### Which are the best bedtime snacks for diabetes?

A high-protein, low-fat snack before bed may help people with diabetes stabilize their blood sugar levels overnight.

Everyone's blood sugar levels change throughout the night. In people with type 1 diabetes or type 2 diabetes, these fluctuations can cause high blood sugar levels, or hyperglycemia, in the morning. A tactical late-night snack before bed may help balance these levels.

Having a bedtime snack can be a good idea for people with diabetes listed are some snack options that can help keep blood glucose levels under control throughout the night.

# How do glucose levels change overnight?

A person can identify how their glucose levels change during the night by taking various readings.

A person's blood sugar levels change during the night, mainly, because of two processes:

- **The dawn phenomenon**. Between roughly 3:00 a.m. and 8:00 a.m., blood sugar levels surge as part of the process of waking up. This causes high blood sugar levels in the morning.
- The Somogyi effect. Glucose levels drop significantly between 2:00 a.m. and 3:00 a.m. The body responds by releasing hormones that raise blood sugar levels again. It can release too much of these hormones, leading to high blood sugar levels in the morning.

Eating a bedtime snack can prevent blood glucose levels from dropping very low during the night and lessen the Somogyi effect.

A person can determine how their glucose levels change throughout the night by taking readings at various points, such as just before bed, between 2:00 a.m. and 3:00 a.m., and again when waking up. Understanding how the body is processing blood sugar is the first step toward picking more healthful snacks in the evening and before bed.

According to the American Diabetes Association (ADA), being overweight or having obesity increases the risk of diabetes-related complications. A variety of bedtime snacks can fit into a balanced, healthful diet.

# Best snacks before bed

People can tailor their snacking based on their weight goals and how their body reacts to sugar overnight. A dietician can help.

The best snacks for each person will depend on how the body responds to the dawn phenomenon and the Somogyi effect, as well as personal preferences and goals.

The ADA recommend that people develop a personalized meal plan with their healthcare team, and this can include snacks and their timings.

Little scientific evidence points to an ideal bedtime snack, but researchers believe that beneficial snacks will contain:

- high levels of protein
- healthful fats
- limited carbohydrates

Foods with this composition may help limit blood glucose spikes during the night and ensure lower blood glucose levels in the morning.

Try one the following healthful snacks before bed to help manage blood sugar levels and satisfy nighttime hunger:

#### 1. A handful of nuts

Almonds, walnuts, and peanuts contain plenty of vitamins, minerals, and healthful fats. Almonds also contain plenty of vitamin E, and walnuts are especially rich in omega-3 fatty acids.

### 2. A hard-boiled egg

Eggs are a great source of protein, with one large egg providing 6.29 grams (g). Eggs also contain very few carbohydrates.

Try eating the egg with a couple of whole-grain crackers to add fiber. Fiber slows down the digestive process, releasing the energy from the food over a longer period. This may help keep blood sugar levels stable.

#### 3. Low-fat cheese and whole-wheat crackers

Cheese provides protein, while whole-wheat crackers add dietary fiber. Choose a healthful type of unprocessed cheese.

Whole-wheat and whole-grain crackers have lower glycemic index scores than white varieties, meaning that they have less of an impact on blood glucose levels.

#### 4. Baby carrots, cherry tomatoes, or cucumber slices

Non-starchy vegetables are a great choice for a snack. They are very low in calories, fats, and carbohydrates, while offering plenty of vitamins and minerals.

These vegetables also provide antioxidants and a good dose of fiber to boost heart and gut health. For more protein, add a low-fat cheese slice to this low-calorie snack.

#### 5. Celery sticks with hummus

Celery is a low-calorie, high-fiber food that also provides vitamins and minerals. Pair celery or another non-starchy vegetable with hummus to add a source of protein.

For the best results, avoid highly processed hummus, and try making it at home by blending chickpeas, tahini, and lemon.

#### 6. Air-popped popcorn

Depending on the method of preparation, popcorn can be a light, healthful snack. It contains vitamins, minerals, fiber, and protein. Add in a few mixed nuts for a source of protein.

### 7. Roasted chickpeas

Chickpeas provide a healthful boost of protein and fiber, providing 11.81 g and 10.6 g, respectively, per cup.

A person can prepare this easy snack in under 1 hour, for example by following this spicy roasted chickpeas recipe.

#### 8. Sliced apple and peanut butter

Peanut butter is rich in protein, fiber, and healthful fats, an attractive nutritional profile for anyone looking to help control blood sugar levels.

Apples provide a range of vitamins, minerals, and antioxidants. The ADA say that apples can play a role in a healthful diet for people with diabetes.

Try cutting an apple and adding a light spread of peanut butter to each slice. Or, try a different type of nut butter, such as almond or cashew butter.

#### 9. Sugar-free Greek yogurt

The ADA advise that, along with skim milk and some reduced-fat cheeses, yogurt is one of the most healthful types of dairy. Yogurt contains calcium and high-quality protein.

#### 10. A handful of seeds

Like nuts, seeds are a great source of protein, healthful fats, and fiber. Try a small handful of a mix of sunflower, sesame, and pumpkin seeds in the evening.

# Best ways to snack before bed

The ADA no longer provide specific carbohydrate counts or recommended diets for people with diabetes. Instead, the ADA's *Standards of Medical Care in Diabetes* — *2019* suggest that a person follows an individualized meal plan tailored to their current eating patterns, preferences, and weight goals.

Some general tips that may be beneficial for everyone:

- Eat mindfully by focusing on enjoying the food.
- Avoiding snacking in front of the television or while reading, driving, or otherwise distracted.
- Plan meals, snacks, and treats ahead of time.
- Choose healthful snacks, rather than ones that contain empty calories and low-quality carbohydrates.
- Learn about and pay attention to portion sizes.

# **Summary**

Each person with diabetes can benefit from learning how their body processes blood sugar during the night.

Getting a sense of the rise and fall of blood sugar levels can help a person decide how much to eat in the evenings and whether to include a snack in a bedtime routine.

There are plenty of low-calorie, high-protein snacks to choose from. Add some fiber for extra health benefits.