Diabetes

Description

Saving this to a â€œHealthâ€• email folder can make it easier to access.

You can use this as an aide to your own research and share with your doctor as appropriate.

You can use drugs.com or other trusted health websites to look up the latest information on prescription drugs, herbs, foods or other treatments possible side & interaction effects.

Diabetes

Quick summary of the research for type II diabetes:

What may help in order of effectiveness:

Walking or exercising before or after every meal or snack that raises blood sugar

Avoiding high fructose corn syrup (may be hidden in nonorganic corn starch, dextrose, corn etc) that has mercury added in processing

Avoiding all nonorganic oils, refined oils, & only cooking with organic unrefined coconut oil or grassfed ghee/butter to avoid the refined/heated polyunsaturated fat that turns to formaldehyde (a toxin)

Getting on a continuous glucose monitor (like a Dexcom) & keeping a diary of how each food affects blood sugar

Taking alpha lipoic acid 300-600mg before each meal or 1200mg every 12 hours (also reverses migraine symptoms in an hour, sciatica in a day, neuropathy half a week (see Mayo Clinic) heart disease/congestive heart failure within a couple months, & cancer by up to 2/3rds)

Taking berberine 500mg before breakfast & dinner

Taking organic natto 1/8th teaspoon (also powder) on an empty stomach (also heart disease, cancer, osteoporosis)

Cold exposure (turn cold water on for a minute before leaving shower)

Taking ceylon cinnamon in food or capsule, ginger, hibiscus tea, glucommanon or flaxseed fiber before a meal, apple cider or red wine vinegar in water before a meal, using extra virgin olive oil or MCT oil, and/or mulberry leaf extract before every meal

Drinking a half glass of water before any other drink and before every meal

Avoiding modern wheat, using organic triticale, spelt or farro instead, stone ground

Substituting sugar & especially fructose with stevia, monk fruit, and/or allulose

eating more organic vegetables and fruits

Type II diabetes

Prevention

Diet & exercise

Diet & exercise has been found to be almost twice as effective (58%) as even the best diabetes drug metformin (31%) in preventing the progression of people with prediabetes to diabetes. Even a small amount of weight loss was predictive of the greatest benefit. And it dropped by 70% in people over 60.

https://www.ncbi.nlm.nih.gov/pubmed/263770542015
https://www.ncbi.nlm.nih.gov/pubmed/11832527
https://www.ncbi.nlm.nih.gov/pubmed/26167912
http://www.nutritionaction.com/daily/diabetes-and-diet-cat/one-out-of-three-u-s-adults-have-prediabetes/?mqsc=E3873912&utm_source=WhatCountsEmail&utm_

When to exercise

Walking or exercising right before or after eating significantly reduces blood sugar rise and helps prevent or reverse diabetes. Exercise right after a meal but before insulin kicks in is easier because of the extra energy for the exercise. I do a one minute high intensity exercise right after eating the high carbohydrate portion of my meal (organic brown rice) to keep my blood sugar down. On workout days I go workout IMMEDIATELY after eating the rice and it gives me so much more energy than normal Iâ€™m able to lift 20 to 30 more pounds on each of my lifts or improve my aerobic exercise times significantly from the increased energy.

Exercising right before or after eating may be the best prevention & treatment for type II diabetes.

Diabetic diary

Everyone responds differently to some foods. Testing blood sugar levels after meals can give information on what foods raise an individuals blood sugar the most. These individual reactions to

normally low glycemic foods may indicate an immune inflammatory reaction. So avoiding these foods not only reduces blood sugar but inflammation and autoimmune overreaction as well. Keeping a diabetic diary can help to reverse diabetes.

Cell, Volume 163, Issue 5, p1079â€“1094, 19 November 2015
Personalized Nutrition by Prediction of Glycemic Responses
David Zeevi et al.
DOI: http://dx.doi.org/10.1016/j.cell.2015.11.001

Dr. Richard Becker with Cindy Becker on â€œYour Healthâ€• 01/31/17 #1570 Your Health Questions

Caloric drinks

Drinking liquids with sugar, including fruit juices (orange juice, lemonade made with sugar, white grapefruit juice) triggers type 2 diabetes. Grapefruit juice doesnâ€™t, but does increase the blood levels of 40% of medications. Dark grape juice doesnâ€™t trigger diabetes because of its resveratrol, but can increase obesity which increases diabetes side effects.

Drinking a half glass of water then eating an orange, lemon, grapefruit, or grapes increases longevity.

Getting off caloric drinks like pop is easier if people drink a half glass of water before drinking the pop/juice. The water satisfies the thirst, & people end up drinking only a portion of their caloric drink per hour rather than gulping it down & drinking one after another.

Water

Drinking a glass of water (best) or another noncaloric beverage BEFORE eating does a couple of good things. When we get older

our sense of thirst is often comingled with our sense of hunger. So when we are thirsty, we often feel hunger. Drinking a noncaloric beverage before a meal can prevent overeating when we are thirsty but feel it as hunger.

Drinking water/beverage before a meal also prevents the beverage from interfering with our blood sugar while eating. Drinking a beverage in the middle of a meal can temporarily lower blood sugar & make people â€œfeelâ€• hungry, even after eating a lot of food.

Drinking a beverage throughout the meal also washes away the taste of the food, often prompting people to eat more to get the taste back rather than relishing the taste for a half hour after eating when the beverage is drunk before the meal.

Vinegar

Apple cider vinegar or red wine vinegar both significantly moderate blood sugar when used in a meal, before a meal in a drink, or with olive oil in salad dressing.

Avoiding wheat

Wheat has a substance in it that raises blood sugar as much as sugar, and our current wheat hybrid has ten times the amount of gluten as spelt (an older version of wheat) and is undigestible & highly inflammatory to all people, not just people with a gluten sensitivity. Because of this blood sugar effect, people can see a fast rise then a fast drop in their blood sugar after eating wheat and feel â€œhungryâ€• right after eating. People who eat wheat ingest 400 more calories per day than people who avoid wheat. Irritable bowel syndrome (IBS) and other digestive abnormalities may go away for good when gluten is dropped from the diet.

Spelt, one of the earlier wheats

The other option is to cook with spelt. Spelt has a different type of gluten than modern wheat that is far easier to break down. Spelt is one of the versions of wheat that people grew for millenia before the new hybrid high gluten wheat was created. Spelt may not avoid all of the blood sugar rise effects of wheat, but it may have significantly reduced inflammatory effects compared to modern high gluten wheat.

Mouthwash

A Study of nearly 1000 people for three years found that people who used mouthwash 2x per day or more had over a 50% higher pre or full diabetes risk.
Mouthwash has aluminum, which causes a number of autoimmune disorders.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6628144/

Statins- a main cause of diabetes & diabetes complications

Statins appear to temporarily decrease mortality/improve longevity until the person gets diabetes, then they appear to increasingly raise mortality/decrease longevity & cause early death. Studies funded by drug companies over short periods appear to find less diabetes, studies funded by nonprofits over longer periods appear to find more diabetes.

In this meta-analyis of multiple studies, the higher the statin dosage the higher the diabetes rate & severity.

Preiss D, Seshasai SRK, Welsh P, et al. Risk of Incident Diabetes With Intensive-Dose Compared With Moderate-Dose Statin Therapy:

A Meta-analysis. JAMA. 2011;305(24):2556â€“2564. doi:10.1001/jama.2011.860 jamanetwork.com/journals/jama/fullarticle/646699

In this meta-analysis, short term trials of statins showed an increase in diabetes incidence, longer term observational studies showed 3-5X greater increase in diabetes.

D. Thakker, S. Nair, A. Pagada, V. Jamdade, A. Malik
Statin use and the risk of developing diabetes: a network meta-analysis
Pharmacoepidemiol. Drug Saf., 25 (2016), pp. 1131-1149
sciencedirect.com/science/article/abs/pii/S0939475317300431#previe
section-cited-by

Atorvastatin (Lipitor) appears to increase diabetes in the short term by 22%, simvastatin (Zocor) 10%, rosuvastatin (Crestor) 18%, more with higher doses and over longer periods. Statins may increase diabetes by 87% in the longer term.

Statins and New-Onset Diabetes Mellitus and Diabetic Complications: A Retrospective Cohort Study of US Healthy Adults.
Mansi I1, Frei CR, Wang CP, Mortensen EM.
J Gen Intern Med. 2015 Apr 28. [Epub ahead of print]

http://www.bmj.com/press-releases/2013/05/23/statin-use-linked-increased-risk-developing-diabetes-warn-researchers

http://www.bmj.com/content/346/bmj.f2610

Risk of incident diabetes among patients treated with statins: population based study BMJ 2013;346:f2610

http://www.ncbi.nlm.nih.gov/pubmed/21130454?access_num=211304

Koh KK, Sakuma I, Quon MJ. Differential metabolic effects of distinct statins. Atherosclerosis. 2011 Mar;215(1):1-8. doi: 10.1016/j.atherosclerosis.2010.10.036. Epub 2010 Nov 2.

http://www.ncbi.nlm.nih.gov/pubmed/21693744?access_num=216937
JAMA. Preiss D1, Seshasai SR, Welsh P,

Murphy SA, Ho JE, Waters DD, DeMicco DA, Barter P, Cannon CP, Sabatine MS, Braunwald E, Kastelein JJ, de Lemos JA, Blazing MA, Pedersen TR, Tikkanen MJ, Sattar N, Ray KK. Risk of incident diabetes with intensive-dose compared with moderate-dose statin therapy: a meta-analysis. 2011 Jun 22;305(24):2556-64. doi: 10.1001/jama.2011.860.

If you got diabetes after you started one of these three statins, or liver, muscle, and/or kidney damage after starting any statin, you may have a legal case against the statin maker. http://www.nolo.com/legal-encyclopedia/crestor-lipitor-other-cholesterol-drugs-29538.html

In a study of over 150,000 women, statin usage increase diabetes for postmenopausal women by 70%.
A. L. Culver, I. S. Ockene, R. Balasubramanian, B. C. Olendzki, D. M. Sepavich, J. Wactawski-Wende, J. E. Manson, Y. Qiao, S. Liu, P. A. Merriam, C. Rahilly-Tierny, F. Thomas, J. S. Berger, J. K. Ockene, J. D. Curb, Y. Ma. Statin Use and Risk of Diabetes Mellitus in Postmenopausal Women in the Womenâ€™s Health Initiative. Archives of Internal Medicine, 2012; DOI: 10.1001/archinternmed.2011.625

Statins even give healthy people diabetes & obesity

A major study only using only healthy people found that statins increase diabetes in people who are healthy by 87%, and increase

diabetes complications as well. The higher the dose, the higher the diabetes. Stains also increase obesity by 14% in these previously healthy people.

Statins and New-Onset Diabetes Mellitus and Diabetic Complications: A Retrospective Cohort Study of US Healthy Adults.
Mansi I, Frei CR, Wang CP, Mortensen EM.
J Gen Intern Med. 2015 Apr 28.

Medications for diabetes type II

Metformin

Metformin, a prescription drug derived from the plant goatâ€™s rue, is very inexpensive, lowers blood sugar, and most importantly, appears to extend life. People who have diabetes and take metformin live 15% longer than people without diabetes who donâ€™t take metformin. Almost none of the other prescription medications that lower blood sugar extend life, and too many interfere with metforminâ€™s benefits. Metformin reduces cancer in people with diabetes (where the risk is elevated) by 40%, 33% for people who take metformin for other reasons (polycystic ovarian syndrome). Metformin appears to be safe in mild to moderate kidney disease, but may cause dangerous lactic acid buildup in severe kidney disease.

The drawbacks of metformin are that it appears to be to deplete vitamin B12, coQ10, folate, vitamin K2, & may lower thyroid stimulating hormone (TSH) in people with an underactive thyroid, and may increase heart failure in men. Since coQ10 is essential for heart function, taking supplemental ubiquinol (the most effective version of coQ10) should help prevent heart problems. In people with diabetes taking metformin, adding an ACE inhibitor (for blood

pressure) halves death rates, possibly by also strengthening the heart muscle. Vitamin B12 is best taken sublingually (under the tongue) in the form of methylcobalamin (not ethylcobalamin). Folate can be gotten from dark leafy greens, useful in salads with vinegarette dressing. Vitamin K2 is available as a supplement or from natto, a type of fermented soy.

Drug interaction effects with metformin-
Cimetidine (Tagamet) is a heartburn medication that increases the blood levels of metformin by 40%, which could trigger dangerous hypoglycemia.

In gestational diabetes metformin outperforms insulin in controlling maternal weight gain, but was associated with younger gestational age at delivery and a higher rate of preterm birth.

Glibenclamide, metformin, and insulin for the treatment of gestational diabetes: a systematic review and meta-analysis
BMJ 2015;350:h102

Alpha lipoic acid

Alpha lipoic acid is made by our body to help deal with blood sugar. It has no known significant side effects or drug interaction effects except at high doses (4000 IU) people may need some biotin (vitB7) in between meals. When we take up to 2400 mg/day (usually upon waking, during meals, and before nightly food cravings) it appears to immediately stop migraines in an hour (even better with magnesium, ubiquinol, vitsB2&B9, feverfew, & butterbur), sciatica in a day (back nerve pain), peripheral neuropathy in a week or two, works as a major anti-inflammatory to speed healing after 2-3days, helps reduce type 2 diabetes within a couple months, heart disease within a few (3-4) months by lowering vLDL & triglycerides, helps prevent/fight

cancer better than chemotherapy according to one major research review, and at 2400 mg per day over six months helped people lose 8% of their body weight on average. If people have diabetes & Alzheimerâ€™s or dementia alpha lipoic acid may bring back memory function very quickly.

Dr. Richard Becker with Cindy Becker â€œYour Healthâ€• 01/27/17 #1557 The Many Uses of ALA
https://www.youtube.com/watch?v=3LglZZIaYGg

A review of 103 studies:
http://www.lifeextension.com/Magazine/2011/8/Lipoic-Acid-Reverses-Mitochondrial-Decay/Page-01

https://www.globalhealingcenter.com/natural-health/alpha-lipoic-acid-benefits-side-effects/#1

Eur Rev Med Pharmacol Sci. 2017 Sep;21(18):4219-4227.

Parente, E., Colannino, G. and Ferrara, P. (2014) Efficacy of Magnesium and Alpha Lipoic Acid Supplementation in Reducing Premature Uterine Contractions. Open Journal of Obstetrics and Gynecology, 4, 578-583.

Safety of oral alpha-lipoic acid treatment in pregnant women: a retrospective observational study.
Parente E, Colannino G, Picconi O, Monastra G.

Patrick L. â€œMercury toxicity and antioxidants: Part 1: role of glutathione and alpha-lipoic acid in the treatment of mercury toxicity.â€• Altern Med Rev. 2002; 7(6),456-71. Accessed 20 Feb. 2018.
IJMDAT 2018; 1(1):e104

Oral plus vaginal alpha-lipoic acid in women at risk for preterm delivery G. Vitrano, G. Mocera, M. Guardino, V. Giallombardo, R. Venezia

Parente, E. , Colannino, G. and Ferrara, P. (2014) Efficacy of Magnesium and Alpha Lipoic Acid Supplementation in Reducing Premature Uterine Contractions. Open Journal of Obstetrics and Gynecology, 4, 578-583. doi: 10.4236/ojog.2014.49082.

Moore R, et al. â€œAlpha-Lipoic Acid Inhibits Tumor Necrosis Factor-Induced Remodeling and Weakening of Human Fetal Membranes.â€• Biology of Reproduction, 2009;(80)4, 781â€“787. Accessed 4 Jan. 2018

Robert M. Moore, Jillian B. Novak, Deepak Kumar, Joseph M. Mansour, Brian M. Mercer, John J. Moore; Alpha-Lipoic Acid Inhibits Tumor Necrosis Factor-Induced Remodeling and Weakening of Human Fetal Membranes, Biology of Reproduction, Volume 80, Issue 4, 1 April 2009, Pages 781â€“787, https://doi.org/10.1095/biolreprod.108.073205

Neurochemistry International
Volume 87, August 2015, Pages 85-91
Alpha lipoic acid inhibits neural apoptosis via a mitochondrial pathway in rats following traumatic brain injury
Wuting Wei et al.
https://doi.org/10.1016/j.neuint.2015.06.003

Environmental Toxicology and Pharmacology
Volume 56, December 2017, Pages 219-224
The Î±-lipoic acid improves high-fat diet-induced cerebral damage through inhibition of oxidative stress and inflammatory reaction
Yang Liu et al.

https://doi.org/10.1016/j.etap.2017.09.018

Brain Research Bulletin
Volume 122, April 2016, Pages 19-28
Alpha-lipoic acid-mediated activation of muscarinic receptors improves hippocampus- and amygdala-dependent memory
Aamra Mahboob et al.
https://doi.org/10.1016/j.brainresbull.2016.02.014

Neuroscience Letters
Volume 587, 5 February 2015, Pages 113-119
Effects of alpha-lipoic acid on spatial learning and memory, oxidative stress, and central cholinergic system in a rat model of vascular dementia
Ran-ran Zhao et al.
https://doi.org/10.1016/j.neulet.2014.12.037

The International Journal of Biochemistry & Cell Biology
Volume 87, June 2017, Pages 86-94
Neurochemical effects of the R form of Î±-lipoic acid and its neuroprotective mechanism in cellular models of Parkinsonâ€™s disease
Hong Zhao et al.
https://doi.org/10.1016/j.biocel.2017.04.002

Neurochemistry International
Volume 108, September 2017, Pages 436-447
Alpha-lipoic acid attenuates acute neuroinflammation and long-term cognitive impairment after polymicrobial sepsis
Amanda Dell et al.
https://doi.org/10.1016/j.neuint.2017.06.003

Cognitive decline associated with aging is prevented by taking tocopheral (a type of vitamin E), N-acetylcysteine, & Î±-lipoic acid. Effects of alpha-lipoic acid on spatial learning and memory, oxidative stress, and central cholinergic system in a rat model of vascular dementia
Ran-ranZhao et al.
https://doi.org/10.1016/j.neulet.2014.12.037

Choi K-H, Park M-S, Kim H-S, et al. Alpha-lipoic acid treatment is neurorestorative and promotes functional recovery after stroke in rats. Molecular Brain. 2015;8:9. doi:10.1186/s13041-015-0101-6.

Choi K-H, Park M-S, Kim J-T, et al. Lipoic Acid Use and Functional Outcomes after Thrombolysis in Patients with Acute Ischemic Stroke and Diabetes. Wang X, ed. PLoS ONE. 2016;11(9):e0163484. doi:10.1371/journal.pone.0163484.

Free Radic Res. 2009 Jul;43(7):658-67. doi: 10.1080/10715760902988843.
The protective effect of alpha lipoic acid against traumatic brain injury in rats.
Toklu HZ1, Hakan T, Biber N, SolakoÄŸlu S, OÄŸÃ¼nÃ§ AV, Sener G.

Molz P, SchrÃ¶der N. Potential Therapeutic Effects of Lipoic Acid on Memory Deficits Related to Aging and Neurodegeneration. Frontiers in Pharmacology. 2017;8:849. doi:10.3389/fphar.2017.00849.

J Neural Transm Suppl. 2007;(72):189-93.
Alpha-lipoic acid as a new treatment option for Alzheimerâ€™s diseaseâ€“a 48 months follow-up analysis.
Hager K, Kenklies M, McAfoose J, Engel J, MÃ¼nch G.

Adv Drug Deliv Rev. 2008 Oct-Nov;60(13-14):1463-70. doi: 10.1016/j.addr.2008.04.015. Epub 2008 Jul 4.
Lipoic acid as an anti-inflammatory and neuroprotective treatment for Alzheimerâ€™s disease.
Maczurek A, Hager K, Kenklies M, Sharman M, Martins R, Engel J, Carlson DA, MÃ¼nch G.

Progress in Neuro-Psychopharmacology and Biological Psychiatry
Volume 64, 4 January 2016, Pages 142-148
Evidence for protective effect of lipoic acid and desvenlafaxine on oxidative stress in a model depression in mice
MÃ¡rcia Calheiros Chaves Silvaa et al.
https://doi.org/10.1016/j.pnpbp.2015.08.002

Journal of Affective Disorders
Volume 219, September 2017, Pages 49-57
Brain antioxidant effect of mirtazapine and reversal of sedation by its combination with alpha-lipoic acid in a model of depression induced by corticosterone
Tatiana de Queiroz et al.
https://doi.org/10.1016/j.jad.2017.05.022

Neuroscience
Volume 272, 11 July 2014, Pages 261-270
Preventive effect of Î±-lipoic acid on prepulse inhibition deficits in a juvenile two-hit model of schizophrenia
J.Deslauriers et al.
https://doi.org/10.1016/j.neuroscience.2014.04.061

Medical Hypotheses
Volume 75, Issue 6, December 2010, Pages 572-575
Is it time to reassess alpha lipoic acid and niacinamide therapy in schizophrenia?

Sheila E.J.Seybolt
https://doi.org/10.1016/j.mehy.2010.07.034

Neuroscience
Volume 373, 1 March 2018, Pages 72-81
Advantages of the Alpha-lipoic Acid Association with Chlorpromazine in a Model of Schizophrenia Induced by Ketamine in Rats: Behavioral and Oxidative Stress evidences
Luis Rafael Leite Sampaio et al.
https://doi.org/10.1016/j.neuroscience.2018.01.008

Cold exposure

Going from heat exposure to cold exposure can significantly improve blood sugar for the rest of the day and increase conversion of fat to healthier brown fat. Only one exposure is needed, more may not increase benefits. One of the easiest ways is to take a hot shower & then for the last 30 seconds turn the spray cold on the legs or the part of the body where cold exposure is the least unpleasant.

Heat exposure with saunas, whirlpools & steamrooms also provide blood sugar benefits.
https://fitness.mercola.com/sites/fitness/archive/2014/08/08/brown-fat-blood-sugar.aspx
https://bengreenfieldfitness.com/article/fat-loss-articles/burning-more-fat-with-cold/

Does getting insulin help or hurt type II diabetes?

A study of over 84,000 people found that people prescribed insulin for type two diabetes for ten years instead of metformin had 3.5 times more kidney problems, 2.2 times more deaths, 2.1 times more neuropathy, 2 times more heart attacks, 1.7 times more adverse cardiac events, 1.4 times more strokes, 1.4 times more cancer, and

1.2 times more eye problems.

Insulin for people with type II diabetes appears to be deadly & disabling. Adding insulin to metformin also appears to increase disease & death incidence over metformin alone.

Why would insulin increase mortality???

Because while extra insulin may temporarily lower blood sugar, a person with type II diabetes already has insulin insensitivity (for up to 5 years before diabetes diagnosis), which the body is already trying to overcompensate with by making too much insulin (hyperinsulinemia), making the problem worse. Adding extra insulin appears to increase hyperinsulinemia & to speed up the progression of type II diabetes. Adding insulin also may increase weight, speeding up the advance of the diabetes.

Mortality and Other Important Diabetes-Related Outcomes With Insulin vs Other Antihyperglycemic Therapies in Type 2 Diabetes
Craig J. Currie, Chris D. Poole, Marc Evans, John R. Peters, Christopher Ll. Morgan
The Journal of Clinical Endocrinology & Metabolism, Volume 98, Issue 2, 1 February 2013, Pages 668â€“677, https://doi.org/10.1210/jc.2012-3042

Better test for type II diabetes

When someoneâ€™s blood sugar starts rising, it may be their insulin levels have been high for years. Perhaps the better test is an oral glucose tolerance test (OGTT) for five (not two) hours with insulin assay to see how high insulin goes, rather than a blood sugar test alone that takes years to reflect the ever increasing insulin elevation & desensitivity.

In the very least taking this test would show doctors the folly of giving insulin in type II diabetes- pouring oil on a fire out of control.

Type II diabetes appears to be a long term buildup of insulin overproduction & desensitivity. The blood glucose rise is only the very end symptom of the disease.

http://www.tuitnutrition.com/2015/09/its-the-insulin-1.html

Sulfonylurea & mortality in diabetes

Sulfonylurea medications are used to treat type II diabetes. They include-

acetohexamide
carbutamide
chlorpropamide
glycyclamide (tolhexamide)
metahexamide
tolazamide
tolbutamide
glibenclamide (Glyburide)
glibornuride
gliclazide
gliquidone
glisoxepide
glyclopyramide
glimepiride (Amaryl)
glipizide(Glucotrol)
glyburide (Diabeta/Micronase)

Sulfonylurea treatment also had a much higher disease incidence than metformin alone in a review of over 84,600 people.
Sulfonylureas also can increase weight, causing the diabetes to

worsen over time. Sulfonylurea treatment for people with type two diabetes appeared to be deadly & disabling, especially in comparison with metformin alone. Adding metformin helped, but was still less safe than metformin without sulfonylureas.

Mortality and Other Important Diabetes-Related Outcomes With Insulin vs Other Antihyperglycemic Therapies in Type 2 Diabetes, Journal of Clinical Endocrinology & Metabolism, Craig J. Currie, Chris D. Poole, Marc Evans, John R. Peters and Christopher Ll. Morgan; doi:10.1210/jc.2012-3042

Deadly diabetes drugs

Sitagliptin (Januvia) and exenatide (Byetta) appear to significantly increase the risk for hospitalization and death from pancreatitis (inflamed pancreas) and may increase the risk for pancreatic cancer, and to increase thyroid cancer. The biggest problem is because the pancreas is hard to examine, a person taking these drugs can develop sudden symptoms that can turn lethal very quickly.

GLp-1 meds
Exenatide (Byetta) and other GLP-1 medications- liraglutide (Victoza), weekly exenatide (Byadureon), dulaglutide (Trulicity), semaglutide (Rybelsus), and albiglutide (Tanzeum)- may increase blindess up to 35x, pancreatitus by 9x, pancreatic cancer by 4.5x, kidney failure, and thyroid cancer. Exenatide may increase heart attacks.
citizen.org/news/new-study-underscores-increased-dangers-of-certain-diabetes-treatments/

DPP-4 inhibitors

Sitagliptin and other DPP-4 inhibitors-alogliptin (Nesina), linagliptin (Tradjenta), saxagliptin (Onglyza), according to the USDA & FDA, along with the pancreatic cancer & thyroid cancer risk can also cause severe & debilitating joint pain. One study found an increase in heart failure (25%).

Dr. Osama Hamdy Bottom Line Person 12/15/15 p11
drugwatch.com

Zannad F, Cannon CP, Cushman WC, Bakris GL, Menon V, Perez AT, Fleck PR, Mehta CR, Kupfer S, Wilson C, Lam H, White WB. EXAMINE Investigators. Heart failure and mortality outcomes in patients with type 2 diabetes taking alogliptin versus placebo in EXAMINE: a multicentre, randomised, double-blind trial. Lancet. 2015;385:2067â€“2076.

DPP-4 Inhibitor â€“ Related Pancreatitis: Rare but Real!
Diabetes Care 2017;40:161â€“163
DOI: 10.2337/dci16-0035

SGLT2 Inhibitors-

Public Citizen recommends â€œDo Not Useâ€• based on possibly deadly side effects

Invokana	canagliflozin
Invokamet	canagliflozin and metformin
Farxiga	dapagliflozin
Xigduo XR	dapagliflozin and metformin extended-release
Jardiance	empagliflozin
Glyxambi	empagliflozin and linagliptin

Type 2 diabetes drugs called sodium-glucose co-transporter 2 (SGLT2) inhibitors, stop glucose from reentering the blood in the kidneys. According to the FDA they are linked to serious side effects like ketoacidosis, acute kidney injury, urinary tract infections, and more rarely flesh eating bacterial infection of the genitals & resulting gangrene, limb loss & blood infections. They may also cause heart problems, bone loss, & hip & spine fractures.
drugwatch.com/sglt2-inhibitors/
drugdangers.com/jardiance/lawsuit
worstpills.org/results.cfm?drug_id=2038
fda.gov/Drugs/DrugSafety/ucm617360.htm

Empagliflozin increased genital infections in one study by over 300%.
Empagliflozin, Cardiovascular Outcomes, and Mortality in Type 2 Diabetes
Bernard Zinman et al.
DOI: 10.1056/NEJMoa1504720
citizen.org/news/fda-must-stop-manufacturers-off-label-promotion-of-dangerous-diabetes-medications/

Diabetic Ketoacidosis

Diabetic Ketoacidosis results in a high level of acidic ketones in the blood stream. Ketones are produced when sugar is unavailable to be used by the cells and fat must be used as a source of energy.

Diabetic ketoacidosis has been reported as a potentially serious adverse event related to the use of SGLT2 inhibitors like Jardiance. More than 100 cases have been reported by the European Medicines Agency and the adverse event may be responsible for multiple deaths in Japan.

At least 20 ketoacidosis reports were received by the FDA between March of 2013 and April of 2014 and the agency issued a May 2015 warning regarding the risk of Diabetic Ketoacidosis in patients who use Jardiance and other SGLT2 inhibitor drugs.

Early symptoms of diabetic ketoacidosis may include:

Increased urination and thirst
GI pain and nausea
Fatigue and Weakness
Shortness of breath and â€œFruityâ€• odor

Advanced symptoms of diabetic ketoacidosis may include:

Difficulty breathing
Vomiting
Confusion
Dizziness
Fainting
Unconsciousness

Supplements that help stop type II diabetes and extend life (reduce mortality)

Alpha lipoic acid (ALA) & beta-alanine

The amino acid alpha lipoic acid & supplementation with Î²-alanine to increase levels of the amino acid carnosine help reverse the side effects of diabetes including diabetic neuropathy/nephropathy (within three weeks) by improving capillary flow & healing the damage from diabetes. They appear to be the most effective treatment for diabetic neuropathy. Carnosine appears to help in wound healing as well. Carnosine levels appear to be higher with Î²-alanine supplementation than with carnosine supplementation. Î²-alanine also helps improve exercise performance.

ALA may reduce blood sugar, triglycerides, insulin resistance, diabetes, cataracts (may reverse when applied topically), diabetic neuropathy within three weeks and increase insulin efficiency, blood capillary flow, and wound healing.

The PDR for dietary supplements says ALA has no significant side effects with no known drug interactions (has sulfur).
Studies have used 300mg-2400mg per day. Taking vitamin B6, vitamin E (mixed), vitamin C, omega 3 fatty acids (spirulina with a meal) concurrently may help ALAs effectiveness.

Dr. Richard Becker with Cindy Becker â€œYour Healthâ€• 01/27/17 #1557 The Many Uses of ALA

Alpha-Lipoic Acid May Improve Symptomatic Diabetic Polyneuropathy

Tang, Junger et al.
Neurologist: May 2007 â€“ Volume 13 â€“ Issue 3 â€“ pp 164-167

The Sensory Symptoms of Diabetic Polyneuropathy Are Improved With Î±-Lipoic Acid
Alexander S. Ametov et al.
Diabetes Care March 2003 vol. 26 no. 3 770-776

Treatment of diabetic polyneuropathy with the antioxidant thioctic acid (Î±-lipoic acid): A two year multicenter randomized double-blind placebo-controlled trial (ALADIN II)
M. Reljanovic, G. Reichel, K. Rett, M. Lobisch, K. Schuette, W. MÃ¶ller, H.-J. Tritschler, H. Mehnert
Free Radical Research, 1999, Vol. 31, No. 3 : Pages 171-179

Alpha-Lipoic Acid and Diabetic Neuropathy Natalia Vallianou, Angelos Evangelopoulos, and Pavlos Koutalas Rev Diabet Stud. 2009 Winter; 6(4): 230â€“236.
Published online Feb 10, 2010. doi: 10.1900/RDS.2009.6.230

Free Radical Biology and Medicine Volume 40, Issue 1, 1 January 2006, Pages 3â€“12 Serial Review: The Role of Oxidative Stress in Diabetes mellitus Exercise training and the antioxidant Î±-lipoic acid in the treatment of insulin resistance and type 2 diabetes Erik J. Henriksen

Î±-Lipoic Acid: A Multifunctional Antioxidant That Improves Insulin Sensitivity in Patients with Type 2 Diabetes
Joseph L. Evans and Ira D. Goldfine.
Diabetes Technology & Therapeutics. October 2000, 2(3): 401-413. doi:10.1089/152091500050194279.

Carnosine as a Protective Factor in Diabetic Nephropathy Association With a Leucine Repeat of the Carnosinase Gene CNDP1

Bart Janssen et al.
Diabetes August 2005 vol. 54 no. 8 2320-2327
doi: 10.2337/diabetes.54.8.2320

Reduced muscle carnosine content in type 2, but not in type 1 diabetic patients
Bruno Gualano et al.
Amino Acids
July 2012, Volume 43, Issue 1, pp 21-24

Carnosine treatment largely prevents alterations of renal carnosine metabolism in diabetic mice
Verena Peters, Claus P. Schmitt, Johannes Zschocke, Marie-Luise Gross, Kerstin Brismar, Elisabete Forsberg
Amino Acids
June 2012, Volume 42, Issue 6, pp 2411-2416

L-Carnosine, a Substrate of Carnosinase-1, Influences Glucose Metabolism
Sibylle SauerhÃ¶fer et al.
Diabetes October 2007 vol. 56 no. 10 2425-2432

Carnosine stabilization of the normal erythrocyte membranes and in experimental diabetes
Korobov VN, Maurisio RB, Mukalov IO, StvolinskiÄ SL
Patologicheskaia Fiziologiia i Eksperimentalâ€™naia Terapiia
[2000(2):13-15]

Amino Acids
July 2012, Volume 43, Issue 1, pp 127-134
Carnosine enhances diabetic wound healing in the db/db mouse model of type 2 diabetes
Ishrath Ansurudeen, Vivekananda Gupta Sunkari, Jacob GrÃ¼nler,

Verena Peters, Claus Peter Schmitt, Sergiu-Bogdan Catrina, Kerstin Brismar, Elisabete Alcantara Forsberg

Î±-Lipoic Acid: A Multifunctional Antioxidant That Improves Insulin Sensitivity in Patients with Type 2 Diabetes
Joseph L. Evans and Ira D. Goldfine. Diabetes Technology & Therapeutics. October 2000, 2(3): 401-413)

Berberine

Berberine is a compound in barberry, Oregon grape, goldenseal, & phellodendron that appears to improve insulin sensitivity & reduce blood sugar as much as metformin and any other diabetes medication, but without the side effects.

In one study, berberine was as effective as metformin in reducing blood sugar and also significantly lowered hemoglobin A1c, triglycerides, & fasting & postprandial glucose as well as LDL cholesterol.

Metabolism. 2008 May; 57(5): 712â€“717.
doi: 10.1016/j.metabol.2008.01.013
Efficacy of Berberine in Patients with Type 2 Diabetes
Jun Yin, Huili Xing, and Jianping Ye

A meta-analysis of 14 randomized studies of over a thousands participants found berberine was as good as multiple prescription diabetic medications without the side effects.

Planta Med. 2013 Apr;79(6):437-46. doi: 10.1055/s-0032-1328321. Epub 2013 Mar 19.
The effects of berberine on blood lipids: a systemic review and meta-analysis of randomized controlled trials.
Dong H1, Zhao Y, Zhao L, Lu F.

Vitamin K1 & K2 and insulin sensitivity

Vitamin K1 in dark leafy greens & vitamin K2 (cheapest in organic natto) appears to increase insulin sensitivity. Vitamin K1 & vitamin K2 (in natto) together appear to also reduce cancer, heart disease (artery calcification), & osteoporosis.
If taken on an empty stomach, organic natto has nattokinase that dissolves blood clots & reverses heart disease.
Yoshida M, Jacques PF, Meigs JB, et al. Effect of vitamin K supplementation on insulin resistance in older men and women. Diabetes Care 2008;31:2092â€“6. doi:10.2337/dc08-1204

Vitamin K2 Supplementation Improves Insulin Sensitivity via Osteocalcin Metabolism: A Placebo-Controlled Trial. Hyung Jin Choi et al. Diabetes Care 2011 Sep; 34(9): e147-e147. https://doi.org/10.2337/dc11-0551

DiNicolantonio JJ, Bhutani J, Oâ€™Keefe JH
The health benefits of vitamin K
Open Heart 2015;2:e000300. doi: 10.1136/openhrt-2015-000300

Spirulina (with a vegetable)

Spirulina is the source of omega3 EPA & DHA fatty acids in fish oils. Spirulina has a lot more EPA & DHA than fish oils and no mercury or toxic pollution (plastic).
Taking spirulina with a vegetable (to help digest) appears to reduce heart attacks, blood pressure, all cause mortality, triglycerides, LDL cholesterol, and to increase artery clearing HDL. Spirulina also helps increase concentration-mood-memory, protect against brain diseases like Alzheimerâ€™s, heal liver damage (including hepatitus C), reduce radiation sickness, reduce inflammation, lower exercise fatigue, improve immune function, reduce hay fever, reduce

oral cancers & precancerous lesions called OSMF, chelate arsenic from the body (taken with zinc), and moderate blood sugar.
Many people start at Â¼ ts 2x a day with a vegetable, and studies show the more that is taken the more effective spirulina is.

Clin Nutr. 2016 Aug;35(4):842-51. doi: 10.1016/j.clnu.2015.09.007. Epub 2015 Sep 25.
A systematic review and meta-analysis of the impact of Spirulina supplementation on plasma lipid concentrations.
Serban MC, Sahebkar A, Dragan S, Stoichescu-Hogea G, Ursoniu S, Andrica F, Banach M.

J Nutr Sci Vitaminol (Tokyo). 2010;56(1):34-40.
Spirulina prevents atherosclerosis by reducing hypercholesterolemia in rabbits fed a high-cholesterol diet.
Cheong SH, Kim MY, Sok DE, Hwang SY, Kim JH, Kim HR, Lee JH, Kim YB, Kim MR.

J Sci Food Agric. 2014 Feb;94(3):432-7. doi: 10.1002/jsfa.6261. Epub 2013 Jul 10.
The hypolipidaemic effects of Spirulina (Arthrospira platensis) supplementation in a Cretan population: a prospective study.
Mazokopakis EE, Starakis IK, Papadomanolaki MG, Mavroeidi NG, Ganotakis ES.

http://blog.insidetracker.com/does-supplementing-with-spirulina-improve-your-health-and-performance
https://www.healthline.com/nutrition/10-proven-benefits-of-spirulina
https://www.well-beingsecrets.com/spirulina-benefits/
http://web.feeddigest.com/naturalon.com

Vinegar (organic red wine vinegar best)

Acetic acid in vinegar slows carb digesting enzymes, reducing blood sugar levels after eating. It also may increase the fatty acid oxidation enzymes in the liver, perhaps reducing fat accumulation.

Vinegar with a meal lowers insulin resistance (the inability of cells to use insulin) by an average of 64% in people with prediabetes and type 2 diabetes. It improves insulin sensitivity (the ability of cells to use insulin) by up to 34%. It lowered postmeal spikes in blood sugar by an average of 20%. Two tablespoons right before or early in the meal is what works (more is not more effective). If youâ€™re making a salad dressing, the ideal ratio for blood sugar control is two tablespoons of vinegar to one tablespoon of oil, and no sugar.

Biosci Biotechnol Biochem. 2009 Aug;73(8):1837-43. Epub 2009 Aug 7.
Vinegar intake reduces body weight, body fat mass, and serum triglyceride levels in obese Japanese subjects.
Kondo T1, Kishi M, Fushimi T, Ugajin S, Kaga T.

Vinegar reduces postprandial hyperglycaemia in patients with type II diabetes when added to a high, but not to a low, glycaemic index meal
European Journal of Clinical Nutrition (2010) 64, 727â€“732)

Vinegar ingestion at mealtime reduced fasting blood glucose concentrations in healthy adults at risk for type 2 diabetes
Journal of Functional Foods Volume 5, Issue 4, October 2013, Pages 2007â€“2011

Vinegar Improves Insulin Sensitivity to a High-Carbohydrate Meal in Subjects
With Insulin Resistance or Type 2 Diabetes Diabetes Care January 2004 vol. 27 no. 1 281-282

Vinegar: medicinal uses and antiglycemic effect.
Carol S. Johnston and Cindy A. Gaas,
MedGenMed. 2006; 8(2): 61.

Vinegar Decreases Postprandial Hyperglycemia in Patients With Type 1
Diabetes
Panayota Mitrou et al.
Diabetes Care February 2010 vol. 33 no. 2 e27)

Vinegar Ingestion at Bedtime Moderates Waking Glucose Concentrations in Adults With Well-Controlled Type 2 Diabetes
Andrea M. White, Carol S. Johnston
Diabetes Care Nov 2007, 30 (11) 2814-2815; DOI: 10.2337/dc07-1062
Vinegar Improves Insulin Sensitivity to a High-Carbohydrate Meal in Subjects With Insulin Resistance or Type 2 Diabetes
Carol S. Johnston, Cindy M. Kim, Amanda J. Buller
Diabetes Care Jan 2004, 27 (1) 281-282;
DOI: 10.2337/diacare.27.1.281

Resveratrol (also in organic red wine vinegar)

Resveratrol stops diabetes & its side effects. Because dark grapes & raisons have resveratrol, despite their sugar content they help prevent diabetes. Apple juice and orange juice increase diabetes because of their simple sugar content. Resveratrol is an anti-inflammatory as well. Some is present in red wine vinegar which has no calories, making it the best food against diabetes. Resveratrol is found in the largest amounts in a plant called Japanese knotweed or Hu Zhang (the name under which it is cheapest online).

http://onlinelibrary.wiley.com/doi/10.1111/j.1749-6632.2010.05844.x/full (Annals of the New York Academy of Sciences Volume 1215, Resveratrol and Health pages 34â€“39, January 2011)
http://www.sciencedirect.com/science/article/pii/S0271531712001200 (Nutrition Research Volume 32, Issue 7, July 2012, Pages 537â€“541)
http://diabetes.diabetesjournals.org/content/60/2/634.short (Diabetes February 2011 vol. 60 no. 2 634-643)
Central Administration of Resveratrol Improves Diet-Induced Diabetes
Giorgio Ramadori, Laurent Gautron, Teppei Fujikawa, Claudia R. Vianna, Joel K. Elmquist, and Roberto Coppari
Endocrinology 2009 150:12, 5326-5333
http://www.sciencedirect.com/science/article/pii/S0014299910002001 (European Journal of Pharmacology Volume 635, Issues 1â€“3, 10 June 2010, Pages 1â€“8

Resveratrol improves left ventricular diastolic relaxation in type 2 diabetes by inhibiting oxidative/nitrative stress: in vivo demonstration with magnetic resonance imaging
Hanrui Zhang , Brandon Morgan , Barry J. Potter , Lixin Ma , Kevin C. Dellsperger , Zoltan Ungvari , Cuihua Zhang
American Journal of Physiology â€“ Heart and Circulatory PhysiologyPublished 1 October 2010Vol. 299no. H985-H994DOI: 10.1152/ajpheart.00489.2010

Vegetables

Kale, spinach, and collard greens have vitamin K, magnesium, & zinc which all help lower blood sugar (especially if deficient) and increase insulin sensitivity. Vitamin K alone may reduce diabetes

incidence by 50%.

Fats

Organic coconut oil

Organic coconut oil appears to not cause weight gain or cause postmeal tiredness. Organic coconut oil has about half of its â€œsaturatedâ€• fat as medium chain triglycerides, which are easier to burn as energy than to store as fat. MCT are a fat that gives you pep rather than makes you sleepy, & helps peopleâ€™s weight rather than gets people fat. It also is more stable than other fats when cooked and healthier. Because coconut oil has very little polyunsaturated fat, it is safer to cook with, as heating polyunsaturated fat creates aldehydes (think formaldehyde) that increase heart disease & cancer. Oils with polyunsaturated fat should be expeller/cold pressed and should not be cooked with.

MCT oil

MCT oil is a combination of coconut & palm oil that has no taste, useful for people who donâ€™t like the taste of regular coconut oil and better for weight loss, for workout energy, & for staying in ketosis to treat epilepsy or as part of a ketogenic diet. As it has no/little polyunsaturated fat it is safer for cooking.

Organic extra virgin olive oil

Organic extra virgin olive oil is the best oil if not cooked. It has anti-inflammatory phenols and reduces pain, especially in someone using opiate painkillers. Olive oil is very often cut with cheaper unhealthier oils according to Consumer Reports. The olive oil most likely to have all of its health benefits & be genuine comes from only one country, is extra virgin, and is organic. Olive oil has some polyunsaturated fat

so should be added after cooking.

Salad

So a kale/spinach/chard/collard salad with MCT/coconut/olive oil with red wine vinegar may help lower blood sugar of the meal and increase weight loss. Avoiding salad dressings with sugar is very important. Because MCT oil &

Glucomannan

Glucomannan is an extremely dense fiber that comes from the root of a plant. It had no calories, and in numerous studies has been shown to help lower blood sugar, systolic blood pressure, LDL cholesterol, triglycerides (far more important to lower than cholesterol), constipation and weight. The capsule (tablets are unsafe) can be taken up to an hour before a meal or the powder can be used as a thickener (like corn starch). The strongest benefit appears to be taking 1g (two 500mg capsules) up to an hour before a meal. Glucomannan must be taken with a full glass of water (to avoid intestinal obstruction). It may cause an increase in gas (infrequently) the first couple of uses before the body gets used to it.

Shirataki noodles are made from glucomannan and have no calories. They are often rinsed to get rid of a fishy smell and mixed with tofu (tofu shirataki noodles) to better simulate noodles taste.

Arvill A, Bodin L. Effect of short-term ingestion of konjac glucomannan on serum cholesterol in healthy men. Am J Clin Nutr. 1995;61:585-589.

Chua M, Baldwin TC, Hocking TJ, Chan K. â€œTraditional uses and potential health benefits of Amorphophallus konjac K. Koch ex N.E.Br.â€• J Ethnopharmacol. 2010 Mar 24;128(2):268-78.

Chen HL, Cheng HC, Wu WT, et al. Supplementation of konjac glucomannan into a low-fiber Chinese diet promoted bowel movement and improved colonic ecology in constipated adults: a placebo-controlled, diet-controlled trial. J Am Coll Nutr. 2008;27:102-108

Chen HL, Sheu WH, Tai TS, et al. Konjac supplement alleviated hypercholesterolemia and hyperglycemia in type 2 diabetic subjects-a randomized double-blind trial. J Am Coll Nutr . 2003;22:36-42

Doi K. Effect of konjac fibre (glucomannan) on glucose and lipids. Eur J Clin Nutr. 1995;(suppl 3):190-197.

Gallaher, DD, et al. A Glucomannan and Chitosan Fiber Supplement Decreases Plasma Cholesterol and Increases Cholesterol Excretion in Overweight Normocholesterolemic Humans. Journal of the American College of Nutrition Volume 21, Issue 5, 2002 DOI: 10.1080/07315724.2002.10719246

Gallaher, CM. et al. Cholesterol Reduction by Glucomannan and Chitosan Is Mediated by Changes in Cholesterol Absorption and Bile Acid and Fat Excretion in Rats. J. Nutr. November 1, 2000 vol. 130 no. 11 2753-2759

GonzÃ¡lez Canga A, FernÃ¡ndez MartÃnez N, SahagÃºn AM, GarcÃa Vieitez JJ, DÃez LiÃ©bana MJ, Calle Pardo AP, Castro Robles LJ, Sierra Vega M. â€œGlucomannan: properties and therapeutic applications.â€• Nutr Hosp. 2004 Jan-Feb;19(1):45-50.

Keithley J, Swanson B. â€œGlucomannan and obesity: a critical review.â€• Altern Ther Health Med. 2005 Nov-Dec;11(6):30-4.

Loening-Baucke V, Miele E, Staiano A. â€œFiber (glucomannan) is beneficial in the treatment of childhood constipation.â€• Pediatrics.

2004 Mar;113(3 Pt 1):e259-64.

McCarty MF. Glucomannan minimizes the postprandial insulin surge: a potential adjuvant for hepatothermic therapy. Med Hypotheses. 2002 Jun;58(6):487-90.

Reffo GC. Glucomannan in hypertensive outpatients: pilot clinical trial. Curr Ther Res . 1988;44:22-27.

Reffo GC, Ghirardi PE, Forattani C. Double-blind evaluation of glucomannan versus placebo in postinfarcted patients after cardiac rehabilitation. Curr Ther Res. 1990;47:753-758.

Signorelli P, Croce P, Dede A. Clinical study on the use of a glucomannan and lactulose association in pregnancy constipation [in Italian; English abstract]. Minerva Ginecol. 1996;48:577-582.

Sood N, Baker WL, Coleman CI. Effect of glucomannan on plasma lipid and glucose concentrations, body weight, and blood pressure: systematic review and meta-analysis. Am J Clin Nutr. 2008;88:1167-1175.

Staiano A, Simeone D, Del Giudice E, et al. Effect of the dietary fiber glucomannan on chronic constipation in neurologically impaired children. J Pediatr . 2000;136:41-45.

Vita PM, Restelli A, Caspani P, Klinger R. Chronic use of glucomannan in the dietary treatment of severe obesity. Minerva Medica [1992, 83(3):135-139]

Vuksan, V et al. Beneficial effects of viscous dietary fiber from Konjac-mannan in subjects with the insulin resistance syndrome: results of a controlled metabolic trial. Diabetes Care January 2000 vol. 23 no. 1 9-14 doi: 10.2337/diacare.23.1.9

Vuksan V, Jenkins DJ, Spadafora P, et al. Konjac-mannan (glucomannan) improves glycemia and other associated risk factors for coronary heart disease in type 2 diabetes. A randomized controlled metabolic trial. Diabetes Care . 1999;22:913-919.

Venter CS, Kruger HS, Vorster HH, et al. The effects of dietary fiber component konjac-glucomannan on serum cholesterol levels of hypercholesterolemic subjects. Hum Nutr Food Sci Nutr. 1987;41F:55-61

Walsh DE, Yaghoubian V, Behforooz A. Effect of glucomannan on obese patients: a clinical study. Int J Obes . 1984;8:289-293

Yoshida, M et al. Effect of plant sterols and glucomannan on lipids in individuals with and without type II diabetes European Journal of Clinical Nutrition (2006) 60, 529â€“537. doi:10.1038/sj.ejcn.1602347; published online 4 January 2006

Flaxseed fiber & diabetes

Organic freshly ground flaxseed in or before a meal appears to significantly moderate subsequent blood sugar levels.

Journal of Functional Foods Volume 18, Part A, October 2015, Pages 1-9
Flaxseed lignan secoisolariciresinol diglucoside improves insulin sensitivity through upregulation of GLUT4 expression in diet-induced obese mice
Yanwen Wang et al.

Journal of Dietary Supplements Volume 13, 2016 â€“ Issue 3
Flaxseed Protects Against Diabetes-Induced Glucotoxicity by Modulating Pentose Phosphate Pathway and Glutathione-Dependent Enzyme Activities in Rats

MÃ¼slÃ¼m GÃ¶k, Nuray N. Ulusu, Nilay Tarhan, Can Tufan, GÃ¼lgÃ¼n Ozansoy, Nuray ArÄ± & show all
Pages 339-351 | Published online: 28 Aug 2015
http://dx.doi.org/10.3109/19390211.2015.1036188

October 2013 Volume 37, Supplement 4, Page S71
The Impact of Flaxseed Lignan Complex Consumption on Waist to Height and Hip Ratios, Body Weight, BMI, Insulin Resistance, Percent Pancreatic Beta-Cell Function, Free Fatty Acids, HDL2- HDL3- and Non-HDL-Cholesterol and Lp(a) in Older Human Type 2 Diabetics
Douglas E. Barre

DOI: http://dx.doi.org/10.1016/j.jcjd.2013.08.218

Beneficial effect of flax seeds in streptozotocin (STZ) induced diabetic mice: isolation of active fraction having islet regenerative and glucosidase inhibitory properties
Menakshi Bhat Dusane, Bimba N. Joshi
Canadian Journal of Physiology and Pharmacology, 2013, 91(5): 325-331, https://doi.org/10.1139/cjpp-2011-0428

Vitamin D3

Vitamin D3 supplementation helps prevent type I diabetes in children. Supplementation increases insulin sensitivity and reduces insulin resistance in people with diabetes. Low levels of vitamin D3 are associated with higher levels of metabolic syndrome and diabetes II and higher levels with lower cardiovascular disease, metabolic syndrome, and type II diabetes.

Vitamin D supplement in early childhood and risk for Type I (insulin-dependent) diabetes mellitus Diabetologia (1999) 42: 51â€“54
C S Zipitis, A K Akobeng Vitamin D supplementation in early

childhood and risk of type 1 diabetes: a systematic review and meta-analysis Arch Dis Child 2008;93:512-517
Philippe Autier, MD; Sara Gandini, PhD Vitamin D Supplementation and Total Mortality A Meta-analysis of Randomized Controlled Trials Arch Intern Med. 2007;167(16):1730-1737
Parker J, Hashmi O, Dutton D, Mavrodaris A, Stranges S, Kandala N-B, et al. Levels of vitamin D and cardiometabolic disorders: systematic review and meta-analysis. Maturitas2010;65:225-36
J Mitri1, M D Muraru2 and A G Pittas Vitamin D and type 2 diabetes: a systematic review European Journal of Clinical Nutrition (2011) 65, 1005â€“1015
Nagpal, J., Pande, J. N. and Bhartia, A. (2009), A double-blind, randomized, placebo-controlled trial of the short-term effect of vitamin D3 supplementation on insulin sensitivity in apparently healthy, middle-aged, centrally obese men. Diabetic Medicine, 26: 19â€“27
The Role of Vitamin D and Calcium in Type 2 Diabetes. A Systematic Review and Meta-Analysis
Anastassios G. Pittas, Joseph Lau, Frank B. Hu, and Bess Dawson-Hughes
The Journal of Clinical Endocrinology & Metabolism 2007 92:6, 2017-2029
Autier P, Gandini S. Vitamin D supplementation and total mortality: a meta-analysis of randomized controlled trials. Arch Intern Med. 2007; 167:1730-7.

I started taking vitamin D3 when I read a study that said high daily doses of vitaminD3 reduces viral infections by 90%. It did for me & most people I know who take it. Optimum blood levels are 70-100ng/ml for full cancer, diabetes, heart disease, and Alzheimerâ€™s prevention, and it takes 8000 IU for most adults to

get over 40ng/ml, but the maximum recommended by the FDA is 4000 IU. As children (when we weighed half as much) our bodies made 10,000 IU from the sun before stopping. It also completely (and unexpectedly) ended my winter blues. After I noticed the mood boost, it seemed logical that lack of sunlight may cause seasonal affective disorder and that high vitamin D3 supplementation may end SAD.

Since vitamin D3 is fat soluble it has to be taken with a meal or a little vegetable oil or 95% gets flushed out without being used. In repeated studies the best results are for high daily supplementation, not one time large doses.

Aloia JF, Li-Ng M. Re: epidemic influenza and vitamin D. Epidemiol Infect 2007;135:1095 â€“ 6; author reply 1097-8 (VitaminDWiki http://www.vitamindcouncil.org/health-conditions/influenza/# https://www.vitamindcouncil.org/health-conditions/respiratory-infections/

Magnesium

Tests often canâ€™t give an accurate read on magnesium deficiency. One study found more than half of people admitted to the hospital were deficient in magnesium, another over half of people with diabetes. The safer forms to take may be citrate, taurate, malate, glycinate, chloride, carbonate. www.naturalnews.com/046401_magnesium_dietary_supplements_nut

The RDA is 310-420mg daily, and many people take 500-1000mg. Topical magnesium can be very effective for pain & cramps, especially headaches & migraines. Topical DMSO is often used first because it takes magnesium thorugh the skin at very high levels. Magnesium reduces diabetes, migraines, muscle cramps, heart

deaths, bone loss, anxiety, cognitive loss from Alzheimerâ€™s. Many diseases are associated with low magnesium like mitral valve prolapse, high blood pressure, cardiac arrythmias, migraines, ADHD, autism, anxiety, asthma, allergies, chronic pain, fibromyalgia, chronic fatigue, muscle spasms, insomnia, twitching & tremors, swelling/edema, weak pulse, brain fog/confusion, osteoporosis www.naturalnews.com/046864_magnesium_mineral_deficiency_detox

Magnesium is essential for using vitamins C & E, and along with zinc, vitamin D3 & vitamin K2 directs calcium away from the arteries & to the bones where its needed. Good magnesium levels are essential for cognitive function. Magnesium is very highly alkaline which helps to prevent & treat cancer taken both internally and used topically via magnesium chloride (magnesium oil).

Turmeric

Turmeric at high doses with a little pepper both fully prevents and treats diabetes & its complications including nephrology & renal failure, as well as preventing deaths from heart disease, cancer and Alzheimers. Turmeric is a major anti-inflammatory/painkiller and boosts mood as well as Prozac, but in a safer way (see Turmeric paper).
functionalfoodscenter.net/files/49461330.pdf
http://care.diabetesjournals.org/content/35/11/2121.short (Diabetes Care November 2012 vol. 35 no. 11 2121-2127)
http://informahealthcare.com/doi/abs/10.3109/00365599.2011.585622 (Scandinavian Journal of Urology and Nephrology, November 2011, Vol. 45, No. 5 : Pages 365-370)
http://www.sciencedirect.com/science/article/pii/S221323171300067O

After taking three grams of dry ginger powder for 30 days (best a gram before each meal), diabetic participants had a significant

reduction in blood glucose, triglyceride, total cholesterol, and LDL cholesterol. Ginger appears to inhibit enzymes in carbohydrate metabolism, increase insulin release and sensitivity, and improve lipid profiles. Ginger also protects against complication of the liver, kidneys, central nervous system, and eyes. Ginger is COX-2 anti-inflammatory/painkiller and stops nausea better than most prescription drugs, and lowers the stress & anxiety hormone cortisol. 9 Evid Based Complement Alternat Med. 2012; 2012: 516870

White kidney bean extract

White kidney bean extract blocks alpha-amylase sugar digestion, which lowers blood sugar & triglycerides, helps fat loss (not muscle). When I used to eat a lot of carbs (four or five platefuls at buffets), it resensitized me to the volume of carbs I was eating & made me eat less. It reduced my carb craving significantly. This change stayed even after I stopped taking the supplement & I find excess carbs to be uncomfortable to this day (if I donâ€™t exercise right after). Phase 2 is the one with the best outcome research.

Celleno L, Tolaini MV, Dâ€™Amore A, Perricone NV, Preuss HG. A Dietary Supplement Containing Standardized Phaseolus vulgaris Extract Influences Body Composition of Overweight Men and Women. Int J Med Sci 2007; 4(1):45-52. doi:10.7150/ijms.4.45. Available from http://www.medsci.org/v04p0045.htm

Layer, P., et al. â€œEffect of purified amylase inhibitor on carbohydrate tolerance in normal subjects and patients with diabetes mellitus.â€• MAYO Clinic Proceedings 61, 6 (June, 1986) 442-447.

Brugge, W.R. and M. S. Rosenfeld. â€œImpairment of starch absorption by a potent amylase inhibitor.â€• American Journal of Gastroenterology 82, 8 (August, 1987) 718-722.

Layer, P., et al. â€œEffects of decreasing intra luminal amylase on starch digestion and postprandial gastrointestinal function in humans.â€• On carbohydrate tolerance in normal subjects and patients with diabetes mellitus.â€• Gastroenterology 91, 1 (July, 1986) 41-48.

Sauna

Using a sauna for 20 minutes at least twice a week appears to temporarily increases human growth hormone naturally by 500% (especially useful to recover after a workout or injury), increases endurance to exhaustion by 30%, and significantly increases insulin sensitivity.

Sweeteners

Avoid high fructose corn syrup & sugar

High fructose corn syrup appears in multiple studies to cause increased weight gain, obesity, diabetes and cancer compared to table sugar.

Stevia, erithritol, and monk fruit (lo han)

Stevia is a sweetener that has no calories and has been used for centuries with no reported side effects in humans. Stevia appears to be very healthy, apparently preventing diabetes & cancer. Itâ€™s best tasting form may be the white powder concentrate. The brown leafy form tastes more earthy.

Stevia helps with diabetes, cancer prevention, weight control, and reduces insulin resistance.
http://www.naturalnews.com/048909_stevia_natural_anti-inflammatory_anti-cancer.html

Erythritol is a sugar alcohol (fermented sugar) with no calories that has little of the laxative or stomach cramping side effects of the other sugar alcohols like sorbitol, mannitol, & xylitol. It bakes like sugar, has the volume of sugar, preserves like sugar, and tastes like sugar, but is 30% less sweet.

Monk fruit is a natural sweetener that also has no calories and has been used for centuries in southeast Asia.

Stevia, monk fruit, and erythritol (Truvia) are often blended together to make them even sweeter. The combination of all three has been said to be the closest taste to sugar there is (especially for noncaloric sweetening).

Sometimes the sweeteners are mixed with dextrose, corn sugar, to add bulk- which is usually GMO. Fortunately they can be found without GMO additives.

Switching from sugar

The way to get used to any new sweetener is to eat a couple bites of food unsweetened before every meal. It will immediately resensitize taste to the new amount & type of sweetener used as the freshest memory will be of the contrast between the unsweetened food and the new sweetener, not between the old sweetener (sugar) & the new sweetener.

Other artificial sweeteners

Nutrasweet (aspartame) has had a dizzying list of dangerous neurological side effects reported to the FDA
http://www.fda.gov/ohrms/dockets/dailys/03/jan03/012203/02p-0317_emc-000199.txt
Aspartame has the most side effects reported to the FDA of any

substance, and that was before the FDA stopped taking reports of side effects starting in 1995.
Monsanto bought the company who owned apartame & worked with their chairman (yes, that Donald Rumsfeld) to get it approved despite a 1980 board of inquiry of three independent scientists vote against approval. Ronald Reaganâ€™s brand new head of the FDA in 1981 approved it. He left the FDA under allegations of impropriety and went to work for Monsanto.
http://www.rense.com/general33/legal.htm

In 1996, the FDAâ€™s own toxicologist told Congress that aspartame (Nutrasweet) can cause brain cancer.
http://www.huffingtonpost.com/robbie-gennet/donald-rumsfeld-and-the-s_b_805581.html

I stopped using it after getting nausea & motion sickness on a repeated basis. It only came back once in the last 15 years, and when I checked all of my new foods, I found one had aspartame as an ingredient, unknown to me.

Sucralose (Splenda)

Sucralose (Splenda) appears to reduce good bacteria in our gut (which could cause many negative health effects), increases weight, and can interfere with the metabolism of many drugs.
http://www.ncbi.nlm.nih.gov/pubmed?orig_db=PubMed&cmd=Search&
(Splenda alters gut microflora and increases intestinal p-glycoprotein and cytochrome p-450 in male rats.J Toxicol Environ Health A. 2008;71(21):1415-29. doi: 10.1080/15287390802328630).

Vitamin B1

Thiamine (vitamin B1) may be needed in up to 10X higher amounts in people with diabetes than normal.

Dr. Richard Becker and Cindy Becker on â€œYour Healthâ€• 01/12/17

EGCG

EGCG is found in green tea and available in supplements. It appears to reduce cognitive deficits and weight in mice fed a high fructose diet.

Yashi Mi, Guoyuan Qi, Rong Fan, Qinglian Qiao, Yali Sun, Yuqi Gao, Xuebo Liu. EGCG ameliorates high-fatâ€“ and high-fructoseâ€“induced cognitive defects by regulating the IRS/AKT and ERK/CREB/BDNF. The FASEB Journal, 2017; fj.201700400RR DOI: 10.1096/fj.201700400RR

Federation of American Societies for Experimental Biology. â€œGreen tea ingredient may ameliorate memory impairment, brain insulin resistance, and obesity: New research identifies potential therapeutic intervention for memory impairment, neuroinflammation, and brain insulin resistance induced by high-fat, high-fructose diet.â€• ScienceDaily. ScienceDaily, 28 July 2017. <www.sciencedaily.com/releases/2017/07/170728100933.htm>.

Prevention & treatment of type I diabetes

Type I diabetes and milk

Milk, obesity, cancer, and diabetes

Cows in the USA are allowed to get recombinant growth hormone, which produces milk with higher insulin-like growth factor (IGF-1) that can increase cancer, diabetes, and obesity. It also stimulates an increase in our own bodyâ€™s IGF-1 levels. Cowâ€™s milk is also intended to turn a small calf into a 300+ lb cow, even without the

growth hormone & IGF-1. Cowâ€™s milk can trigger an allergic reaction, and because the chemical trigger is similar to cells that make our insulin, their death can cause a chain reaction that kills our insulin producing cells and trigger type 1 diabetes.

Removal of Bovine Insulin From Cowâ€™s Milk Formula and Early Initiation of Beta-Cell Autoimmunity in the FINDIA Pilot Study.
Vaarala O et al.
Arch Pediatr Adolesc Med. 2012 Jul 1;166(7):608-14. doi: 10.1001/archpediatrics.2011.1559.

Relation of Time of Introduction of Cow Milk Protein to an Infant and Risk of Type-1 Diabetes Mellitus
Marcia F. Goldfarb
J, Proteome Res., 2008, 7 (5), pp 2165â€“2167
DOI: 10.1021/pr800041d

Gone off
Linda Geddes
New Scientist
Volume 227, Issue 3031, 25 July 2015, Pages 33â€“37

Type 1 Diabetes Causes
What leads to the development of type 1 diabetes?
Daphne E. Smith-Marsh PharmD, CDE | Reviewed by W. Patrick Zeller MD
endocrineweb
http://www.endocrineweb.com/conditions/type-1-diabetes/type-1-diabetes-causes

The beta-casein A1 protein variant of cowâ€™s milk may contribute to increased risk of diabetes type 1.
Diabetologia. 1999 Mar;42(3):292-6. PMID: 10096780

The consumption of cow milk A1 beta-casein is associated with increased risk of ischaemic heart disease and type 1 diabets.
N Z Med J. 2003 Jan 24;116(1168):U295. Epub 2003 Jan 24. PMID: 12601419

Cowâ€™s milk protein antibodies are a risk factor for childhood insulin-dependent diabetes mellitus.
Diabetologia. 1998 Jan;41(1):72-8. PMID: 9498633

Insulin-free whey-based cowâ€™s milk formula is associated with lower incidence of beta cell autoimmunity in infants and young children
Arch Pediatr Adolesc Med. 2012 Mar 5. Epub 2012 Mar 5. PMID: 22393174

Lower consumption of cow milk protein A1 beta-casein at 2 years of age, rather than consumption among 11- to 14-year-old adolescents, may explain the lower incidence of type 1 diabetes in Iceland than in Scandinavia.
Ann Nutr Metab. 2006;50(3):177-83. Epub 2006 Jan 10. PMID: 16407643

http://www.greenmedinfo.com/toxic-ingredient/cow-milk

Environmental and genetic factors could both be responsible for type 1 diabetes
Fri, 01 Oct 2010
http://www.diabetes.co.uk/news/2010/Oct/environmental-and-genetic-factors-could-both-be-responsible-for-type-1-diabetes-91391653.html

Treatment of type I diabetes

Bionic automatic sensor & pump

A newly tested bionic pancrease that automatically senses blood sugar & pumps insulin helped improve glucose control, reduced hypoglycemia, and, in adults, resulted in a lower glycated hemoglobin level.

Home Use of an Artificial Beta Cell in Type 1 Diabetes
Hood Thabit, M.D., Martin Tauschmann, M.D., Janet M. Allen, R.N., Lalantha Leelarathna, Ph.D., Sara Hartnell, B.Sc., Malgorzata E. Wilinska, Ph.D., Carlo L. Acerini, M.D., Sibylle Dellweg, M.D., Carsten Benesch, Ph.D., Lutz Heinemann, Ph.D., Julia K. Mader, M.D., Manuel Holzer, M.Sc., Harald Kojzar, B.Sc., Jane Exall, R.N., James Yong, M.D., Jennifer Pichierri, M.Sc., Katharine D. Barnard, Ph.D., Craig Kollman, Ph.D., Peiyao Cheng, M.P.H., Peter C. Hindmarsh, M.D., Fiona M. Campbell, M.D., Sabine Arnolds, M.D., Thomas R. Pieber, M.D., Mark L. Evans, M.D., David B. Dunger, M.D., and Roman Hovorka, Ph.D. for the APCam Consortium and AP@home Consortium
N Engl J Med 2015; 373:2129-2140November 26, 2015DOI: 10.1056/NEJMoa1509351

Preserving & increasing insulin producing cells in Type I & Type II diabetes

Eliminating dairy

If some of these treatments end up regenerating insulin producing cells, dairy products may trigger another immune reaction and end up killing them again. Taking dairy out of the diet may be the first step towards recovery, or at least maintaining the insulin producing cells that have survived.

Vitamin D3

Giving children 2000 IU of vitamin D3 daily with a meal or vegetable oil (fat soluble) reduces type I diabetes in infants by 80%, so its very possible vitamin D3 supplementation helps protect the insulin producing cells that are left.

Dong, J. et al. Vitamin D Intake and Risk of Type 1 Diabetes: A Meta-Analysis of Observational Studies. Nutrients 2013;5;3551-3562.

HyppÃ¶nen, E. et al. Intake of vitamin D and risk of type 1 diabetes: a birth-cohort study. The Lancet 2001;358;1500-1503.

SÃ¸rensen, I et al. Maternal Serum Levels of 25-Hydroxy-Vitamin D During Pregnancy and Risk of Type 1 Diabetes in the Offspring. Diabetes 2012;61;175-178.

Aljabri, K. et al. Glycemic changes after vitamin D supplementation in patients with type 1 diabetes mellitus and vitamin D deficiency. Annals of Saudi Medicine 2010;30;454-458.

Vitamin D levels, microvascular complications, and mortality in type 1 diabetes
Christel Joergensen and colleagues
Diabetes Care 34:1081â€“1085, 2011

https://www.vitamindcouncil.org/health-conditions/type-i-diabetes/#ref7

GABA

Taking GABA, an amino acid, appears to protect the remaining islet beta cells & helps the body regenerate new ones, stopping the progression of & possibly reversing type I diabetes.

GABA exerts protective and regenerative effects on islet beta cells and reverses diabetes.
Soltani N1, Qiu H, Aleksic M, Glinka Y, Zhao F, Liu R, Li Y, Zhang N, Chakrabarti R, Ng T, Jin T, Zhang H, Lu WY, Feng ZP, Prudâ€™homme GJ, Wang Q.
Proc Natl Acad Sci U S A. 2011 Jul 12;108(28):11692-7.
doi: 10.1073/pnas.1102715108. Epub 2011 Jun 27.

GABA Promotes Human Î²-Cell Proliferation and Modulates Glucose Homeostasis
Indri Purwana et al.
Diabetes December 2014 vol. 63 no. 12 4197-4205
doi: 10.2337/db14-0153

Combined Therapy With GABA and Proinsulin/Alum Acts Synergistically to Restore Long-term Normoglycemia by Modulating T-Cell Autoimmunity and Promoting Î²-Cell Replication in Newly Diabetic NOD Mice
Jide Tian et al.
Diabetes September 2014 vol. 63 no. 9 3128-3134
doi: 10.2337/db13-1385

Î³-Aminobutyric Acid Regulates Both the Survival and Replication of Human Î²-Cells
Jide Tian et al.
Diabetes November 2013 vol. 62 no. 11 3760-3765
doi: 10.2337/db13-0931

Protective effects of gamma-aminobutyric acid in rats with streptozotocin-induced diabetes.
Nakagawa T1, Yokozawa T, Kim HJ, Shibahara N.
J Nutr Sci Vitaminol (Tokyo). 2005 Aug;51(4):278-82.

Low taurine, gamma-aminobutyric acid and carnosine levels in plasma of diabetic pregnant rats: consequences for the offspring
Journal of Perinatal Medicine. Volume 29, Issue 1, Pages 81â€“84, ISSN (Print) 0300-5577

Diabetes mellitus decreases the expression of calcitonin-gene related peptide, gamma-amino butyric acid and glutamic acid decarboxylase in human pancreatic islet cells.
Al-Salam S, Hameed R, Parvez HS, Adeghate E
Department of Pathology, Faculty of Medicine & Health Sciences, United Arab Emirates University, Al Ain, United Arab Emirates.
Neuro Endocrinology Letters [2009, 30(4):506-510]

Acta Diabetologica
1995, Volume 32, Issue 1, pp 53-56
Baclofen, a gamma-aminobutyric acid-b receptor agonist, delays diabetes onset in the non-obese diabetic mouse
P. E. Beales, M. Hawa, A. J. K. Williams, M. C. Albertini, A. Giorgini, P. Pozzilli

Regulatory Peptides
Volume 160, Issues 1â€“3, 25 February 2010, Pages 75â€“80
Selective amino acid deficiency in patients with impaired glucose tolerance and type 2 diabetes
Bjoern A. Menge, Henning Schrader, Peter R. Ritter, Mark Ellrichmann, Waldemar Uhl, Wolfgang E. Schmidt, Juris J. Meier

Diabetologia
July 2012, Volume 55, Issue 7, pp 1985-1994,
Î³-Aminobutyric acid (GABA) signalling in human pancreatic islets is altered in type 2 diabetes
J. Taneera, Z. Jin, Y. Jin, S. J. Muhammed, E. Zhang, S. Lang, A. Salehi, O. Korsgren, E. RenstrÃ¶m, L. Groop, B. Birnir

Niacinamide (a type of vitamin B3)

Niacinamide may help to increase the number of stem cells that become insulin producing cells, and preserve the functioning cells left.

A randomized trial of nicotinamide and vitamin E in children with recent onset type 1 diabetes (IMDIAB IX).
CrinÃ² A et al.
Eur J Endocrinol. 2004 May;150(5):719-24.

Double blind trial of nicotinamide in recent-onset IDDM (the IMDIAB III study).
Pozzilli P, Visalli N, Signore A, et al.
Diabetologia 1995;38:848-852.

A population based strategy to prevent insulin-dependent diabetes using nicotinamide.
Elliott RB, Pilcher CC, Fergusson DM, Stewart AW.
J Pediatr Endocrinol Metab 1996;9:501-509.

Gymnema sylvestre

Gymnema sylvestre appears to lower blood sugar in people with type I & type II diabetes, over the long term often lowers or eliminates the need for diabetes medications, and may help to regenerate the beta cells that produce insulin in people with type I diabetes.

Antidiabetic effect of a leaf extract from Gymnema sylvestre in non-insulin-dependent diabetes mellitus patients.
Baskaran K, Kizar Ahamath B, Radha Shanmugasundaram K, Shanmugasundaram ER.
J Ethnopharmacol. 1990 Oct;30(3):295-300.

Possible regeneration of the islets of Langerhans in streptozotocin-diabetic rats given Gymnema sylvestre leaf extracts.
Shanmugasundaram ER, Gopinath KL, Radha Shanmugasundaram K, Rajendran VM.
J Ethnopharmacol. 1990 Oct; 30(3):265-79

Use of Gymnema sylvestre leaf extract in the control of blood glucose in insulin-dependent diabetes mellitus.
Shanmugasundaram ER, Rajeswari G, Baskaran K, Rajesh Kumar BR, Radha Shanmugasundaram K, Kizar Ahmath B.
J Ethnopharmacol. 1990 Oct;30(3):281-94.

Triglycerides- prescription drugs

Triglycerides can be more important than overall cholesterol in causing heart attacks. Triglycerides may thicken and harden arteries. Lowering triglycerides can significantly lower heart disease, heart attacks, & stroke deaths.

Fibrates

Fibrates lower triglycerides & may increase HDL levels, but can cause muscle, kidney, & liver damage (especially in combination with statins) as well as increase gallstones & reduce blood levels of COq10 & vitamin E. Fibrates may cause abnormal heart rhythms. They may not decrease mortality in people with high cholesterol.

gemfibrozil (Lopid)
fenofibrate (Tricor)
clofibrate (Atomid-S)

http://www.medicinenet.com/fibrates/article.htm
https://en.wikipedia.org/wiki/Fenofibrate#Contraindications

Triglyceride- supplements

Niacin (vitamin B3) in high doses raises HDL & lowers LDL cholesterol & triglycerides very well. Taking a low dose aspirin 30 minutes before as well as using extended release niacin (Niaspan) or inositol hexaniacinate either taken after a meal or before bed may cause less flushing or headache, which also may diminish in time. It is contraindicated in people with liver problems or gout.

All supplements that may lower blood sugar & triglycerides if taken right before a meal-

All these below are substances that have been shown to lower blood sugar if taken right before a meal. They can often be found in combination in supplements to lower blood sugar. The benefit to using them in combination is that by using a fraction of the normal dose of each, side effects are minimized for each while the different ways they lower blood sugar often work better in combination. You can also take them individually before a meal for their beneficial effects on blood sugar (taking them on an empty stomach in between meals might increase hunger). White kidney bean extract lowers the amount of carbs our bodies absorb. When I took it it resensitized me to eating a smaller amount of carbs permanently.

Alpha lipoic acid
Aloe Vera
Banaba leaf
Barberry
Bilberry
Bitter melon
Cayenne pepper
Celery & celery seed
Chamomile

Cinnamon
Chokeberry/Aronia berry
Chromium
Cinnamon
coQ10
Cordyceps mushroom
Dandelion
Fenugreek extract
Fiber
Ginger
Ginkgo
Glucomannan
Glyco amino glycans in mushrooms
Goldenseal
Green tea
Guggul
Gymnema sylvestra
Hibiscus more effective than metformin (Hibiscus sabdariffa also lowers body temperature)
Holy Basil (Tulsi)- regular use 100mg/dl drop in blood sugar
Magnesium
Milk thistle
Mulberry leaf extract
NAC- N-acetylcysteine
Okra
Olive leaf
Oregon grape
Prickly pear cactus
Rose Geranium
Spirulina-EPA&DHA omega 3s, 1/4 ts 2X/day in a meal with a vegetable

Turmeric
Vanadium sulfate
Vitamin D3
White kidney (northern) bean extract

Cardiovasc Drugs Ther. 1994 Aug;8(4):659-64.
Hypolipidemic and antioxidant effects of Commiphora mukul as an adjunct to dietary therapy in patients with hypercholesterolemia.
Singh RB, Niaz MA, Ghosh S.

Annu Rev Nutr. 2003;23:303-13. Epub 2003 Feb 26.
GUGULIPID: a natural cholesterol-lowering agent.
Urizar NL, Moore DD.

Int J Vitam Nutr Res. 2014;84(3-4):196-205. doi: 10.1024/0300-9831/a000206.
Effect of Fenugreek Seeds on Serum Metabolic Factors and Adiponectin Levels in Type 2 Diabetic Patients.
Rafraf M1, Malekiyan M, Asghari-Jafarabadi M, Aliasgarzadeh A.

J Biosci. 2011 Jun;36(2):383-96.
Metabolic and molecular action of Trigonella foenum-graecum (fenugreek) and trace metals in experimental diabetic tissues.
Baquer NZ1, Kumar P, Taha A, Kale RK, Cowsik SM, McLean P.

Ceska Slov Farm. 2015 Jun;64(3):67-71.
[Effectiveness of phytotherapy in supportive treatment of type 2 diabetes mellitus II. Fenugreek (Trigonella foenum-graecum)]. [Article in Czech]
KoupÃ½ D, KotolovÃ¡ H, RudÃ¡ KuÄ•erovÃ¡ J.

https://www.healthline.com/nutrition/13-ways-to-lower-triglycerides#section13

â€”â€”â€”â€”â€”â€”â€”â€”â€”â€”â€”

Category

1. Uncategorized

Date Created
September 4, 2022
Author
biggs