

## **Carbologist Teresa 55 Years T1D: Managing Carbohydrates and Blood Glucose Levels**

Maintaining balanced glucose levels is crucial for overall health, especially for individuals with diabetes. This involves a combination of nutrition, exercise, and insulin management. Addressing low blood sugar (hypoglycemia) promptly with oral glucose is also essential. Here, we provide a brief overview to help you get started on managing your glucose levels effectively.

### **1. Nutrition:**

- Focus on a balanced diet rich in fiber, lean proteins, and healthy fats.
- Limit intake of refined sugars and simple carbohydrates.
- Monitor carbohydrate intake to maintain steady blood sugar levels.

### **2. Exercise:**

- Regular physical activity helps improve insulin sensitivity.
- Aim for at least 150 minutes of moderate-intensity exercise per week.
- Incorporate both aerobic exercises and strength training.

### **3. Insulin:**

- Follow your healthcare provider's instructions for insulin therapy.
- Regularly monitor your blood glucose levels to adjust insulin doses as needed.
- Understand the different types of insulin and their onset, peak, and duration times.

### **4. Managing Lows:**

- Keep fast-acting glucose sources like glucose tablets or juice on hand.
- Recognize symptoms of hypoglycemia such as shakiness, sweating, and confusion.
- Treat low blood sugar promptly and recheck levels after 15 minutes.

For more information, visit the American Diabetes Association (ADA) website or consult with your healthcare provider.

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### **Expanded Information:**

#### **1. Nutrition:**

A well-balanced diet is fundamental in managing blood glucose levels. Focus on incorporating a variety of nutrient-dense foods, including vegetables, whole grains, lean proteins, and healthy fats. It's important to limit foods high in refined sugars and simple carbohydrates, which can cause rapid spikes in blood sugar. Instead, opt for complex carbohydrates that provide a slower release of glucose into the bloodstream. Monitoring carbohydrate intake through methods like carb counting can help maintain steady blood sugar levels.

#### **2. Exercise:**

Regular physical activity is a key component in managing diabetes. Exercise enhances insulin sensitivity, allowing your body to use glucose more effectively. Aim for at least 150 minutes of moderate-intensity exercise each week, such as brisk walking, cycling, or swimming. Additionally, incorporating strength training exercises at least twice a week can help build muscle mass and further improve glucose metabolism. Always consult with your healthcare provider before starting a new exercise regimen.

### 3. Insulin:

Insulin therapy is often necessary for individuals with type 1 diabetes and some with type 2 diabetes. It's crucial to follow your healthcare provider's guidance on insulin administration. This includes understanding the different types of insulin (rapid-acting, short-acting, intermediate-acting, and long-acting) and their respective onset, peak, and duration times. Regular blood glucose monitoring is essential to adjust insulin doses appropriately and prevent both hyperglycemia and hypoglycemia.

### 4. Managing Lows:

Hypoglycemia, or low blood sugar, can occur unexpectedly and must be addressed promptly. Symptoms of hypoglycemia include shakiness, sweating, dizziness, and confusion. It's important to have fast-acting glucose sources readily available, such as glucose tablets, fruit juice. The "15-15 rule" is a common method for treating hypoglycemia: consume 15 grams of carbohydrates, wait 15 minutes, and recheck your blood sugar. Repeat if necessary until your levels return to normal.

For more detailed information, you can visit resources like the American Diabetes Association (ADA) or consult with your healthcare provider for personalized advice.

Complex carbohydrates, also known as polysaccharides, are made up of long chains of sugar molecules. Here are some examples:

1. Starch: Found in foods like potatoes, rice, corn, and wheat.
2. Glycogen: Stored in the liver and muscles of animals.
3. Cellulose: A major component of plant cell walls, found in vegetables, fruits, and whole grains.

These complex carbs provide a steady release of energy and are an important part of a healthy diet.