

Diet and Diabetes: Recipes for Success

PHYSICIANS COMMITTEE FOR RESPONSIBLE MEDICINE

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generally have enough insulin. However, their cells become resistant to it, leaving too much glucose in the bloodstream, where it can cause problems.

Over the short run, people with uncontrolled diabetes may feel tired, thirsty, urinate frequently, and notice blurred vision. In the long run, they are at risk for heart disease, kidney problems, vision loss, nerve damage, and other difficulties.

Dietary Approaches to Diabetes

Diabetes diets typically call for portion control, carbohydrate limits and, for those who are overweight, calorie restrictions. Fortunately, there is another way. **Low-fat, plant-based diets are ideal for diabetes** and the conditions associated with it, such as heart disease, weight gain, high cholesterol, and high blood pressure. And, they offer the nice advantage of not requiring any weighing or measuring of portions. Going hungry is not necessary!

The old approach had us cutting down on carbohydrates. It's true that overly processed carbohydrates—those made with sugar or white flour, for example—are poor choices. However, delicious unprocessed or minimally-processed foods, such as potatoes, rice, oats, beans, pasta, fruit, and vegetables, were the main part of the diet in countries where people were traditionally fit and trim and where diabetes was rare. Unfortunately, highly processed carbohydrates and affordable meat and cheese dishes have moved in, and now we have a worldwide type 2 diabetes epidemic.

A low-fat vegetarian approach recognizes that whole-food carbohydrates are fine; it's the fat in our diets that is the problem. New information suggests that fat in animal products and oils interferes with insulin's ability to move glucose into the cells.¹ Eating less fat reduces body fat. Less body fat allows insulin to do its job. **However, choosing skinless chicken, skim milk and baked fish is not enough of a change for most people to beat diabetes.**

The new approach eliminates fatty foods and animal protein, such as meats, dairy products, and oils, and offers unlimited grains, legumes, fruits, and vegetables. One study found that

Diabetes Basics

In the past few years, much of what we thought we knew about diabetes has been turned on its head. New understanding of the nutritional causes of diabetes gives us the power to keep it from occurring or to turn it around.

Here is what is supposed to happen: Our bodies turn starchy and sweet foods into glucose for our muscle cells to use for fuel. Insulin, a hormone made in the pancreas, ushers glucose into the cells. People with type 2 diabetes, the most common type,

21 of 23 patients on oral medications and 13 of 17 patients on insulin were able to get off of their medications after 26 days on a near-vegetarian diet and exercise program.² During two- and three-year follow-ups, most people with diabetes treated with this regimen have retained their gains.³ The dietary changes are simple, but profound, and they work.

A 2006 study, conducted by the Physicians Committee for Responsible Medicine with the George Washington University and the University of Toronto, looked at the health benefits of a low-fat, unrefined, vegan diet (excluding all animal products) in people with type 2 diabetes.⁴ Portions of vegetables, grains, fruits, and legumes were unlimited. The vegan diet group was compared with a group following a portion-controlled, higher-fat diet based on American Diabetes Association (ADA) guidelines. The results of this 22-week study were astounding:

- Forty-three percent of the vegan group and 26 percent of the ADA group reduced their diabetes medications. Among those whose medications remained constant, the vegan group lowered hemoglobin A1C, an index of long-term blood glucose control, by 1.2 points, three times the change in the ADA group.
- The vegan group lost an average of about 13 pounds, compared with about 9 pounds in the ADA group.
- Among those participants who didn't change their lipid-lowering medications, the vegan group also had more substantial decreases in their total and LDL cholesterol levels compared to the ADA group.

This study illustrates that a plant-based diet can dramatically improve the health of people with diabetes. It also shows that people found this way of eating highly acceptable and easy to follow. The ADA now includes a vegan diet option.

Type 1 Diabetes and Diet

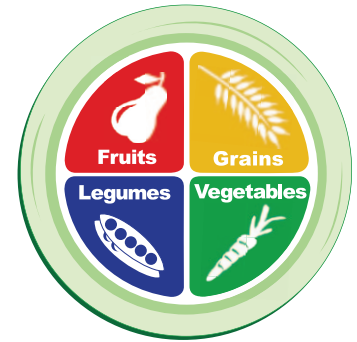
While people with type 2 diabetes can often reduce, and sometimes eliminate, medications when they lose weight and food and exercise are better controlled, those with type 1 diabetes will always need insulin. Even so, a good diet can minimize the amount of insulin required. Type 1 diabetes, formerly called “childhood onset diabetes,” occurs when the pancreas stops producing insulin. The cause of type 1 diabetes remains elusive. Several studies have implicated cow's milk consumption as a possible contributor.^{5,6} When milk consumption patterns were examined across various nations, there was a strong correlation with the incidence of type 1 diabetes. It may be that milk proteins cause an autoimmune reaction in which the body mistakenly attacks its own insulin-producing cells. For this reason, among others, the American Academy of Pediatrics no longer recommends unmodified cow's milk for infants. When breast-feeding women ingest dairy products, the cow's milk proteins end up in their own breast milk. For this reason, breastfeeding mothers may do well to avoid cow's milk until more research is completed.

The Remarkably Simple New Dietary Approach to Diabetes

Give It a 3-Week Trial. What Have You Got to Lose?

1. Build Your Meals from The Power Plate.

It's not complicated! Fill your plate with whole grains, legumes (beans, lentils, peas), fruits and vegetables. Drink water. Keep nuts or seeds to a small handful once a day. Visit www.ThePowerPlate.org for more information.



2. Begin a Vegan Diet: Avoid Animal Products.

A *vegan* diet has no animal products at all: No red meat, poultry, pork, fish, dairy products, and eggs. Why? Animal products contain *saturated* fat, which is linked to heart disease, insulin resistance, and certain forms of cancer. They also contain cholesterol and, of course, animal protein. It may surprise you to learn that diets high in animal protein can aggravate kidney problems and calcium losses. All the protein you need can be found in whole grains, legumes, and even vegetables: that's where strong horses, bulls, and elephants get their protein.

3. Avoid Added Vegetable Oils and Other High-Fat Foods.

Although vegetable oils are healthier than animal fats, oils are not health foods. All fats and oils are high in calories; one gram of any fat or oil has nine calories, while one gram of carbohydrate has only four calories. The amount of fat we really need each day is quite small and comes packed inside the Power Plate vegetables, grains, and beans.

Avoid oily sauces and salad dressings, and foods fried in oil. Limit olives, avocados, nuts, and peanut butter. Read labels, and choose mostly foods with no more than 2–3 grams of fat per serving.

4. Favor Foods with a Low Glycemic Index.

The glycemic index (GI) identifies foods that raise blood sugar more than other foods. High GI foods can also raise triglyceride levels. Fortunately, beans, oats, sweet potatoes, and, surprisingly, white and wheat pasta, are among foods that are lower GI champions. So are breads such as pumpernickel, rye, multigrain and sourdough, and tortillas. Lower GI cereals are bran cereals, muesli and rolled or steel-cut oats. Grains such as barley, parboiled rice, couscous, corn, and quinoa have a low GI. High GI foods to limit are sugar and sugary products, white and wheat bread, corn flakes and puffed rice cereals.

5. Go High-Fiber.

Aim for at least 40 grams of fiber each day. Choose beans, vegetables, fruits, and whole grains (e.g., whole wheat pasta, barley, oats, quinoa). Aim for at least 3 grams/fiber per serving on labels and 10 to 15 grams per meal. Start slowly. Expect a change in bowel habits (usually for the better). Gassiness from beans can be minimized with small servings and thorough cooking and, if a problem, will get better over time!

A note on vitamin B12: Those following a diet free of animal products (and all adults over the age of 50) should take a B12 supplement of at least 5 micrograms per day to protect blood and nerve cells.

Additional Resources

For more information, visit these Web sites or PCRM.org/shop.

- www.NutritionMD.org (Try the Meal Planner Tool)
- www.PCRM.org/diabetes
- www.ThePowerPlate.org
- *Dr. Neal Barnard's Program for Reversing Diabetes: The Scientifically Proven System for Reversing Diabetes Without Drugs* by Neal D. Barnard, M.D.
- *A New Approach to Nutrition for Diabetes* (DVD)
- *Breaking the Food Seduction: The Hidden Reasons Behind Food Cravings—and Seven Steps to End Them Naturally* by Neal D. Barnard, M.D.
- *21-Day Weight Loss Kickstart: Boost Metabolism, Lower Cholesterol, and Dramatically Improve Your Health* by Neal D. Barnard, M.D.
- *Food for Life 90-Day Journal* by Neal Barnard, M.D.; Joanne Evans, M.Ed., R.N., A.P.R.N.; Caroline Trapp, M.S.N., A.P.R.N., B.C.-A.D.M., C.D.E.
- *The McDougall Quick & Easy Cookbook: Over 300 Delicious Low-Fat Recipes You Can Prepare in Fifteen Minutes or Less* by John A. McDougall, M.D., and Mary McDougall

Pasta with Lentil Marinara Sauce

- 1 pound pasta of choice
- 1 jar (26 ounces) fat-free, low-sodium, tomato-based pasta sauce
- 1 can (15 ounces) lentils, rinsed and drained
- 1/2 cup dry red wine (can be nonalcoholic) or low-sodium vegetarian broth
- Salt to taste
- Freshly ground black pepper

Cook the pasta according to package directions.

Meanwhile, combine the pasta sauce, lentils, and wine or broth in a medium saucepan. Heat gently and season with the salt and pepper. Serve over the drained pasta.

Makes 5 servings

Per serving: 470 calories, 19 g protein, 91 g carbohydrates, 9 g sugar, 2 g total fat, 3% calories from fat, 0 mg cholesterol, 8 g fiber, 173 mg sodium.

Cherry Tomato and Brown Rice Salad with Artichoke Hearts

This delicious salad is a complete meal and is a great picnic or potluck dish. Because neither tomatoes nor rice benefit from refrigeration, it should be served at room temperature.

- 3 cups warm brown basmati rice

- 6 ounces marinated artichoke hearts, rinsed in hot water, drained, and sliced
- 1 cup chopped scallions
- 1 1/2 pounds red, yellow, or mixed cherry tomatoes, halved
- 1/2 cup chopped fresh basil
- 1/2 cup fat-free Italian dressing
- 3 tablespoons lemon juice
- 2 cloves garlic, crushed
- 1/4 teaspoon salt
- Freshly ground black pepper to taste
- 1 head crisp lettuce

Place the rice in a large salad bowl and add the artichoke hearts, scallions, tomatoes, and basil. Mix gently.

Combine the Italian dressing, lemon juice, garlic, salt, and pepper in a small bowl or jar. Whisk or shake until well blended. Pour over the salad and mix gently. Serve on beds of lettuce on individual plates.

Makes 6 servings

Per serving: 153 calories, 4 g protein, 32 g carbohydrates, 3 g sugar, 1 g total fat, 6% calories from fat, 0 mg cholesterol, 4 g fiber, 376 mg sodium

Berry Mousse

This is so easy that it's hardly a recipe! Your blender does most of the work. This can be eaten as a pudding or used as a topping for fruit.

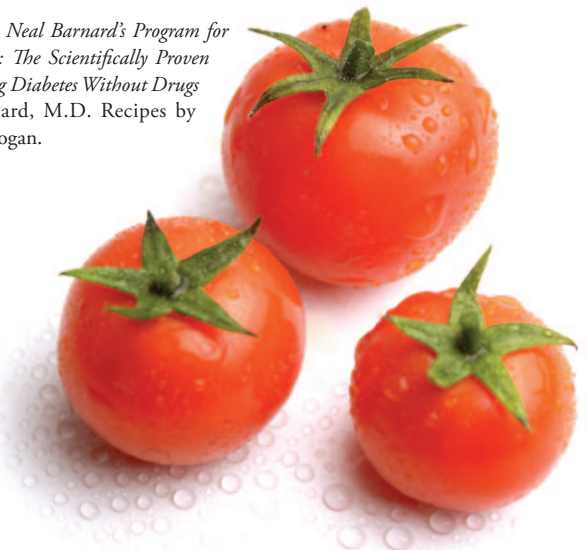
- 1 package (12.3 ounces) reduced-fat extra-firm silken tofu, crumbled
- 2 3/4 cups thawed frozen unsweetened berries of choice
- 3 tablespoons sugar or 2 tablespoons agave nectar
- 1 tablespoon berry liqueur (optional)

Blend the tofu, berries, sugar or agave nectar, and liqueur, if using, in a blender or food processor until smooth. Spoon into 4 pudding dishes and refrigerate until chilled.

Makes 4 servings

Per serving: 123 calories, 7 g protein, 24 g carbohydrates, 17 g sugar, 1 g total fat, 5% calories from fat, 0 mg cholesterol, 3 g fiber, 89 mg sodium

Recipes from *Dr. Neal Barnard's Program for Reversing Diabetes: The Scientifically Proven System for Reversing Diabetes Without Drugs* by Neal D. Barnard, M.D. Recipes by Bryanna Clark Grogan.



Meal Suggestions

Breakfast

- Hot cereals: oatmeal with cinnamon, raisins, and/or applesauce
- All-Bran or muesli with nonfat soy- or rice milk and/or berries, peach, or banana
- Fresh fruit
- Pumpkin or rye toast topped with jam (no butter or margarine)
- Oven-roasted sweet potato home fries solo or smothered with sautéed mushrooms, peppers, and onions
- Tofu scrambler

Lunch

- Mixed-vegetable salad with lemon juice, fat-free dressing, or soy or teriyaki sauce
- Legume-based salads: three-bean, chickpea, lentil, or black bean and corn salads
- Grain-based salads: noodle, couscous, bulgur, or rice salads
- Soups: carrot-ginger, mixed vegetable, black bean, vegetarian chili, spinach lentil, minestrone, split pea, etc.
- Hummus spread on whole wheat pita with grated carrots, sprouts, and cucumbers
- Black bean and sweet potato burrito with corn and tomatoes
- Sandwich made with fat-free meat alternatives such as barbecue seitan, Lightlife Smart Deli turkey style, or Yves veggie pepperoni slices and your favorite sandwich veggies

Dinner

- Pasta marinara: can be made with many commercial sauces (any brand that has less than 2 grams fat per serving and is free of animal products)
- Beans and rice: black beans with salsa, vegetarian baked beans, or fat-free refried beans
- Soft tacos: a flour tortilla filled with beans, lettuce, tomato, and salsa
- Fajitas: lightly sautéed sliced bell peppers, onion, and eggplant with fajita seasonings



- Chili: homemade or vegetarian boxed or canned versions
- Veggie lasagna: low-fat tofu replaces the ricotta cheese, layered with grilled veggies
- Vegetable stir-fry: vegetables seasoned with soy sauce or other low-fat stir-fry sauce and served over pasta, beans, or rice

Snacks

- Fruit
- Carrot, celery, or other vegetables with low-fat hummus
- Baked tortilla chips with salsa or bean dip
- Air-popped popcorn or rice cakes
- Toast with jam
- Soup

This fact sheet is not intended as a comprehensive program for diabetes. Be aware that a change in diet can produce big results. For some, there is a risk that low blood sugar can occur if diabetes medications are not lowered or eliminated. If you have diabetes, consult your health care provider and tailor a program for your needs.

References

1. Peterson KF, Dufour S, Befroy D, Garcia R, Shulman GI. Impaired mitochondrial activity in the insulin-resistant offspring of patients with type 2 diabetes. *N Engl J Med.* 2004;350:554-671.

2. Barnard RJ, Lattimore L, Holly RG, Cherny S, Pritikin N. Response of non-insulin-dependent diabetic patients to an intensive program of diet and exercise. *Diabetes Care.* 1982;5(4):370-374.

3. Barnard RJ, Massey MR, Cherny S, O'Brien LT, Pritikin N. Long-term use of a high-complex-carbohydrate, high-fiber, low-fat diet and exercise in the treatment of NIDDM patients. *Diabetes Care.* 1983;6(3):268-273.

4. Barnard ND, Cohen, J, Jenkins DJ, et al. A low-fat, vegan diet improves glycemic control and cardiovascular risk factors in a randomized clinical trial in individuals with type 2 diabetes. *Diabetes Care.* 2006;29(8):1777-1783.

5. Scott FW. Cow milk and insulin-dependent diabetes mellitus: is there a relationship? *Am J Clin Nutr.* 1990;51:489-491.

6. Karjalainen J, Martin JM, Knip M, et al. A bovine albumin peptide as a possible trigger of insulin-dependent diabetes mellitus. *N Engl J Med.* 1992;327:302-307.