

The Value of Medical Technology: Controlling & Treating Diabetes



Diabetes is a group of diseases characterized by high blood glucose, or blood sugar, caused when the body either does not produce enough insulin or is unable to use insulin in an effective way. When not controlled, the high level of glucose can lead to serious health complications, including death.¹

26 MILLION

Americans are thought to have diabetes.²

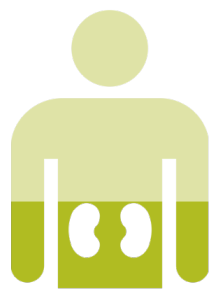


1 in 3 ADULTS

Could have diabetes by 2050 if recent trends continue at the same rate.³



According to the American Diabetes Association (ADA), diabetes kills more Americans every year than AIDS and breast cancer combined.⁴ Complications can include heart and kidney disease, vision loss and limb amputation.⁵



KIDNEY FAILURE

Diabetes accounts for 44% of all new cases of kidney failure.⁶



STROKE & HEART DISEASE

Death from heart disease and stroke risk among adults with diabetes are two to four times greater than among adults without diabetes.⁷



LOWER-LIMB AMPUTATION

More than 60% of non-traumatic lower-limb amputations are in patients with diabetes.⁸



Diabetes imposes a substantial economic burden on society and is one of the costliest chronic diseases in the world.



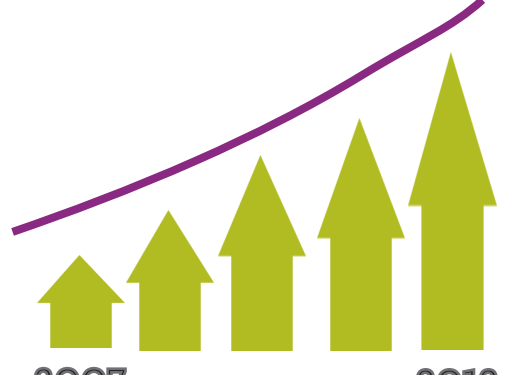
\$245 BILLION

Economic costs of diagnosed cases of diabetes in 2012 included \$176B in direct medical costs and \$69B in reduced productivity.⁹



\$18 BILLION

Burden placed on society due to undiagnosed cases of diabetes.¹⁰



2007

2012

41% INCREASE

Economic costs of diabetes increased 41% over just five years, from 2007 to 2012.¹¹



Medical technology has revolutionized the ways in which people are screened for and live with diabetes, providing diagnostic and treatment options that contribute to improved health outcomes, helping to maintain a better quality of life and reducing overall health system costs.



COMPLICATIONS REDUCED

Eye disease reduced by 76%, kidney disease by 54% and heart attacks by 40%, due to better blood glucose management.^{12 13}



DOLLARS SAVED

Between \$34,000 and \$57,000 is saved each year for every 100 patients who use insulin pumps.¹⁴



THE FUTURE OF MEDTECH

An estimated \$1.9B over 25 years could be saved through development and utilization of artificial pancreas technology.¹⁵

LifeChangingInnovation.org

¹ Centers for Disease Control and Prevention. Diabetes Report Card 2012. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services; 2012.

² Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.

³ Ibid

⁴ American Diabetes Association. Fast Facts: Data and Statistics about Diabetes. Retrieved March 3, 2014, from: <http://professional.diabetes.org/admin/UserFiles/0%20-%20Sean/FastFacts%20March%202013.pdf>

⁵ Ibid

⁶ Ibid

⁷ Ibid

⁸ Ibid

⁹ American Diabetes Association. Economic Cost of Diabetes in the US in 2012. [published online ahead of print March 6, 2013] Diabetes Care. DOI:10.2337/dc12-2625.

¹⁰ Zhang, Y et al. The Economic Costs of Undiagnosed Diabetes. Population Health Management. April 2009, 12(2): 95-101. doi:10.1089/pop.2009.12202.

¹¹ American Diabetes Association. Economic Cost of Diabetes in the US in 2012. [published online ahead of print March 6, 2013] Diabetes Care. DOI:10.2337/dc12-2625.

¹² Diabetes Control and Complications Trial Research Group. The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. New Engl J Med. 1993;329:977-986.

¹³ Diabetes Control and Complications Trial/Epidemiology of Diabetes Interventions and Complications Study Research Group. Intensive diabetes treatment and cardiovascular disease in patients with type 1 diabetes. New Engl J Med. 2005;353:2634-2653.

¹⁴ S. Bevan, K. Zheltoukhova and R. McGee, "Adding Value: The Economic and Societal Benefits of Medical Technology", The Work Foundation – part of Lancaster University, November 2011.

¹⁵ Juvenile Diabetes Research Foundation. Retrieved March 3, 2014, from: <https://www.jdrf.org.uk/news/latest-news/19-billion-potential-healthcare-saving-for-usa-with-artificial-pancreas>



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