**Diabetes Incidence Declining, Mostly in High-Income Countries**

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In a systematic review of 47 studies, 36% of age- and ethnicity-defined populations in countries around the world showed reductions in incident total diabetes or type 2 diabetes rates from 2006 to 2014, according to Dianna Magliano, PhD, of Baker Heart and Diabetes Institute in Melbourne, Australia, and colleagues. Populations with declines in diabetes incidence after 2005 included the U.S., Israel, Switzerland, Hong Kong, Sweden, and South Korea.

During the same 2006-2014 time span, incident diabetes held steady for 30% of global populations, including Canada, Italy, Scotland, Norway, non-Hispanic white people in the U.S., and the U.K. Only one-third of populations showed an uptick in diabetes, including Portugal, Denmark, and Germany.

The studies included in the systematic review encompassed 121 separate sex-specific or ethnicity-specific population-based cohort studies; administrative and health insurance databases, as well as other diabetes registries, were also used in the review.

Of note, not all populations had available trend data for all the time points assessed by Magliano's group, particularly low-income countries. Although some studies included in the review reported trends on both type 1 and type 2 diabetes, the researchers pointed out that their findings "apply predominantly to type 2 diabetes."

The team observed that from the years 1990 to 2005, 66% of global populations saw an increase in incident diabetes rates -- accounting for the biggest spike of diabetes rates -- juxtaposed by only 2% of populations noting a decline. During these years, 32% of populations saw a stable rate of incident diabetes.

Regarding the spike in diabetes incidence from 1990 to 2005, the researchers explained that the diagnostic threshold for fasting plasma glucose dropped from 140 mg/dL to 126 mg/dL (7.8 to 7.0 mmol/L) in 1997, potentially contributing to an increase in incident diabetes cases at this time.

Additionally, around 2009 and 2010, HbA1c was introduced as a new diagnostic tool for diabetes. "Evidence from some studies suggests that the HbA1c diagnostic threshold detects fewer people with diabetes than do the thresholds for fasting plasma blood glucose, potentially leading to a lowering of incidence estimates," the researchers noted. "However, across [multiple studies](https://www.ncbi.nlm.nih.gov/pubmed/26109024), prevalence estimates based on fasting plasma glucose only versus HbA1c definitions are similar."

From 1960 to 1989, 36% of populations saw an increase, while most populations held stable with new diabetes diagnoses during this time (55%). And only 9% of populations saw a drop in diabetes rates during these years.

Some of the reasons for the current drop in diabetes incidence may be attributed to heightened prevention efforts, increased awareness, and reduced sugar intake, according to the authors.

"Another potential explanation for declining or stable diabetes incidence after the mid-2000s is a reduction in the pool of undiagnosed diabetes through the intensification of diagnostic and screening activities and changing diagnostic criteria during the previous decade," they acknowledged.

The researchers did qualify their findings, however, noting that their data may represent only part of the larger global picture. "Although the lack of data for non-Europid populations leaves global trends in incidence unclear, these findings suggest that trends in the diabetes epidemic in some high-income countries have turned in a more encouraging direction compared with previous decades," the group wrote.

Source Reference: [Magliano DJ, et al "Trends in incidence of total or type 2 diabetes: systematic review" BMJ 2019; 366: l5003.](https://www.bmj.com/content/366/bmj.l5003)