A 64-year-old man with chronic pancreatitis presents with increasing diarrhea despite taking increasing amounts of loperamide on a daily basis. The stool is described as bulky and oily. He also reports significant bloating. Pancreatic exocrine insufficiency is suspected, and pancreatic enzyme replacement therapy is initiated. A 14 day course of rifaximin is also prescribed for possible small intestine bacterial overgrowth. There is significant improvement in bloating as well as normalization of his stools. He now wants to stop pancreatic enzymes.

What test would best diagnose pancreatic exocrine insufficiency in this scenario?

A. A spot fecal elastase
B. A spot fecal lipase
C. 72 hour fecal fat collection on pancreatic enzymes
D. Hydrogen breath testing

Answer: A

Fecal elastase is a laboratory marker of pancreatic exocrine function, with low levels indicating pancreatic exocrine insufficiency (assuming the patient is taking a diet containing fat). Fecal elastase is not influenced by pancreatic enzyme replacement therapy. A spot fecal lipase would be potentially elevated due to pancreatic enzymes. A 72 hour fecal fat collection on pancreatic enzymes could be falsely negative if the pancreatic enzymes are sufficiently dosed. Hydrogen breath testing has no role in accurately diagnosis pancreatic exocrine insufficiency.