

# Diabetes

## Life Lines



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To receive this newsletter by mail, contact your local U of I Extension office.

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## Lack of Sleep Affects Blood Glucose Levels

During the holiday season, we often get less sleep than we should or than we would like. Can this affect your diabetes management? Yes!



Inadequate sleep results in changes in glucose control in the body. Sleep deprivation (lack of sleep) can result in higher blood glucose levels because of increased production of glucose by the liver.

When sleep is fragmented, there is a release of hormones that can worsen blood glucose levels. Certain hormones related to stress may also become elevated, increasing blood glucose levels or affecting other body functions.

What can you do to improve your sleep? Follow these guidelines for healthy sleeping:

- Sleep and wake at regular times.
- Sleep in your bed and avoid using the bed for activities such as watching television, balancing a checkbook, or working.
- Sleep in a quiet, dark room.
- Avoid strenuous exercise for about three hours before going to bed.
- Decrease or eliminate caffeine and nicotine.
- Allow one hour to “unwind” before bedtime. For instance, have a routine before going to bed that is quieting, like reading a few pages, listening to music, or taking a warm bath.
- Avoid alcohol around bedtime because it can fragment sleep.
- Avoid napping after 4 P.M.

*Contributed by Shalini Manchanda, M.D., College of Medicine, UIUC*

# The Difference Between Macro- and Micronutrients

Food is made of nutrients. Sometimes these nutrients are divided into “macronutrients” and “micronutrients.” Macronutrients are nutrients that provide calories (energy). Since “macro” means large, macronutrients are nutrients needed in large amounts. There are three categories of macronutrients: Carbohydrates, Proteins, and Fats.

While each of these macronutrients provides calories, the amount of calories that each one provides varies. One gram of carbohydrate or protein provides 4 calories per gram. One gram of fat provides 9 calories per gram. If you looked at the Nutrition Facts label of a food product and it said 12 grams of carbohydrate, 0 grams of fat, and 0 grams of protein per serving, you would know that this food has about 48 calories per serving (12 grams carbohydrate multiplied by 4 calories for each gram of carbohydrate = 48 calories). The only other substance that provides calories is alcohol, which provides 7 calories per gram. Alcohol, however, is not a macronutrient because we do not need it for survival.

Micronutrients are nutrients that our bodies need in smaller amounts and include vitamins and minerals. While micronutrients are needed for health, they do not provide calories.

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## News and Resources

- *The Diabetes Menu Cookbook: Delicious Special-Occasion Recipes for Family and Friends* by Barbara Scott-Goodman, Kalia Doner, and Judd Pillosof; 236 pages, hardcover. Published by John Wiley and Sons, 2006. This newest edition incorporates the most recent nutritional recommendations of the American Diabetes Association and explains the latest changes to the USDA food pyramid and what they mean for you.
- *My Diabetes Organizer: The Essential Planner and Record-Keeper for People with Type 2 Diabetes* by Gina Barbetta and Valerie Rossi; 84 pages, spiral-bound. North Hill Publishing, 2006. Packed with charts, guides, and advice, this organizer helps to simplify the lives of people with diabetes. Patients can keep track of test results, contact information, and medication records. The organizer features 12-month check-up charts, and envelopes and pockets for bills and business cards.

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## Medication Update

Insulin is needed to maintain blood glucose levels within a target range. Normally produced by the pancreas, those with diabetes may need to take insulin injections.



Another hormone produced by the pancreas is amylin. Amylin works with insulin and helps to control how quickly glucose from a meal enters the blood from the intestines. Researchers have found that some people with diabetes have too little amylin as well as too little insulin.

A new medication has been approved that is a synthetic form of amylin, called Symlin. Those with diabetes who have difficulty achieving their target blood glucose levels although they follow their medication and dietary prescriptions might benefit from this new medication.

Insulin levels usually are decreased, and amylin injections are prescribed before meals. Because amylin lowers blood glucose levels, careful self-monitoring of blood glucose levels is important. People with a history of low blood glucose probably should not take amylin.

If you have questions about this new medication, talk to your health care provider or pharmacist.

# Recipe Corner

## Holiday Broccoli Tomato Salad

*7 1-cup servings*

6½ cups broccoli flowerets

½ cup sun-dried tomatoes in oil, drained

2 tablespoons oil from tomatoes

1 teaspoon dried dill

4 ounces low-fat mozzarella cheese

1 tablespoon lemon juice

### *Directions*

1. Slice flowerets and tomatoes to about same size. Place in bowl.
2. Toss with lemon juice, add oil.
3. Cut cheese into cubes. Add to salad. Toss with dill.

*Per serving:* 110 calories; 6 grams protein; 9 grams cholesterol; 0 grams fiber;  
6 grams carbohydrate; 8 grams fat; 63% calories from fat; 113 mg. sodium

## Dark Chocolate Strawberry Fondue

*16 servings, 3 strawberries each*

48 strawberries

4 ounces unsweetened chocolate

½ cup skim milk

5 tablespoons Splenda®

### *Directions*

1. Place chocolate squares in a microwave-safe bowl and microwave on High in 1-minute increments until melted.
2. Whisk in milk and Splenda®.
3. Dip strawberries, using about 1 teaspoon of chocolate fondue per berry.

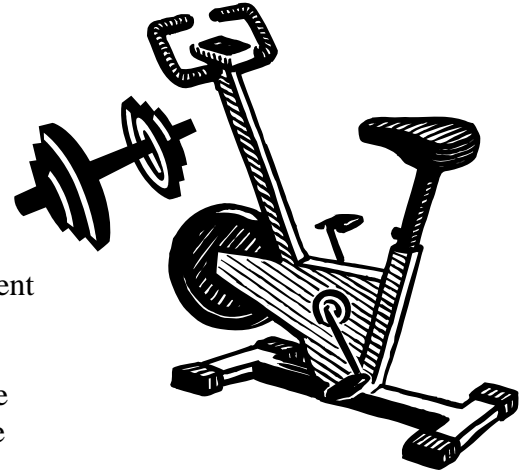
*Per serving:* 52 calories; 1 gram protein; 0 grams cholesterol; 2 grams fiber;  
5 grams carbohydrate; 4 grams fat; 70% calories from fat; 6 mg. sodium

# Exercise Update: What Researchers Found

Researchers in New Zealand analyzed 27 studies that included 1,003 patients to determine the effects of different types of exercise on hemoglobin A1C, a measure of how well a person's blood glucose is controlled long term.

The researchers found hemoglobin A1C levels fell by about 0.8 percent in cases where the exercise was continued for 12 weeks or longer. Combining aerobic exercise with resistance training had somewhat more of an effect on the hemoglobin A1C than either type of exercise alone. However, more intense exercise programs did not appear to be more effective.

The researchers thought this may be because the more intense programs were more difficult for people to continue as a long-term lifestyle habit.



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