What You Need to Know About Cardiovascular Diabetes Medications

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Cardiovascular Diabetes Medication

When you think of cardiovascular medications, what do you think of? Undoubtedly, you think of blood pressure medications.

When it comes to diabetes, there are a couple of cardiovascular diabetes medication options that your physician may add to your arsenal – they treat your diabetes, yes, but they also may help your heart.

Diabetes and Your Heart

According to Diabetes Self-Management, people with diabetes are prone to developing hypertension.

In fact, 20% to 60% of those with diabetes have hypertension – and people with hypertension have an increased risk for other diseases such as stroke, heart disease, peripheral vascular disease and other diabetic-related complications, such as diabetic retinopathy, diabetic nephropathy and diabetic neuropathy.

Cardiovascular Diabetes Medication Options

Popular cardiovascular diabetes medications during this time include SGLT-2 inhibitors and ACE Inhibitors. Keep on reading to learn more about these two types of cardiovascular diabetes medications.

SGLT-2 Inhibitors

Sodium-glucose co-transporter-2 inhibitors, more commonly known as SGLT-2 inhibitors, assist with glucose re-absorption in the kidney. To put it simply, they do this by excreting excess glucose in the urine, thereby reducing glucose levels.

These drugs were created to reduce glucose levels. During their rigorous testing, it was found that this drug class also had cardio-protective benefits.

The EMPA-REG OUTCOME trial studied empagliflozin. Its aim was to ensure that empagliflozin did not harm pose any cardiovascular risk. Instead, the trial found that those who took empagliflozin not only reduced their glucose levels, but they also had a 35% reduction in hospitalization from heart failure.

The medical community was excited but skeptical. However, these results were strengthened as yet another study, CANVAS Program, using canagliflozin, as well as CVD-Real Study, which used empagliflozin, canagliflozin and dapagliflozin, mirrored these results. Study investigators realized that the benefit was likely a class effect on the heart.

So why are SGLT-2 inhibitors reportedly cardio-protective?

According to Circulation, the exact effect is not completely understood. However, "SGLT2 inhibition promotes natriuresis and osmotic diuresis, leading to plasma volume contraction and reduced preload, and decreases in blood pressure, arterial stiffness, and afterload as well, thereby improving subendocardial blood flow in patients with HF".

To summarize, SGLT-2 inhibitors may act as a light diuretic, causing less pressure in the heart, thereby reducing blood pressure.

There has been recent news that has linked SGLT-2 inhibitors with a genital infection. In fact, the FDA has even provided a warning. This genital infection, called Fournier's gangrene, is a form of necrotizing fasciitis. It occurs when bacteria enter the body through a break in the skin. In the report, between March 2013 and May 2018, there were 12 cases of Fournier's gangrene and one death that were likely related to SGLT-2 inhibitors.

Does this mean that you should stop your SGLT-2 inhibitor? This is something that you should discuss with your physician. You should certainly be aware of this complication, but you should also discuss the pros and cons of this medication and determine with your provider it is safe for you to continue it.

Being aware of the symptoms is important, according to the FDA: "tenderness, redness or swelling of the genitals, or the area from the genitals back to the rectum and have a fever above 100.4 F or a general feeling of being unwell".

ACE Inhibitors

Angiotensin-converting enzyme (ACE) inhibitors are a specific type of blood pressure medication that are protective of the kidneys. While helping to control blood pressure, they prevent diabetic nephropathy (diabetic kidney disease).

The American Diabetes Association (ADA) recommends certain measures to reduce blood pressure (a goal of 130/80 mmHg) – exercise, weight loss and sodium restriction. When these measures are not enough, medication therapy is indicated – and an ACE inhibitor is the is generally prescribed.

Why not a beta blocker or a diuretic?

While a beta blocker or a diuretic may be equally as effective in reducing blood pressure, studies have indicated that ACE inhibitors slow the progression of diabetic nephropathy than any other blood pressure medication – a boon to people with diabetes because this means that these medications work in multiple different ways!

What if your physician prescribed an ACE inhibitor and you do not even have hypertension?

Well, current practice guidelines recommend that an ACE inhibitor may be recommended for those individuals "over 55 with or without high blood pressure but with another cardiovascular risk factor (such as a history of cardiovascular disease, abnormal blood lipid levels, microalbuminuria, or smoking)". If you fall into this category, this could be why your physician has recommended an ACE inhibitor for you.

Examples of ACE inhibitors include: enalapril (Vasotec), lisinopril (Prinivil, Zestril), fosinopril (Monopril), quinapril (Accupril) and benazepril (Lotensin).

The Bottom Line…

If it feels like your diabetes medication list is getting longer and longer… it may be. But it may be at the benefit of your heart – and your kidneys!