



## How I Treat Patients with Elevated Blood Pressure

Elevated blood pressure, or hypertension, is associated with serious health problems, such as strokes, heart attacks, and kidney failure. Most people believe the problem with hypertension is that the elevated pressure damages the arteries and the body's organs. Actually, it is more often the other way around. The rise in blood pressure is a response to a sick body—the blood pressure goes up as a natural and proper adaptation—as an attempt to compensate for a plugged up cardiovascular system. After years of consuming the rich Western diet, the blood vessels develop blockages referred to as atherosclerosis, the artery walls stiffen, and the blood itself becomes viscous. All this change creates a resistance to flow, resulting in a decrease in the ability to deliver nutrients to the tissues. The body responds, as it should, with a rise in blood pressure.

The correct action for the patient to take is to decrease the resistance to flow by eating a healthy diet and exercising. Most people who follow the McDougall diet find their blood pressure decreases within a few days. Based on several collections of results from my clinic, the average reduction of blood pressure is about 14/11 mmHg in seven days, and at the same time medications used for treating hypertension are usually stopped. My customary protocol is to stop all blood pressure-lowering medications the first day of the Program, except for beta-blockers, which I slowly discontinue by cutting the dosage in half every two to three days. Unfortunately, not every patient experiences the reduction in numbers they desire. Despite their best efforts some people may need medications.

These blood-pressure-lowering drugs function by poisoning the body in various ways. "Poison" is the correct word. In chemistry poison means to inhibit a substance or a reaction. Beta-blockers inhibit the action of adrenalin on the heart muscle, calcium channel blockers inhibit the contraction of the blood vessels, ACE inhibitors and angiotensin receptor blockers do just that (inhibit and block) the blood pressure regulating hormones produced by the adrenal glands, and diuretics poison the water and electrolyte conserving functions of the kidneys.

These five major classes of medications are discussed in more detail below.

### Take Measurements at Home for Months before Starting Drugs



Before starting medications in non-emergency situations, people with concerns about their blood pressure should first, buy a good quality blood pressure cuff (an oscillometric monitor for \$50 to \$100) and use it to monitor their blood pressure at home.<sup>1</sup> I suggest they then record the values several times a week and take these numbers to their private doctor for further discussion.

A sustained elevation of blood pressure to 160/100 mmHg or greater over months suggests the need for treatment with medication.<sup>2</sup> A word of caution: If you do start blood pressure-lowering medications, avoid overly aggressive treatment. In general, reducing blood pressure below 140/90 mmHg with

medication is not beneficial and actually will increase the risk of heart attacks, strokes, and death.<sup>3,4</sup> A recent review by the well-respected Cochrane Collaboration concluded with: "Treating patients to lower than standard BP targets,  $\leq 140$ -160/90-100 mmHg, does not reduce mortality or morbidity."<sup>5</sup>

### Chlorthalidone Is the Drug of Choice

Chlorthalidone is an oral diuretic (a water pill taken by mouth) with a prolonged action of 48 to 72 hours and low toxicity. Diuretics lower blood pressure by reducing fluid volume, which decreases the output of

the heart causing the blood pressure to fall. Doctors and patients often believe that all diuretics have similar benefits. This is not the case, and chlorthalidone is the preferred kind of diuretic for most patients.<sup>6,7</sup> In 1990, the Multiple Risk Factor Intervention Trial (MRFIT) reported a reduction in nonfatal cardiovascular events when the diuretic treatment was changed to replace hydrochlorothiazide (HCTZ) with chlorthalidone in men at high risk for coronary heart disease.<sup>8</sup> Chlorthalidone is also more effective at lowering systolic blood pressure (the top number) than HCTZ. The starting dosage used was 12.5 to 25 mg daily; but the dosage can be increased to 50 to 100 mg daily. All patients receiving chlorthalidone should be checked after one month for evidence of fluid or electrolyte imbalance: namely, low sodium, low chloride, and low potassium (by blood tests). Other periodic laboratory tests should be performed to look for adverse effects from this potent diuretic. For example, blood levels of cholesterol, triglycerides and uric acid can be increased by this medication. Chlorthalidone is inexpensive; a 30-day supply is \$4 and a 90-day supply is \$10 for 25 or 50 mg tablets at Walmart.

### **Why I No Longer Routinely Prescribe Beta-blockers**

For many years beta-blockers were considered one of the first line therapies for the treatment of hypertension. Current evidence suggests that beta-blockers (like Atenolol) should not be prescribed unless there is some other reason for their use (like atrial fibrillation, heart failure, or myocardial infarction).<sup>9</sup> A recent Cochrane Collaboration concluded: "The available evidence does not support the use of beta-blockers as first-line drugs in the treatment of hypertension. This conclusion is based on the relatively weak effect of beta-blockers to reduce stroke and the absence of an effect on coronary heart disease when compared to placebo or no treatment."<sup>10</sup>

Examples of commonly prescribed beta-blockers are: acebutolol (Sectral), atenolol (Tenormin), betaxolol (Kerlone), betaxolol (Betoptic, Betoptic S), bisoprolol fumarate (Zebeta), carteolol (Cartrol), carvedilol (Coreg), esmolol (Brevibloc), labetalol (Trandate, Normodyne), metoprolol (Lopressor, Toprol XL), nadolol (Corgard), nebivolol (Bystolic), penbutolol (Levatol), pindolol (Visken), propranolol (Inderal, InnoPran), sotalol (Betapace), and timolol (Blocadren).

### **I Never Prescribe Calcium Channel Blockers**

Calcium channel blockers are also called "calcium antagonists" and "calcium blockers." They may decrease the heart's pumping strength and relax the blood vessels, and are commonly used to treat high blood pressure, angina (chest pain), and some arrhythmias (abnormal heart rhythms). However, they increase the risk of dying from heart disease and cancer (especially breast cancer), and the risk of developing open-angle glaucoma, suicide, and bleeding.<sup>11-17</sup>

Examples of commonly prescribed calcium channel blockers are: amlodipine (Norvasc), clevidipine (Cleviprex), diltiazem (Cardizem), felodipine (Plendil), isradipine (Dynacirc), nifedipine (Adalat, Procardia), nicardipine (Cardene), nimodipine (Nimotop), nisoldipine (Sular), and verapamil (Calan, Isoptin).

### **I Never Prescribe Angiotensin Receptor Blockers (ARBs)**

Angiotensin is a hormone found in the body that causes blood vessels to constrict, resulting in higher blood pressure and extra work on the heart. Angiotensin receptor blockers (ARBs), also called angiotensin II receptor antagonists, prevent angiotensin from binding to its receptor in the walls of the blood vessels. This results in a lower blood pressure. These medications are often prescribed because they are less likely to cause a chronic cough than medications called angiotensin converting enzyme inhibitors (ACE Inhibitors), which also work on the "angiotensin system" to control high blood pressure.

Convincing evidence shows that angiotensin receptor blockers (unlike ACE inhibitors) increase the rates of myocardial infarction (heart attacks) despite their beneficial effects on reducing blood pressure.<sup>18</sup>

Examples of commonly prescribed angiotensin receptor blockers are: candesartan (Atacand), eprosartan (Tevetan), irbesartan (Avapro), telmisartan (Mycardis), valsartan (Diovan), and losartan (Cozaar).

## ACE Inhibitors Are Less Beneficial and More Dangerous Than Advertised

Angiotensin converting enzyme inhibitors (ACE Inhibitors) have been used for decades to treat hypertension and heart disease. Their main selling point is that they are said to be “renal-protective,” meaning they help protect the kidneys from failing, especially for people with already existing kidney disease and/or diabetes. However, their value for protecting the kidneys has been largely refuted.<sup>20-23</sup> The ALL-HAT data (the largest antihypertensive trial and the second largest lipid-lowering trial) showed that among those patients with diabetes, more patients in the ACE inhibitor (lisinopril) group progressed to end stage kidney failure compared with the chlorthalidone group.<sup>23</sup> Acute and chronic kidney failure from the use of these drugs is also reported (and is much more common than most doctors realize).<sup>19,23</sup>

Examples of commonly prescribed ACE inhibitors are: benazepril (Lotensin), captopril (Capoten), enalapril (Vasotec), fosinopril (Monopril), lisinopril (Prinivil, Zestril), moexipril (Univasc), perindopril (Aceon), quinapril (Accupril), ramipril (Altace), and trandolapril (Mavik).

## Medication Benefits Are Oversold

Not surprisingly, pharmaceutical companies make great efforts to advertise the benefits of their products and to cover up the harms. To be more blunt, these companies lie to doctors, patients, medical journals, and the media.<sup>24</sup> One common method used is to report unimportant benefits from use of their products, such as lowering the blood pressure, rather than reporting very important end points like staying alive and reducing the risk of a stroke or heart attack.

They also report “relative benefits” rather than “absolute benefits.” For example, the risk of stroke over five years is fifteen cases per thousand for untreated patients and nine cases for those actively treated with medications.<sup>25</sup> The relative risk reduction is 15 minus 9 divided by 15 or a 40% reduction. Forty percent sounds like a great benefit. However, figuring more honestly with reports of the absolute benefit are far less impressive. The absolute reduction in stroke from treatment with medication is 15 minus 9 strokes, which equals only 6 strokes prevented after treating a thousand people with medication for five years. In other words, annually, one stroke is prevented by treating one thousand patients. That’s a lot of money spent and side effects suffered for a very low absolute benefit. (Would you trade sexual dysfunction for this one in a thousand possible benefit?)

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