

## Case Study 1: Patient N.B.

### Diabetic Ketoacidosis

#### Patient Profile

N.B., a 34-year-old Native American man, was admitted to the emergency department after he was found unconscious by his wife in their home.

#### Subjective Data (Provided by Wife)

- Was diagnosed with type 1 diabetes mellitus 12 mo. ago
- Was taking 50 U/day of insulin: 5 U of lispro insulin with breakfast, 5 U with lunch, and 10 U with dinner Plus 30 U of glargine insulin at bedtime
- States a history of gastroenteritis for 1 wk with vomiting and anorexia
- Stopped taking insulin 2 days ago when he was unable to eat

#### Objective Data

##### Physical Examination

- Breathing deep and rapid
- Fruity acetone smell on breath
- Skin flushed and dry

##### Diagnostic Studies

- Blood glucose level 730 mg/dL (40.5 mmol/L)
- Blood pH 7.26

#### Discussion Questions

1. Briefly explain the pathophysiology of the development of diabetic ketoacidosis (DKA) in this patient.  
Caused by a major deficiency of insulin which results in hyperglycemia, ketosis, acidosis, and dehydration
2. What clinical manifestations of DKA does this patient exhibit?  
The patient was breathing deep and rapid, fruity breath, his blood glucose level was very high, and his pH was acidotic
3. What factors precipitated this patient's DKA?  
Pt is a type 1 diabetic who stopped taking insulin 2 days ago because he was sick
4. Priority Decision: What is the priority nursing intervention for N.B.? hydration
5. What distinguishes this case history from one of hyperosmolar hyperglycemic syndrome (HHS) or Hypoglycemia?  
Fruity breath, T1DM, acidotic
6. Priority Decision: What is the priority teaching that should be done with this patient and his family?  
Don't stop taking insulin when you're sick
7. What role should N.B.'s wife have in the management of his diabetes?  
A supporter. She should try to help him manage his, medication, bg levels, and care. She should make sure he is taking his insulin as well as get the same pt education he is getting so she can be an asset in helping him through his diagnosis
8. Priority Decision: Based on the assessment data presented, what are the priority nursing diagnoses?  
Are there any collaborative problems? Knowledge Deficient- need to teach pt the sick day rules.  
Imbalanced nutrition- less than body requirements
9. Evidence-Based Practice: N.B.'s wife asks you if she should have given her husband insulin when he got

sick? How would you respond? Tell her that when a person isn't feeling well their body is in stress which leads to a raise in bg so it's important to stick with the medication regimens they are usually on to prevent DKA.