

Diabetes prevention programs beneficial in improving cardio-metabolic profiles

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A new study by researchers at Emory's Rollins School of Public Health and the Centers for Disease Control and Prevention (CDC) shows that lifestyle modification programs modeled on diabetes prevention programs (DPP) trials not only achieved weight reduction, but also additional metabolic benefits -specifically, reductions in blood sugar, blood pressure, and cholesterol levels. The researchers compiled data from 44 published studies with nearly 9,000 adults participating in DPP conducted in US communities, clinics, and through online media.

Led by Mohammed K. Ali, MD, MSc, MBA, associate professor in the Hubert Department of Global Health at Emory, the study offers an overview of the range of metabolic benefits possible through lifestyle modification programs and the program and participant features that were associated with greater benefit.

"There are a number of studies that have shown that <u>weight loss</u> is achievable through DPP programs," says Ali. "Our study goes further by estimating the aggregate metabolic changes that can be achieved."

Complete findings are available in the July 27th edition of *PLOS Medicine*.

"Our study has relevance for the Centers for Medicare and Medicaid (CMS) which announced in March 2016 their intention to cover diabetes prevention programs for the Medicare population that are at <u>high risk</u> for diabetes. Though CMS has not indicated an intention to cover Medicaid



beneficiaries, these findings may prompt further consideration regarding covering this group," says Ali. "Our findings are also relevant for private payer groups and providers of diabetes prevention services, reinforcing several take home messages, that:

- Lifestyle modification programs to prevent diabetes can be delivered effectively in non-academic and non-clinical settings;
- on average, participants in the 44 included studies were similar to participants in the original DPP trial, and achieved less weight loss (3.8 vs. 6.8kg), but similar improvements in glucose, <u>blood</u> <u>pressure</u>, and cholesterol reductions; and
- programs with a maintenance component (keeping contact with participants even after the core program sessions are complete) were associated with larger benefits."

Diabetes currently affects approximately 29 million Americans, and a further 86 million US adults have prediabetes, putting them at high risk of developing diabetes. Identifying people at risk for diabetes, like those with prediabetes, and enrolling them in programs may be an important public health approach to addressing growing diabetes burdens in the US. By 2050, the prevalence of diabetes is expected to reach 25 percent. Adults with diabetes have two to four times higher rates of death from heart disease or stroke with medical expenses that double those without <u>diabetes</u>.

The authors conclude: "According to our findings, there is no difference in outcomes based on who or where DPP programs are delivered, and improvement in other cardio-metabolic factors suggests the program may be especially cost-effective. These types of interventions can yield great results for <u>diabetes prevention</u> if distributed nationally."

More information: Uma Mudaliar et al, Cardiometabolic Risk Factor Changes Observed in Diabetes Prevention Programs in US Settings: A



Systematic Review and Meta-analysis, *PLOS Medicine* (2016). <u>DOI:</u> <u>10.1371/journal.pmed.1002095</u>

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