1. Diabetes can be prevented with a pill.

You've probably heard the name of this drug before. It's called metformin and it's a common first-line defense for type 2 diabetics. But what you haven't likely heard is that by reducing glucose production by the liver and improving insulin resistance, metformin can help keep prediabetes from turning into full-blown diabetes. It's safe and effective, yet one study revealed doctors only prescribe the drug to about 8% of those the American Diabetes Association's guidelines recommend it for: prediabetics who are under age 60, severely obese or have a history of gestational diabetes.

Experts surmise it's being underprescribed because many doctors and patients seem to be unaware of the drug's effectiveness, and a spate of studies have found that lifestyle changes were more effective than metformin at preventing diabetes. "An aversion to daily medicine could also make some people refuse the prescription," explains Kevin Goist, MD, an assistant professor of internal medicine at The Ohio State

However, the Centers for Disease Control and Prevention estimates that 15% to 30% of prediabetics will progress to type 2 within five years. "For those who are unable to change diets and incorporate more physical activity into their lives, metformin is a real opportunity to says endocrinologist Tannaz Moin, MD, the study's lead author and an assistant professor at the David and VA Greater Los Angeles Healthcare System.

2. Even slim adults get diabetes.

It's been called type 1.5 diabetes and latent autoimmune diabetes in adults (LADA), but experts still haven't settled on a definitive name for this disease that is often mistaken for type 2 diabetes. In fact, 20% of people diagnosed with type 2 could

really have (what we'll call for now) LADA, which typically occurs after age 30 and in patients who have low to normal BMIs. While symptoms of LADA can

be the same as for other types of diabetesextreme thirst, frequent urination, blurred vision and tingling in hands or

experience any of these.

prevent or delay the onset of diabetes." Geffen School of Medicine at UCLA

SURPRISIN

'HS YOU HAVEN'T HEARD ABOUT

Cutting-edge research and studies are changing how this disease (which strikes 29 million Americans) is classified, treated and prevented. feet-many patients don't

BY GINA ROBERTS-GREY

University Wexner

Medical Center.

Instead they learn they have high blood sugar via blood work, usually during an annual physical.

While the terminology to use when talking about this disease is unclear, one thing isn't: Unlike children with type 1, those diagnosed with LADA don't immediately require insulin to regulate their blood sugar—avoiding medication for six months or longer. That means

understanding LADA may open the door to future treatments. "Currently, the plan for all type 1 diabetics is the same: Use insulin to regulate blood sugar," says Matt Petersen, managing director of medical information for the American Diabetes Association. "But if we unlock the reason those diagnosed with LADA have a 'honeymoon' period before needing medication, we may be

able to prevent the need for others to be insulin-dependent."

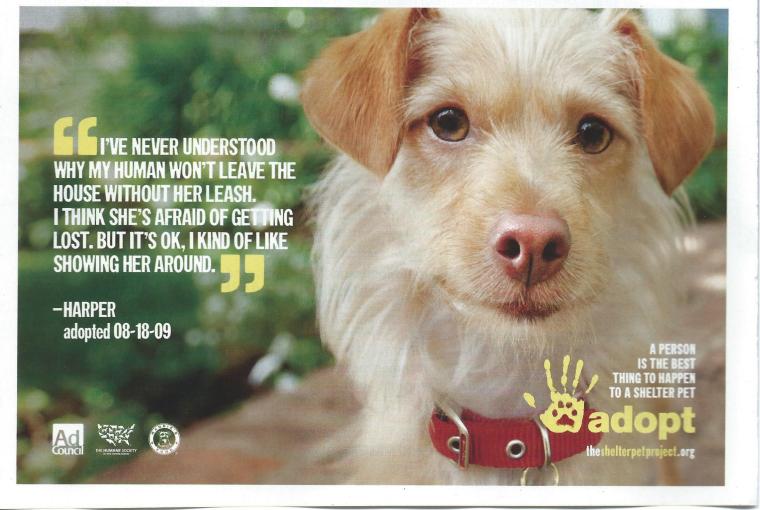
4. Diabetes may harm your memory.

A small study out of Harvard Medical School showed that people with type 2 diabetes aren't able to regulate blood flow to their brain as well as nondiabetics do. That diminished blood flow may negatively impact brain health and cognitive abilities and could be one reason having diabetes was associated with an increased risk of Alzheimer's by researchers in Taiwan. New research has found that diabetics also have less gray matter in parts of the brain responsible for memory retrieval, an early risk factor for dementia.

Type 1 diabetes could be just as bad for your brain, aging it faster than normal, which impairs the processing of information and cognitive abilities, according to University of Pittsburgh researchers. "One possibility is that diabetes potentially causes changes to blood vessels and other parts of the vascular system throughout the body that may affect brain health, but more research is needed," says Heather

3. There's a breast cancer link. The demands of managing diabetes could be one of the reasons women with the disease are up to 20% less likely to get mammograms, increasing their risk of having breast cancer diagnosed at a more deadly stage. Insulin resistance and high blood sugar levels may also promote more rapid growth of tumors.

Source: Women's College Research Institute in Toronto, Canada



Snyder, PhD, director of medical and scientific operations of the Alzheimer's Association.

There is some good news: A large German study found that managing blood sugar with the anti-diabetic drug pioglitazone reduces the risk of dementia by 47% in type 2 diabetics who aren't taking insulin. The medicine's anti-inflammatory abilities coupled with decreasing insulin resistance are believed to offer protective benefits to parts of the brain impacted by dementia.

5. A "healthy" diet isn't necessarily enough.

Skipping sweets and sticking to goodfor-you foods doesn't guarantee you
won't develop diabetes. Unfortunately,
the majority of American diets are
stuck in a rut, consisting of the same
few items. Instead of filling their plates
with a variety of fruits, nuts and veggies,
most Americans typically pair meat
and dairy with a rice-, corn- or wheatbased partner. This unbalanced eating
pattern has reduced the assortment
of gut bacteria, which is believed to
help regulate blood sugar levels and

inflammation as well as hormones that trigger a sense of fullness.

One recipe for balanced belly flora is simple: Add several different fiber-rich foods to your diet. Go beyond brown rice, oatmeal or whole-grain toast and try incorporating fiber-rich seasonal fruits and vegetables and a variety of nuts and legumes to keep your gut bacteria balanced. And make it a goal to get more than 26 grams of fiber a day. Consuming at least that much tames spiking blood sugar levels, lowering the risk of diabetes by 18%, according to the InterAct Consortium, a European union of diabetes researchers.

Dairy or seafood can also be protective. Separate studies have determined that vitamin D, which is found in milk, yogurt, eggs, salmon and tuna, stimulates production of gut bacteria shown in animal studies to inhibit the pancreatic inflammation thought to lead to type 1 diabetes.

6. Lowering your cholesterol can raise your blood sugar.

The heart-healthy practice of decreasing LDL cholesterol and

triglycerides with a prescription statin may significantly increase your risk of developing diabetes. It may also indirectly raise your chances of experiencing diabetes complications like kidney disease, elevated blood sugar-induced coma and eye disease. Experts believe one possibility is that the drug reduces muscle strength and conditioning. "When you lower muscle bulk, your body uses fewer calories during the day, making it easy to gain weight if you don't watch what you eat," says Ishak Mansi, MD, physician and professor at UT Southwestern Medical Center and the study's lead author. "Another reason may be that people taking statins to keep cholesterol in check may permit themselves to eat whatever they want, which increases weight and the risk of diabetes."

Mansi isn't suggesting that anyone stop taking statins. But he does advocate making an effort to lower your risk of cardiovascular disease by quitting smoking, exercising regularly and maintaining a healthy body weight. You might also ask your doctor about statin alternatives like proprotein

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inhibitors, a new class of injectable medicines that also treat high cholesterol, or embracing a Mediterranean lifestyle, which research from the University of Texas found can lower triglycerides and lower LDL cholesterol. "That means eating olive oil, vegetables, fruits, legumes, wholegrain foods, nuts, cheese and yogurt daily; limiting red meat meals to once a week or less; having fish twice a week; getting daily physical activity and adequate rest; and enjoying moderate alcohol consumption," says Labros Sidossis, PhD, professor at University of Texas Medical Branch at Galveston and lead author of the study. "No single component can have a very significant effect alone. You need the whole Mediterranean package."

7. Diabetes is a couple's disease. A recent Canadian study found that having a wife with diabetes increases a man's chance of developing type 2 diabetes by 26%, possibly because partners often share similar dietary and exercise habits.

Source: McGill University Health Centre

8. Diabetes can be a side effect of menopause.

Along with hot flashes and night sweats, several studies have found decreased estrogen and progesterone during perimenopause and menopause are linked to your insulin resistance and raise the risk of diabetes. "Insulin resistance makes us crave sugar, and satisfying that craving promotes belly fat. The excess weight leads to greater insulin resistance and the vicious cycle continues," says ob-gyn Diana Bitner, MD, NCMP, of Spectrum Health Medical Group, Women's Health Network in Grand Rapids, MI. Extra fat lingering around your midsection may mean more frequent hot flashes, causing stress and even depression. "When that happens, many women look for comfort in the form of a simple carbohydrate like candy, sweets and sugary drinks, keeping themselves stuck on that merry-go-round."

Research has shown lifestyle changes like increasing activity levels and healthy diets can counter hormone-induced insulin resistance. To keep your blood sugar in check, Bitner also suggests consulting a certified menopause practitioner (go to menopause.org) to discuss all effective ways to improve insulin resistance.

9. Your bones should beware.

Diabetics with uncontrolled blood sugar have an increased risk of fractures and decreased bone strength, according to new research out of the University of Delaware. The good news is that exercise can help build stronger bones, so long as your diabetes is well controlled.

IMPORTANT SAFETY INFORMATION (continued)

The dose of BOTOX® is not the same as, or comparable to, another botulinum toxin product.

Serious and/or immediate allergic reactions have been reported. These reactions include itching, rash, red itchy welts, wheezing, asthma symptoms, or dizziness or feeling faint. Tell your doctor or get medical help right away if you experience any such symptoms; further injection of BOTOX® should be discontinued.

Tell your doctor about all your muscle or nerve conditions such as amyotrophic lateral sclerosis (ALS or Lou Gehrig's disease), myasthenia gravis, or Lambert-Eaton syndrome, as you may be at increased risk of serious side effects including severe dysphagia (difficulty swallowing) and respiratory compromise (difficulty breathing) from typical doses of BOTOX®.

Tell your doctor about all your medical conditions, including if you: have or have had bleeding problems; have plans to have surgery; have symptoms of a urinary tract infection (UTI) and are being treated for urinary incontinence. Symptoms of a urinary tract infection may include pain or burning with urination, frequent urination, or fever; have problems emptying your bladder on your own and are being treated for urinary incontinence; are pregnant or plan to become pregnant (it is not known if BOTOX® can harm your unborn baby); are breastfeeding or plan to breastfeed (it is not known if BOTOX® passes into breast milk).

Tell your doctor about all the medicines you take, including prescription and nonprescription medicines, vitamins, and herbal products. Using BOTOX® with certain other medicines may cause serious side effects. Do not start any new medicines until you have told your doctor that you have received BOTOX® in the past.

Especially tell your doctor if you: have received any other botulinum toxin product in the last 4 months; have received injections of botulinum toxin such as Myobloc®, Dysport®, or Xeomin® in the past (be sure your doctor knows exactly which product you received); have recently received an antibiotic by injection; take muscle relaxants; take an allergy or cold medicine; take a sleep medicine; take anti-platelets (aspirin-like products) or anti-coagulants (blood thinners).

Other side effects of BOTOX® include: dry mouth, discomfort or pain at the injection site, tiredness, headache, neck pain, and eye problems: double vision, blurred vision, decreased eyesight, drooping eyelids, swelling of your eyelids, and dry eyes. In people being treated for urinary incontinence other side effects include: urinary tract infection, painful urination, and/or inability to empty your bladder on your own. If you have difficulty fully emptying your bladder after receiving BOTOX®, you may need to use a disposable self-catheter to empty your bladder up to a few times each day until your bladder is able to start emptying again.

For more information refer to the Medication Guide or talk with your doctor.

You are encouraged to report negative side effects of prescription drugs to the FDA.

Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

Please refer to full Medication Guide including Boxed Warning on the following pages.

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