifestyle changes, which included increasing physical activity at least 1.5 hours per week over baseline for the duration of the 3-year trial.

The substudy examined the risk of progression in 1,766 of these women who had given birth to a live child. Of these, 350 had pregnancies complicated by gestational diabetes mellitus (GDM).

In the placebo group, diabetes developed in 38% of those with a history of GDM and 26% of those without a history—a 71% increased incidence per 100 person-years.

Women without GDM who were randomized to lifestyle therapy experienced a 49% risk reduction compared with placebo; the risk reduction was only 14% in the group randomized to metformin. Women with a history of GDM therapy experienced a 50% risk reduction compared with placebo when randomized to lifestyle therapy and a 53% risk reduction when randomized to metformin.

The pattern of weight loss in the different groups probably impacted the effect of lifestyle therapy in those with a GDM history, the investigators said.

These women lost a mean of 5 kg by 6 months, compared with a mean of 6 kg at 6 months in the comparator group.

Additionally, women who had experienced GDM regained more of their weight, reaching a mean loss of 1.6 kg by the end of the study, compared with

4 kg by the study’s end in the comparator group.

Women with a history of GDM also experienced a significantly higher conversion rate to diabetes than did women without a history (15 cases vs. 9 cases per 100 person-years). “Taking into account the treatment effects, we estimate that only five or six women with glucose intolerance and a history of GDM would need to be treated over 3 years with ei-

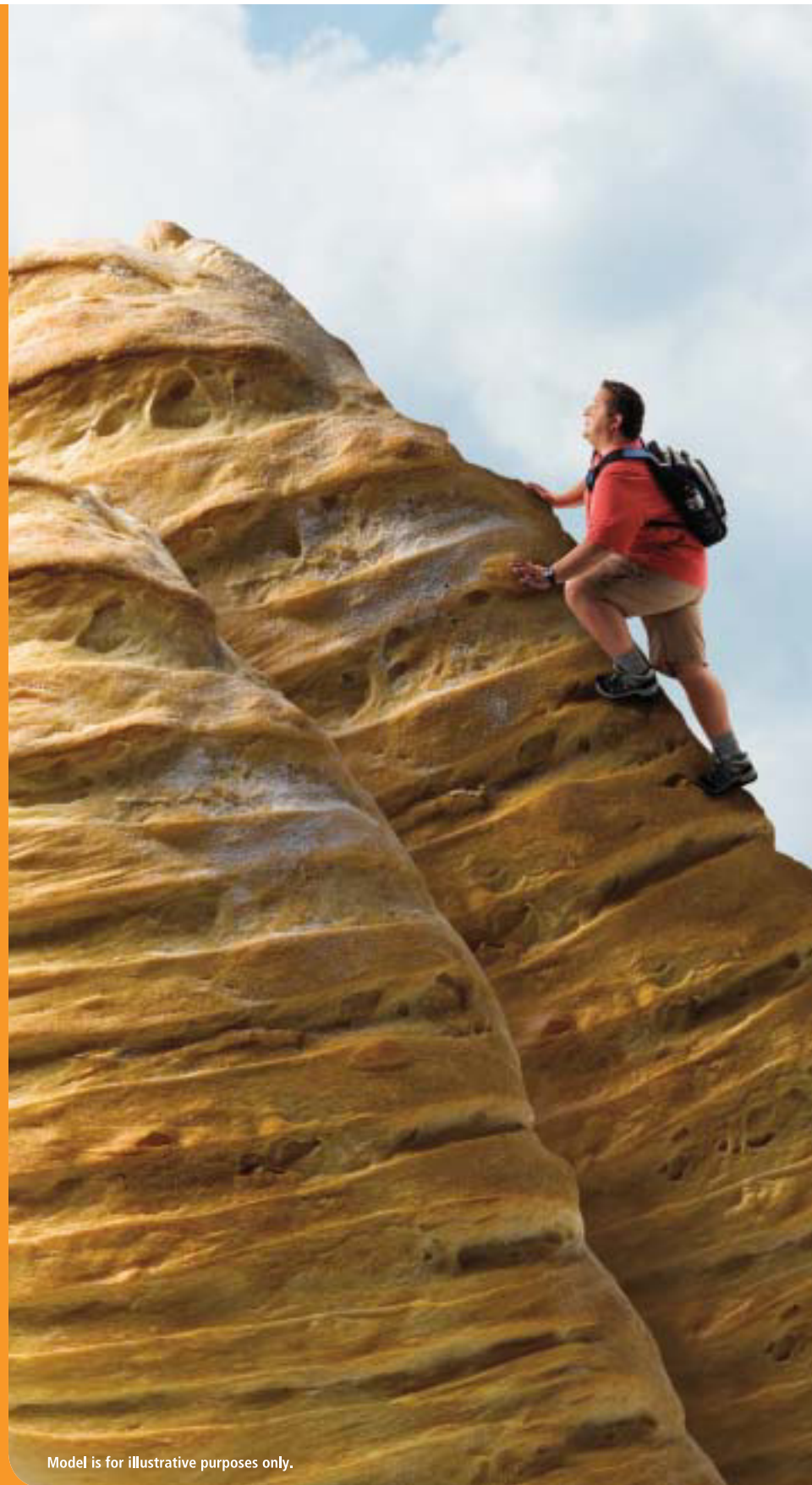
ther metformin or lifestyle therapy to prevent one case of diabetes,” the team said. “In women without a history of GDM, the estimated numbers needed to treat to prevent a single case of diabetes over 3 years are 24 [for metformin] and 9 [for lifestyle therapy].”

The Diabetes Prevention Program study was sponsored by the National Institutes of Health. Dr. Ratner was the project’s primary investigator. ■

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