

# Diabetes as a major global health challenge

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A researcher from UPM is involved in a study that estimates the global prevalence of diabetes and anticipates future trends.

Full professor Marcela González Gross of UPM is involved in an international scientific team led by Imperial College London that has carried out a study to assess the number of adults with diabetes and the trends of prevalence of this disease.

According to the results, the world's adult population with diabetes increased from 108 million in 1980 to 422 millions in 2014 and if measures are not enacted, this figure will exceed 700 million in coming years.

Today, diabetes is among the leading causes of death and morbidity, entailing a high cost for national health systems worldwide. Accordingly, there is an urgent need to prevent diabetes, improve early detection and to slow its progression to other complications.

In order to combat the disease, the United Nations (UN) set a global goal of stopping the increase of diabetes among adults and to keep its prevalence by 2025 at the same level than in 2010.

Estimates of the prevalence of diabetes over time are needed to assess the effects of the implemented interventions, to compare the trends among the different countries and to measure the progress toward achieving the goal set by the UN. The NCD-RisC group is a network of scientists around the world focused on health that provides rigorous and

timely data about [risk factors](#) for noncommunicable diseases of 200 countries and regions.

The NCD-RisC group works closely with World Health Organization (WHO) through a collaborating centre on surveillance of [noncommunicable diseases](#) and epidemiology at Imperial College London.

Researchers collected data from 751 surveys between 1980 and 2014 that included 4,372,000 adults whose diabetes was measured through biomarkers in 146 out of 200 countries where this study was carried out. The Bayesian hierarchical model was used to estimate by gender the trends in diabetes prevalence defined by the fasting plasma glucose, the history of diagnosis of diabetes, the use of insulin or oral medications.

Results show that from 1980, the age-standardized adult diabetes prevalence almost doubled, increasing from 4.7 percent to 8.5 percent. This data also indicates an increase of associated risk factors such as overweight and obesity.

The burden of [diabetes](#), both in terms of prevalence and number of adults affected, has increased faster in low-income and middle-income countries than in high-income countries. Based on these results, researchers suggest that "if post-2000 trends continue, the chance of meeting the global target of UN on this disease is lower than 1 percent for males and 1 percent for females worldwide.

**More information:** NCD Risk Factor Collaboration. "Worldwide trends in diabetes since 1980: a pooled analysis of 751 population-based studies with 4.4 million participants. *The Lancet* 387 (10027): 1513-1530. [DOI: 10.1016/S0140-6736\(16\)00618-8](https://doi.org/10.1016/S0140-6736(16)00618-8)

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