Nutrition: Hypertension - Part 1

Hey, everyone, in this section we're going to talk about nutritional suggestions for hypertension, high blood pressure. High blood pressure, or hypertension, is a serious and very common condition. It accounts for about 14 percent of all deaths yearly. It's the single greatest risk factor for cardiovascular disease on its own. As you know, cardiovascular disease is the number one cause of death. A third of American adults have hypertension, and a staggering nine out of 10 Americans develop hypertension by the age of 65. This is particularly remarkable when you consider that only 3 percent of contemporary hunter-gatherer populations that were studied had hypertension. So this conclusively tells us that hypertension is a disease of poor diet and lifestyle choices.

Let's talk about how hypertension is diagnosed. Normal blood pressure is 120 over 80. Prehypertension is between 120 over 80 to 139 over 89. Stage one hypertension is 140 over 90 to 159 over 99. Stage two hypertension is anything over 160 systolic or 100 diastolic. There is no evidence to support pharmaceutical treatment in the prehypertension stage, that's very important to realize. Diet, lifestyle and behavior changes are going to be the most effective interventions for hypertension at that stage.

Okay, so major diet and lifestyle changes can significantly improve blood pressure, and these would include reducing excessive intake of refined carbohydrates and sugar, because high blood sugar and insulin resistance contribute to the development of hypertension. High blood sugar, insulin, and triglycerides are aspects of the metabolic syndrome, and of course hypertension is part of that as well, so we frequently see these together. These are often, not always, but often a direct result of the Standard American Diet and the typical modern lifestyle. So sugar-sweetened beverages and even diet beverages can directly influence blood pressure, and any kind of excess sugar should be removed right off the bat. If a patient is still consuming those foods, that's the lowest-hanging fruit and the first thing you should focus on.

But beyond just removing excess sugar and refined carbs, which are perhaps the worst offenders when it comes to hypertension, it's pretty clear that a Paleo template type of diet is an excellent choice in terms of normalizing blood pressure or preventing high blood pressure in the first place. As I said a few slides back, only about 3 percent of contemporary hunter-gatherers that have been studied have high blood pressure, so this suggests that our traditional diet and traditional activity levels are very good preventative measures for hypertension, and there have been several studies, actually, that show that a Paleolithic diet can restore normal blood pressure in people who previously had high blood pressure. So as is often the case, the Paleo template is a fantastic starting place for reducing blood pressure, and in terms of carbohydrate intake, it should match activity levels, as we've discussed before. So if someone is primarily sedentary and they've got really abnormal blood sugar levels and insulin resistance, a lower-carb approach might be best to start with. If someone is a little bit more active and they don't

necessarily have significant blood sugar dysregulation, then a higher carbohydrate intake would be appropriate. Of course, we're talking about Paleo-friendly real-food carbohydrates like the ones that are pictured on this slide; starchy tubers, sweet potatoes, fruit, even white potatoes, they can be excellent because hypertension can be contributed to by a potassium deficiency. A lot of Americans don't eat enough potassium, and potatoes are a very rich source of potassium, as are plantains, so these starchy foods, Paleo-friendly starchy foods, can actually be a big ally in terms of dealing with high blood pressure, and even patients with blood sugar issues can often tolerate these insignificant amounts. It's the acellular refined processed carbohydrates that cause the problems, not typically these Paleo-friendly carbohydrates.

You also want to pay attention to intake of minerals: potassium, magnesium, and calcium are essential for normal blood pressure, and they're more important than sodium intake. So eating a high-potassium diet is actually probably more effective and a better choice for most people than a very-low-sodium diet. It's really the ratio between potassium and sodium that makes the biggest difference. We know that our Paleolithic ancestors ate an enormous amount of potassium, something like 10,000 milligrams per day on average. The US intake is far, far … and everywhere in the industrialized world ... is far, far lower than that. We also have research that suggests that restricting salt to less than 2,300 milligrams per day, as the American Heart Association has long advised, may actually be harmful and increase the risk of heart disease, ironically, paradoxically. I've written a lot about this; I have a series on salt called "Shaking Up the Salt Myth" on my blog. It's a special report with a lot of great information. We'll provide a link to it in the resources section. I really encourage you to read that if you haven't already. I believe hypertension patients should aim for something around 4,500 to 5,000 milligrams of potassium per day from whole-food sources at a minimum.

Many of the potassium-rich foods are also carbohydrate-dense, like white potatoes, sweet potatoes, plantains, and bananas. I mentioned that a couple slides back—one large baked potato, for example, has almost 1,000 milligrams of potassium—so it's a fantastic source of potassium. And this is one of the many reasons why I would urge you to rethink the white potato restriction with Paleo diets. I don't think there's really any evidence to support restricting intake of white potatoes, unless perhaps someone has an autoimmune disease and they're sensitive to nightshades, but even then there isn't much evidence to support that; it's mostly just empirical. So if the patient tolerates white potatoes and they feel good when they eat them, they don't have any symptoms, and they don't adversely affect their blood sugar, then they can be a really healthy part of the diet. The other thing with Paleo diets is it can be a challenge, to some extent, to get enough calcium, depending upon how much dark, leafy greens and other more calcium-rich foods within a Paleo diet that people are eating. Strict Paleo, of course, removes dairy products, which are the number-one source of calcium in the typical American diet, and I have written extensively about dairy and why I think full-fat and fermented dairy in particular, that's organic and from pasture-raised cows, and even raw milk can be a really nutrient-dense beneficial food when it's well tolerated, and it's a fantastic source of highly bioavailable calcium, among many other nutrients. So if patients tolerate full-fat dairy, having some cream or butter or

ghee or kefir or yogurt that has been made from full-fat, organic dairy can be a great addition; it can be really helpful with maintaining healthy blood pressure. There are also many studies which I've written about on my blog, and we'll provide some links as well, that show that full-fat dairy is associated with numerous metabolic and cardiovascular benefits, whereas low-fat dairy is not. So this is really interesting because dairy often gets a bad rap in the nutrition community, particularly the kind of alternative nutrition community, but when you look at the research, it shows unequivocally that full-fat dairy is inversely associated with obesity and metabolic disease and cardiovascular disease, so it benefits people with those conditions and it's preventative against those conditions, so there's really not a strong argument against full-fat dairy consumption, if the individual patient tolerates it. If dairy is not tolerated, I'd recommend bone-in fish, so, for example, canned salmon from Vital Choice that still has the bones in it. It's an excellent source of calcium. Dark leafy greens are a great source of calcium too, bone broth, and nuts and seeds, and I would suggest aiming for a minimum of 600 milligrams of calcium daily.

Grass-fed dairy, as we've been talking about, isn't just a great source of calcium; it's also a great source of vitamin K2. So, particularly, hard cheeses are high in K2, butter oil like ghee would be high in K2, especially if the cows that produced it were grazing on rapidly growing green grass in the spring. So, K2 may be one of the most important nutrients in preventing cardiovascular disease, and it may be protective against hypertension via effects on vascular stiffness and arterial calcification. K2 is required to move calcium into the bones and the teeth where it belongs, to distribute calcium into the hard tissues where it should be, and to keep it out of the soft tissues like the arteries, and we know that stiff arteries and calcified arteries are more likely to lead to hypertension and to heart disease, so K2 is a crucial nutrient to prevent both of those conditions. Foods that are high in K2, I just mentioned them, I'll mention them again: ghee butter, hard cheeses, but then there's also goose liver or poultry liver, admittedly a less commonly consumed source in the industrialized diet, fermented vegetables because K2 is a byproduct of bacterial fermentation, so that's another reason to have fermented dairy like kefir, yogurt, but also things like sauerkraut, beet kvass and kimchi, and then natto, which is a fermented soybean product from Japan. It's really quite an acquired taste to put it lightly; some people like it, other people absolutely can't stand it, I would unfortunately put myself in the latter category, and I say it's unfortunate because natto is ounce for ounce the richest source of K2 in the diet. Several years ago, I believed that the MK4 form of K2, which is found in animal products, was probably superior to the MK7 form, which is found in plant products and fermented foods, but I don't think the research really supports that. After looking into it further, I would say that the MK4 and MK7 forms are probably equally beneficial, and you don't need to worry too much about which form you supplement with, if you decide to supplement.