

## Doctor for a Day

Symptoms: A patient comes in to your office complaining of unusual thirst for the last few weeks. The patient also complains that they have been urinating frequently. However, they assure you the urination is probably because they have been so thirsty and drinking so much. You decide to take a urine sample. The test results show unusually high levels of glucose.

Organ System Involved:  
Endocrine

Organ Malfunctioning:  
Pancreas

Problem: Describe what has malfunctioned with the organ  
The pancreas is not releasing insulin into the bloodstream.

Results: What is actually happening in the body because of the malfunction? This should include macroscopic and microscopic descriptions.  
Insulin signals the cells in the body to remove sugar from the bloodstream and store it as fat. With insufficient insulin, too much sugar enters the bloodstream. In extreme cases, this sugar can damage organs like the eyes (resulting in blindness), and block the arteries reducing blood flow (resulting in the loss of limbs). The kidneys will actually excrete glucose in the urine to try and get rid of the extra sugar.