

# Pathophysiology case study

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Nat risk factors for primary hypertension are evident from K.

H. ' s history and hysterical data? Primary hypertension can be linked to several risk factors, some in Inch are evident in K. H. ' s history and physical data. The first risk factor evident is KHZ's diabetes mellitus. Diabetes mellitus poses as a threat and a risk factor to hypertension because the disease directly affects the blood vessels and arteries by hardening the arteries and potentially causing atherosclerosis, therefore raising blood pressure.

Other risk factors in KHZ's history are his age and race.

It has been en that African Americans are at highest risk for primary hypertension than other races. Additionally, as age increases, the risk for hypertension does so as well. These risk factors are non-modifiable, and unfortunately are independent risk factors for KHZ : Capstoneand Bananas). However, KHZ is also slightly overweight which is a modifiable risk factor and can be eliminated as a risk factor if the weight is lost.

KHZ should continue to follow his low sodium diet plan to help with some of the weight loss and also to help lessen his hypersensitivity as sodium may lead to high blood pressure due to water retention (Mayo Clinic).

There are other risk factors associated with hypertension and rising blood pressure and it is important to find out if any of them are also evident in KHZ. One of these risk factors includes KHZ's activity level. It is Important for KHZ to stay physically active because inactive people are usually associated with having higher heart rates. The higher the heart rate, the harder the heart must work which puts a greater amount of pressure on the arteries

leading to hypertension. Physical exercise can also help the weight loss process, in turn lowering high blood pressure.

Excessive smoking and drinking also leads to hypertension due to hardening of the arteries. Family history and high stress levels should also be determined if present in KHZ as they play a large role in hypertension as well (Mayo Clinic). What is the rationale for treating K. H. With an ACE inhibitor? What is the mechanism of action? ACE inhibitors are important and useful in the medication and treatment for KHZ due to their effectiveness in treating hypertension.

ACE inhibitors will help treat KHZ by slowing the negotiation converting enzyme (ACE). Negotiation II is produced by the body that can cause vasoconstriction of the blood vessels.

Negotiation II is made from Negotiation I by the E It the production to Negotiation II is slowed by the ACE inhibitor, the blood vessels will be able to dilate, and blood pressure is able to be lowered (Capstone and Bananas). Thus, it is important for KHZ to stay on the ACE inhibitors due to his blood pressure readings. KHZ's blood pressure is 135/96.

His systolic blood pressure is in the pre-hypertensive range, however, his diastolic blood pressure is in the hypertensive range and therefore, his blood pressure is hypertensive. Since his blood pressure is high, it is important for KHZ to maintain taking the ACE inhibitors.

If KHZ was not on the ACE inhibitors, there is a significant chance that his blood pressure would actually be higher and more hypertensive than it is

currently. His heart rate is 70 BPML, which is a normal heart rate (Capstone and Bananas), so it can be shown that the ACE inhibitor is probably helping his condition. Norms Cited Capstone, Lee-Ellen, and Jacqueline Bananas. Pathologically.

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