

## Snacks and Type 1 Diabetes: Examples and Precautions

### Administering insulin and snacks

**Note: If the snack is intended to prevent hypoglycemia (e.g., during the night, between meals), it is likely that no insulin is required for this snack.**

If you wish to consume a snack in a different context (e.g., hunger) and want to administer insulin for it, remember that the risk of hypoglycemia may be increased when administering insulin doses less than 3-4 hours apart or in certain situations (e.g., after physical activity). Some people do not administer insulin for snacks containing less than 15g of carbohydrates. It is up to you to assess the situation based on your needs.

Here are some strategies to limit the risk of hypoglycemia if you take insulin with a snack:

- Use an insulin-to-carbohydrate ratio to determine a specific insulin dose based on the amount of carbohydrates in the snack.
- Count carbs with precision.
- Use a bolus calculator (e.g., in an app or an insulin pump) and enter your blood sugar level (if not automatically integrated) to determine the insulin amount to take while considering active insulin (insulin-onboard).
- Evaluate if a reduction in insulin dose is required (e.g., consider reducing by 20-50% after physical activity).

## Examples of snacks depending on the situation



### Snack with a small amount or no carbs

Less than 15g of carbs +/- proteins

With protein	Without protein
<ul style="list-style-type: none"> <li>• 1 cup (250 ml) of strawberries + 1/3 cup (80 ml) of cottage cheese</li> <li>• Raw vegetables + 1 individual portion of cheese (about 30 g)</li> <li>• 1/3 cup (73 ml) edamames + 2 tsp (10 ml) homemade vinaigrette</li> <li>• Raw vegetables + 1 hard-boiled egg</li> </ul>	<ul style="list-style-type: none"> <li>• 1 cup (250 ml) of green salad + 1/2 cup (125 ml) of cucumbers + olive oil and balsamic vinegar</li> <li>• 1 cup (250 ml) flavoured gelatine (i.e. Jello®) without added sugar</li> <li>• 1 popsicle without added sugar</li> <li>• 2 cups of pop corn</li> </ul>

### Filling snack

15g of carbs + proteins

Carbs (examples containing 15g of carbs)	Protein (examples containing 8-16g of protein)
<ul style="list-style-type: none"> <li>• 1/2 cup (125 ml) of fruit salad</li> <li>• 5-6 whole-wheat crackers</li> <li>• 1 slice of multigrain bread</li> <li>• 1/2 slice multigrain English muffin</li> <li>• 1/2 whole grain pita bread</li> <li>• 1 medium-sized fruit (e.g., apple, peach)</li> <li>• 2 cups of strawberries</li> <li>• 1-2 tbsp (15-30 ml) of dried fruit</li> </ul>	<ul style="list-style-type: none"> <li>• 1/2 cup (125 ml) of cottage cheese or Greek yogurt</li> <li>• 1-2 oz (30-60 g) of cheese</li> <li>• 1/2 can (60 g) of tuna</li> <li>• 2 tbsp (30 ml) of nut butter</li> <li>• 1-2 tbsp (15-30 ml) of nuts or seeds</li> </ul>

## Snacks for physical activity

### Before and during physical activity

- Choose a snack that contains quick-acting sugar and eat it at regular intervals (e.g., every 20 minutes).
- The amount of carbs will vary depending on your blood sugar level, the type, duration and intensity of the activity and the amount of active insulin (delay since last injection).

- Fruit sauce
- Sports drink (e.g., Gatorade)
- Juice
- A few bites of granola bar
- Energy gels or chews
- Glucose tablets like Dex 4®

### After physical activity

Complex carbs + protein

- Chocolate milk or soy beverage
- One medium-sized fruit and some nuts
- Greek yogurt, flaxseed and raspberries

### If you have difficulty eating (e.g., nausea, vomiting)

Carbs (as a priority) + protein and fat (based on tolerance)

- Fruit sauce
- Rehydration drink (e.g., Gastrolyte)
- Regular popsicle
- Regular fruit gelatin (e.g., Jell-O®)
- Juice
- White bread with or without regular jam
- Saltine-type crackers
- Glucose tablets like Dex 4®