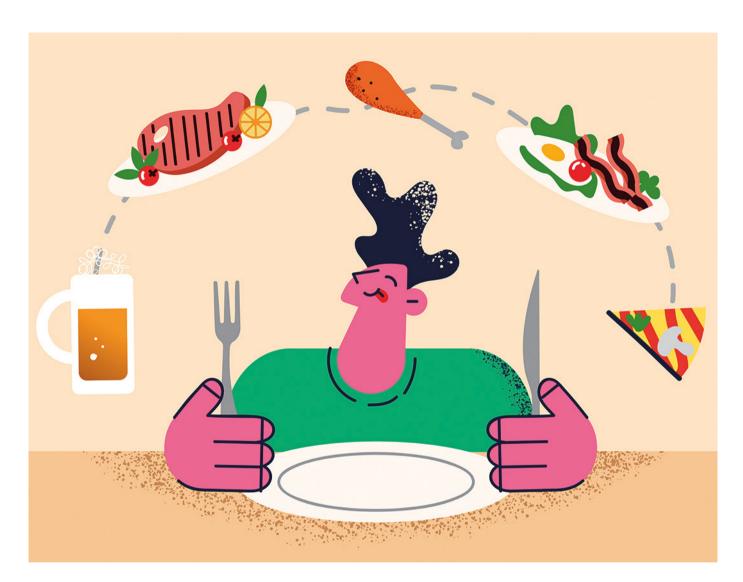


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Is a good relationship with food possible in type 1 diabetes?

n essential part of managing type 1 diabetes mellitus involves managing food. However, focusing on controlling and planning meals can often lead to a poor relationship with food, which, if not addressed, can develop into an eating disorder.

WHAT IS THE RELATIONSHIP WITH FOOD, AND WHAT DOES "HAVING A GOOD RELATIONSHIP WITH FOOD" MEAN?

According to the Royal Spanish Academy (RAE), the word "relationship" is defined as a correspondence or connection between two or more things. Therefore, in this case, the relationship with food will indicate the link, the way in which a person perceives, interacts with, and relates to food and eating in general.

In other words, it not only involves consuming healthy foods or those that contribute to better blood glucose levels, having a healthy relationship with food also means:

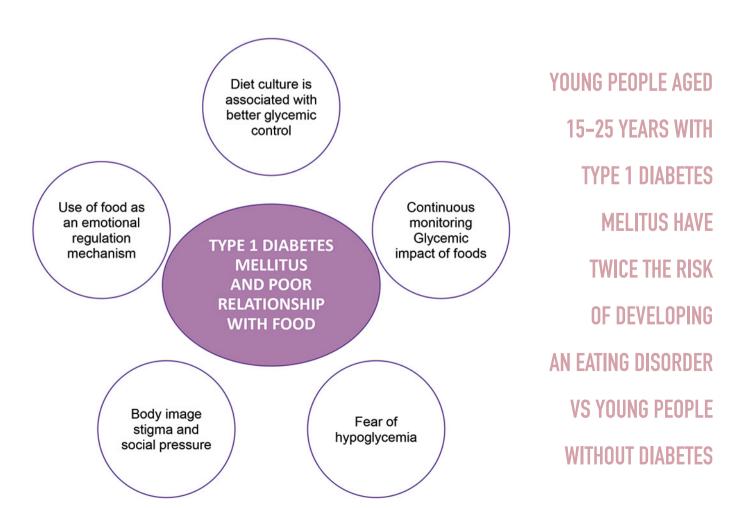
- **Recognizing bodily signals:** Being able to understand hunger and satiety to understand what our body needs and respond correctly to it.
- **Using food for bodily well-being:** Seeing food as that which nourishes and allows the body to function properly.
- **Enjoying food:** Feeling the pleasure of eating and enjoying

- everything that it involves (the moment, the people you're with, etc.) without feeling guilt.
- Accepting all types of food: Understanding that all types of food are permitted, but it's a matter of knowing how to manage them.
- Being able to eat in harmony with the sensations/emotions you feel: Understanding that there will be moments or situations in which certain foods may cause instability or discomfort, and simply listening to and accepting it.

All these aspects, combined with how the person's internal dialogue about food looks like and a good perception of their body image, will increase the likelihood of a healthy relationship with food.

1. WHY ARE PEOPLE WITH TYPE 1 DIABETES MELLITUS MORE LIKELY TO HAVE A POOR RELATIONSHIP WITH FOOD?

Patterns associated with the diet culture that benefit glucose management



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- >> People with type 1 diabetes mellitus must engage in certain behaviors associated with diet culture: a set of beliefs, attitudes, rules, and practices related to food and the body. These patterns help maintain appropriate blood glucose levels but can also contribute to developing disruptions in the relationship with food. Some of these behaviors include:
 - Understanding nutrients perfectly and knowing which foods contain them.
 - Weighing food and counting carbohydrate servings, and even fat-protein units.
 - Choosing the type and amount of food based on glucose levels, avoiding certain foods during hyperglycemia.
 - Taking a specific and quantified amount of carbohydrates during hypoglycemia to prevent a subsequent hyperglycemia.
 - Spending a lot of time and thoughts on meal planning.
 - Administering insulin in advance and waiting before starting to eat.
 - Planning physical activity, considering the type of sport, duration, etc.
 - Making food-related decisions in social events.

This not only makes it difficult for the person to connect with intuitive eating and detect when this causes them great discomfort, but even professionals who treat people with diabetes in their eating (e.g., nutritionists) often struggle to determine the extent to which a behavior should be the subject of intervention or not.

CONTINUOUS MONITORING AND GLYCEMIC IMPACT OF FOOD

Glucose sensors constantly brief people with diabetes on how each type of food affects their blood glucose, through trend arrows and graphs. This can encourage the person to begin restricting certain foods due to the "negative" effect on blood glucose.

In fact, there are increasingly more people with an intense fear and worry about glucose spikes, in some cases developing obsessive thoughts and rituals around food, or even avoiding eating certain foods they love.

As a matter of fact, this situation worsens when the person's health and social environment demonizes certain foods and blames. them for glycemic results, thus creating the stigma of "good and bad" foods.

FEAR OF HYPOGLYCEMIA

The fear of hypoglycemia may lead to avoiding certain foods or overeating to prevent blood glucose drops, which can trigger disordered eating patterns.

It can happen that people with diabetes use hypoglycemia as an excuse to indulge uncontrollably in certain "forbidden" foods because of their high sugar content and are considered "unhealthy" (pastries, cookies, chocolates, etc.). They only feel "well-being" when eating them during a low blood glucose episode; otherwise, they feel guilt and discomfort.

BODY IMAGE STIGMA AND SOCIAL PRESSURE

There is significant external pressure on people with type 1 diabetes mellitus to strictly control their diet and weight, whether from health care professionals, family members, or society in general.

Furthermore, in recent years, the increase in diagnoses among adolescents or young adults, in whom the pressure on body image is high, can lead to individuals feeling constantly judged and monitored concerning their food choices, internalizing and perpetuating these patterns.

Young people aged 15-25 years with type 1 diabetes mellitus are twice as likely to develop an eating disorder vs young people without diabetes.

Additionally, the diagnosis of type 1 diabetes mellitus is often associated with weight loss—usually aggressive—and comments associated with the social stigma surrounding weight ("You look so pretty, have you lost weight?" "Wow, you look much prettier like this, with a few pounds less.") can contribute to people with diabetes beginning to develop body concerns or worsen their body >>> » image, which in turn affects their eating behavior.

USING FOOD AS A MECHANISM FOR EMOTIONAL REGULATION

Living with a chronic disease such as type 1 diabetes mellitus can have a significant impact on mental health, including low self-esteem, anxiety, or depression. These psychological factors can influence a person's relationship with food, leading them to use food as a way to control difficult emotions or as a way to cope with the stress associated with managing the disease.

All this results not only in an increased likelihood of a worse relationship with food in people with type 1 diabetes, but also a 33% increased risk of developing an eating disorder (ED) vs people without diabetes.

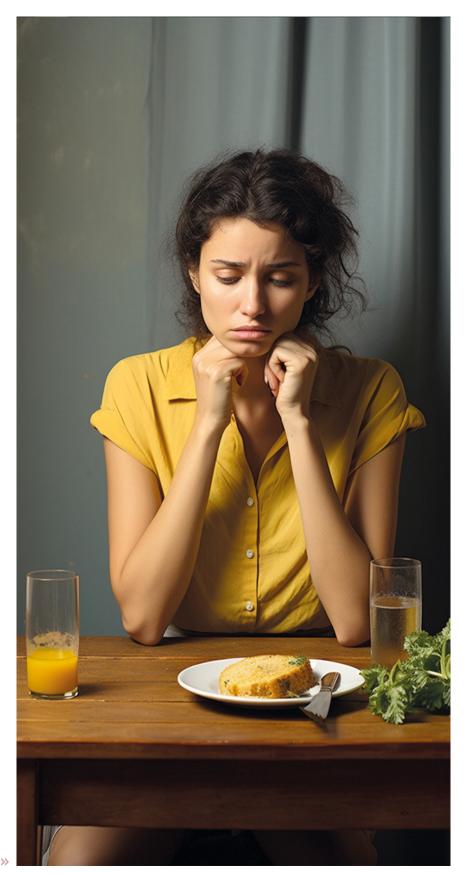
In any case, of note this is an increased risk, and therefore, prevention and assessment of the relationship with food and body image in people with type 1 diabetes mellitus play a key role in preventing the development of an ED.

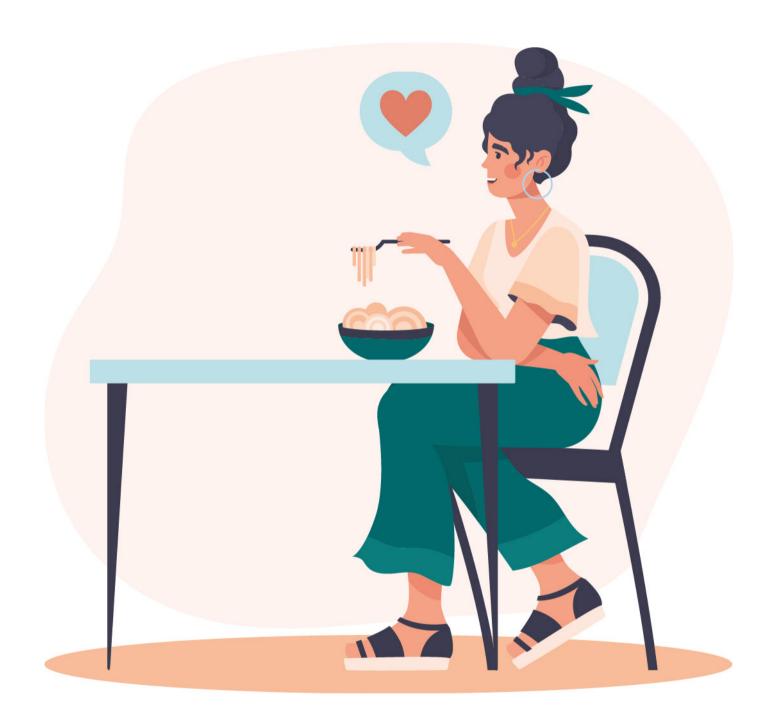
2. HOW CAN WE IDENTIFY WHEN SOMETHING IS WRONG?

In general, when a person feels a high level of discomfort related to food, avoids certain foods or situations where there is no control over what will be eaten, and feels that there is no enjoyment in their eating, we can say that there is a risk of a poor relationship with food.

Specifically, some signals in people with type 1 diabetes mellitus may be:

- Skipping or manipulating insulin doses.
- Recurrent episodes of ketoacidosis.
- Absence of menstruation in women.
- Obsessive thoughts on counting carbohydrates and controlling food.
- Avoiding certain foods, usually labeled as "forbidden," frequently and with great distress if consumed.
- Feeling guilty after eating certain foods and observing a blood glucose spike.





- Losing enjoyment in foods that previously brought pleasure.
 - Overly restrictive eating patterns.
 - Starting a ketogenic or low-carb diet without supervision or based on avoidance and discomfort.
 - Avoiding social events in general (due

to fear that food might be involved), or simply avoiding events that involve food.

 Experiencing extreme discomfort or stress at the thought of food.

It's not only important to teach individuals to recognize these signals in themselves, but also to identify and acknowle-

dge the messages they receive through social media, from those around them, and even from health care professionals.

Examples such as: "You should stop eating bread because it's what's making you lose control".

"The miraculous effects of the keto diet on diabetes." "You shouldn't go out with »

LEARNING TO MANAGE FOOD AND THE ASSOCIATED EMOTIONAL ASPECTS SO THAT THE DIABETIC PERSON CAN HAVE A DIET SUITED TO THEIR SITUATION THAT MAKES THEM FEEL AT PEACE

your friends if you want to have certain hemoglobin levels."

By identifying and recognizing them, people with diabetes who have never had problems with food will be able to preserve that healthy relationship with food, reducing the risk of developing EDs.

3. HOW TO IMPROVE THIS RELATIONSHIP?

Improving the relationship with food in people with diabetes requires developing healthy habits, both nutritionally and emotionally, including an internal dialogue based on understanding oneself, accompanying emotions, and fostering a sense of peace and well-being in the relationship with food.

Recommendations to improve this relationship include:

- Learning nutritional concepts from motivation, not from imposition: Having nutritional knowledge always helps make more flexible decisions.
- Staying conscious and present during meals: Doing small mindful eating exercises, paying attention to texture, leaving the food in your mouth for 10 seconds without chewing, looking at its color, etc.
- Avoiding distractions during meals, including the phone, especially for those who check their glucose on it.
- Developing alternative emotional co-

ping strategies such as diaphragmatic breathing, changing negative thoughts into coping thoughts, or practicing small self-care habits, such as going for a walk, listening to music, taking a relaxing shower, etc.

- Not labeling foods: Avoid speaking of forbidden/allowed foods or glucose-damaging foods but understand that there are occasional foods and daily foods.
- Knowing the foods that are typically avoided (avoiding eating them in "normal" circumstances and using events such as hypoglycemia or going out to eat them uncontrollably).
- Trying those foods that cause more fear first in safe contexts (like home) to learn how to handle them, thus increasing the feeling of control.
- Taking advantage of moments when blood glucose is more stable and emotions are more positive, rather than eating during glycemic or emotional instability, to avoid worsening the relationship with that food.
- If there is fear of a particular food, introduce it gradually to eventually reconcile with a food that has been avoided for a long time takes time. Therefore, it should be introduced in small quantities and gradually, which will reduce fear and uncertainty.
- Blood glucose curves are NOT flat: Remember that although people wi-

thout diabetes also experience some variability in their glucose levels, but they don't carry a sensor to monitor it.

Be mindful of whether you are checking the sensor obsessive or excessively and try to reduce the number of times you do so (e.g., by keeping your phone out of the room you are in or asking for help from someone close to you).

Having type 1 diabetes mellitus and maintaining a healthy relationship with food is possible, even if it seems challenging. It involves learning to manage both your diet and the emotional aspects associated with it, so that you can follow a diet that suits your situation and gives you peace of mind. D

CONCLUSIONS

It is essential to emphasize that if food-related distress is intense, remains for a long period of time, or causes instability in both glycemic control and emotional well-being, the joint intervention of a psychologist and a nutritionist is essential. This will allow for a comprehensive approach to psychonutrition, providing tools to manage all aspects related to this issue effectively.

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