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Angiotensin Receptor Blockers

Steven G. Terra, PharmD



Angiotensin receptor blockers (also known as ARBs) are a class of medications that are widely used by patients with high blood pressure, kidney disease, and heart failure. This article provides information for patients who receive this type of medication. The Table lists the brand and chemical names for the angiotensin receptor blockers that are available in the United States.

How Do Angiotensin Receptor Blockers Work?

Angiotensin receptor blockers work by inhibiting the effects of a hormone called angiotensin 2, which produces a number of effects in the body: Constriction of blood vessels, increased salt and water retention, activation of the sympathetic nervous system, stimulation of blood vessel and heart fibrosis (stiffening), and promotion of heart cell growth. Together, these effects can increase blood pressure and in some situations be harmful to the heart and kidneys. For angiotensin 2 to produce its effects in the body, it must bind to a receptor in much the same way that a key must fit into a lock to open a door. Angiotensin receptor blockers prevent angiotensin 2 from binding to its receptor and thus reduce the effects of angiotensin 2.

Most of the angiotensin receptor blockers, except for Benicar (Sankyo Pharma, Inc), are also available in combination with an additional medication called hydrochlorothiazide (HCTZ), a diuretic that is very effective in lowering blood pressure. The blood pressure-lowering effects of angiotensin receptor blockers are made more effective by the addition of HCTZ. Therefore, your doctor may prescribe a combination product containing an angiotensin receptor blocker plus HCTZ if you require additional blood pressure lowering.

What Conditions Are Treated With an Angiotensin Receptor Blocker?

All angiotensin receptor blockers can be used to treat high blood pressure. In addition, both Cozaar (Merck) and Avapro (Bristol-Myers Squibb) are also used to prevent kidney damage in patients who have high blood pressure, and one angiotensin receptor blocker is used to treat patients who have heart failure but who cannot tolerate a related class of medications called angiotensin-converting enzyme (ACE) inhibitors. However, angiotensin receptor blockers can be used to treat other heart conditions, so speak with your doctor if you are not clear about

the reason that you are receiving this class of medication.

What Are the Common Side Effects of Angiotensin Receptor Blockers?

Any medication that lowers blood pressure can cause dizziness. Frequent dizziness or lightheadedness may be an indication that your blood pressure is too low. If this occurs, you should speak with your doctor. You may find that changing positions slowly (such as going from lying down to standing up) may minimize dizziness. In very rare cases, patients receiving this class of medication have developed swelling of the lips, tongue, or face. You should contact your physician immediately if you experience any facial swelling or trouble breathing. You should also notify your physician if you have experienced facial swelling or difficulty breathing with any other medications in the past.

In some susceptible individuals, angiotensin receptor blockers can cause increases in potassium and changes in kidney function. To monitor for these side effects, your doctor may do routine blood work. Many patients with high blood pressure are told to minimize their use of sodium. Some of these patients use salt substitutes instead. However, some of these salt

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List of Angiotensin Receptor Blockers Available in the United States

Trade Name (Manufacturer)	Chemical Name
Cozaar (Merck)	losartan
Hyzaar (Merck)	losartan/hydrochlorothiazide
Avapro (Bristol-Myers Squibb)	irbesartan
Avalide (Bristol-Myers Squibb)	irbesartan/hydrochlorothiazide
Diovan (Novartis)	valsartan
Diovan HCT (Novartis)	valsartan/hydrochlorothiazide
Atacand (AstraZeneca)	candesartan cilexetil
Atacand HCT (AstraZeneca)	candesartan cilexetil/hydrochlorothiazide
Teveten (Solvay Pharma Inc)	eprosartan
Teveten HCT (Solvay Pharma Inc)	eprosartan/hydrochlorothiazide
Micardis (Boehringer Ingelheim)	telmisartan
Micardis HCT (Boehringer Ingelheim)	telmisartan/hydrochlorothiazide
Benicar (Sankyo Pharma, Inc)	olmesartan

substitutes contain potassium (instead of sodium), which when taken with an angiotensin receptor blocker, may increase the amount of potassium in your blood. It is a good idea to talk with your doctor before using any of these salt substitutes, especially if you have kidney disease or heart failure.

You should not take angiotensin receptor blockers if you are pregnant or plan on becoming pregnant because this class of medication can cause harm to the unborn fetus.

Are There Any Medications That I Should Not Combine With My Angiotensin Receptor Blocker?

You should always inform your doctor and pharmacist of all the medications

you are taking. This includes prescription and over-the-counter medications, along with any vitamins and herbal products. If you are taking an angiotensin receptor blocker for either high blood pressure or heart failure, you should speak with your doctor before taking any decongestants. Decongestants, which are available in many over-the-counter cough and cold products, can increase blood pressure. The most widely used decongestant is pseudoephedrine. In addition, in some individuals, nonsteroidal antiinflammatory drugs such as ibuprofen, naproxen, and indomethacin may elevate blood pressure, thus blunting the blood pressure-lowering effect of angiotensin receptor blockers. Speak

with your doctor before taking these medications. One angiotensin receptor blocker, Micardis (Boehringer Ingelheim) may interact with the medication Lanoxin (GlaxoSmithKline; digoxin). Therefore, the level of digoxin in your blood should be monitored when you begin taking Micardis or have the dose increased or decreased. Because of this interaction, another angiotensin receptor blocker may be more appropriate if you are also receiving Lanoxin (digoxin).

Does It Matter if Take My Angiotensin Receptor Blocker With or Without Food?

Angiotensin receptor blockers can be taken with or without food. It is however, important that you take your medication at approximately the same time each day to maintain a consistent concentration of the medication in your body.

Additional Information

WebMD. Health guide A-Z: angiotensin II receptor blockers (ARBs). Available at: <http://my.webmd.com/content/healthwise/174/55175.htm?lastselectedguid={5FE84E90-BC77-4056-A91C-9531713CA348}>. Accessed May 8, 2003.

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