

# natureOUTLOOK

## DIABETES

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The distinct but biologically related disorders that share the name diabetes impose vast human and economic losses. The US Center for Disease Control and Prevention estimates that medical expenses for people living with diabetes in the United States are, on average, 2.3 times higher than for non-diabetics. According to the World Health Organization, 346 million people worldwide — roughly the combined populations of the United States and Canada — have diabetes (page S2).

In the developing world, Type 2 diabetes is growing at an alarming rate as people gain access to the trappings of modernity — Western-style diets along with a more sedentary lifestyle. India, for example, is experiencing an alarming epidemic in T2D that threatens to sap the country's economic potency (S14).

Advances in medicine and technology offer some hope to those with type 1 diabetes — an autoimmune disorder that requires routine insulin injections. Immunomodulator agents under development could stop the body's misguided attack on the insulin-producing pancreatic cells (S4). And computer-controlled devices that monitor blood sugar levels and deliver insulin in response are taking some of the guesswork and inconvenience out of this vitally important task.

There is remarkably little certainty on how these conditions arise (S10). And although it remains unclear what triggers either T1D or T2D, the bacteria that live within us are implicated (S12).

Is diabetes preventable? On this question, the differences between T1D and T2D are perhaps most apparent (S18). Vaccines might one day be able to guard against T1D, but that day is still distant. T2D, on the other hand, appears to offer ample opportunity for individuals to manage their destiny through a healthy diet and exercise.

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**Herb Brody**

*Supplements Editor*

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