

# Patient Cases, Panel Discussion, and Audience Q & A

# Case 2

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The patient is a 57-year-old African American female smoker who presents with an eleven-year history of type 2 diabetes, for which she's been taking insulin since the onset. She also suffers from depression and eczema. She has been on Lantus insulin since her diagnosis and also takes Humalog insulin

### **Labs:**

A1c 9.0

All other labs are normal.

She is agreeable to adopting a low-carb diet with a goal of taking less than 30 total carbs per day.

# ARS Question 1:

- 1) If this patient adopts a low-carb diet, what adjustments to her mealtime insulin should be considered to help match her glucose spikes to the insulin being utilized
  - A) Continue with Humalog
  - B) Switch to Humulin
  - C) Switch to Novolog
  - D) Switch to NPH

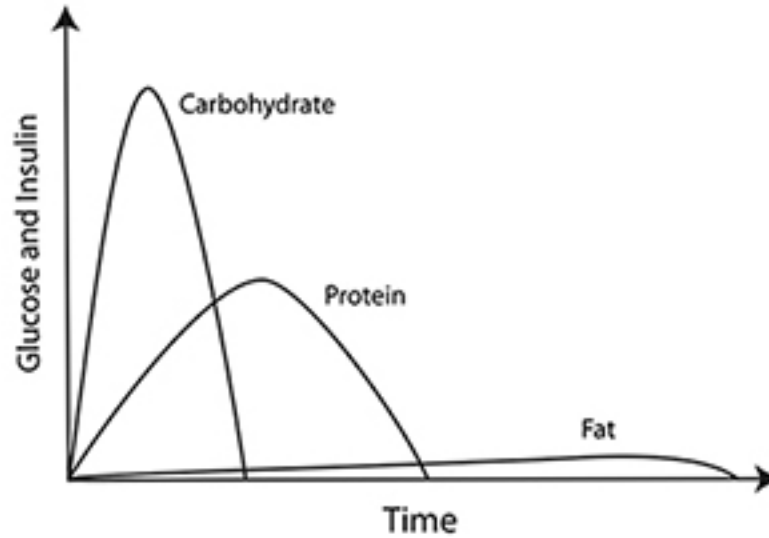
<b>Insulin Type</b>	<b>Onset</b>	<b>Duration</b>
Rapid-acting inhaled	10 to 15 minutes	3 hours
Regular/short acting	30 minutes	3 to 6 hours
Intermediate acting	2 to 4 hours	12 to 18 hours
Long acting	2 hours	Up to 24 hours

## ARS Question 2:

She is interested in making sure she is in ketosis.  
What is the most reliable indicator of clinically relevant ketosis:

- A) Acetone
- B) Acetoacetone
- C) B-Hydroxybutyrate
- D) Ketone bodies

## Glucose/Insulin Reaction to Macronutrients



## ARS Question 3:

Patient desires getting off insulin. What test helps her best know her risk for having Type 1 diabetes after having diabetes for over 11 years:

- A) Fasting insulin
- B) Islet cell antibodies
- C) C peptide
- D) Anti-GAD65 (glutamic acid decarboxylase antibody)



# Case 3

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48-year-old with history of hypertension and anxiety. Since having COVID-19, the loss of her mom, aunt, and sister she's been having anxiety. She's continued to have elevated blood pressures with a blood pressure on presentation of 160/60

# ARS Question 1:

Ketosis benefits our mental health by improving all the following except:

- A) Mitochondrial function
- B) Reduces oxidative stress and inflammation.
- C) Favorably impacts microbiota
- D) Reduces the neurotransmitter GABA

# ARS Question 2:

Anxiety's impact on blood pressure is related to all except:

- A) Cortisol elevation
- B) Increased renin activity
- C) **Reduced angiotensin 2**
- D) Negatively impacts endothelial function

Open discussion about the Keto for Refractory Mental Illness study  
<https://www.frontiersin.org/journals/psychiatry/articles/10.3389/fpsy.2022.951376/full>