

>> Okay, continuing with high blood pressure, there is – your book goes through some ways that you can also lose – or lower the blood pressure, besides changing your diet, that you see here. The Dash Diet can lower your blood pressure quite a bit. Losing weight, if you're overweight also, it's actually the number one way you can lower your blood pressure. Exercising will lower it, limiting your sodium, we'll go through that, and also alcohol. Alcohol does tend to raise blood pressure. Another problem with too much sodium, besides blood pressure problems, is when you take in more than 2,000 milligrams a day, which most Americans do, it increases your calcium loss. So, over time, throughout your lifetime, by the time you're 50 or 60 or so, you're – with all that calcium loss every day, you can have probably osteoporosis, so this is a great way to prevent osteoporosis is watching how much sodium you take in. The upper limit, which means you really shouldn't go beyond that, is 2,300 milligrams a day. And the research shows 95% of Americans go over that upper limit, probably a reason why the number one cause of death in the United States is heart disease. Again, where do we find the sodium? A lot of it is in the processed foods that we eat. Keep in mind that 2,000 milligrams is about a teaspoon. So, if on your Nutri calc, it shows 4,000 milligrams that you took in the average a day, that's about 2 teaspoons of salt, which seems like a lot. Like you would not take two 2 of salt and drink it, right – or eat it. Soup, soup is a big – canned soup is a big source of sodium. Cheese has quite a bit. But like I said, the fast foods and TV dinners have a lot, you can see here. Look at this, two slices of pepperoni pizza have over 2,000 milligrams of sodium. You know, ham, any of the processed meats are preserved, got a lot sodium, you can see that. I'll let you go through the list. Bacon, you know, like I said, the processed meats, bacon, ham, sausage, frozen dinners, the can – canned foods, fast foods, salad dressing. I don't know if you guys are aware of sea salt and that white sea salt, the pink Himalayan sea salt, like you see here. All salt comes from the sea and now food manufacturers are starting to realize that people are onto this sea salt, that it's a much healthier version of getting salt, and so now they're calling it – everything sea salt, even though it's white when it's – when you see white salt, it's been bleached, and they've taken everything out – all the minerals, except sodium and chloride and sometimes iodide, if it's an iodine salt. This sea salt has 72 trace minerals, this is how it originally came from the sea, in rock formation, and it's ground down. You can get it kind of like this in pellets or you can buy it like this where it's really fine like you would get in the store, the regular white salt. This have about 72 minerals, it's unrefined salt. It has been shown to not increase your blood pressure because it has other minerals besides the sodium and chloride. It's got other minerals that help lower blood pressure. So, this, you don't have to really limit yourself on like you do with the white salt. Like I said, beware of white sea salt, because all salt comes from the sea, it shouldn't be white. It should be pink, or they also have gray Celtic sea salt. You can get this, Trader Joe sells it, all the health food stores sell it. Now let's talk about potassium because potassium helps lower blood pressure and there is a test question on that. Where sodium raises it, potassium lowers it and if you can see here, we need about 4,700 milligrams a day, so about three

times as much potassium as the sodium. This is a question on your Nutri calc assignment, there is a question regarding your potassium sodium ratio. And basically, it should be a three-to-one ratio, meaning you should get about three times as much potassium relative to your sodium intake. The ratio is on the calorie and fat graph and usually it will say let's say .2 to 1, that means you're getting more sodium than potassium and the assignment asks, you know, why is that bad because you're at risk for having high blood pressure. If – again, it should be three to one, three times as much potassium relative to disodium. So, again, that ratio is a 10-point question on the Nutri calc and have any other questions with that, please email me. The potassium helps lower blood pressure and the problem with Americans, we get way more sodium, not enough potassium, and that's a big cause of blood pressure problems. Potassium is not just in bananas like everybody thinks. There's a lot of potassium in avocados, in apricots, in squash, basically all fruits and vegetables. We see a deficiency in alcoholics. If you're taking the diuretic, you're going to urinate it out. If you're on a special diet where you're not eating a lot of fruits and vegetables and if you've been sweating a lot, you do sweat out quite a bit of potassium. There's your sources. Again, here is just a potato, load– loaded with potassium, half of it is in the skin. Spinach has quite a bit. Chloride, don't worry about this one. Most people get enough, it's part of salt, of course, but it's part of our stomach acid, hydrochloric acid. We do need some and we get plenty through our foods. Calcium, most of the calcium in our body is in our bones and teeth, of course, you probably know that. Like I mentioned earlier, we don't absorb every bit of what we take in. For one thing, we need enough acid in our stomach to absorb it. All minerals need enough acid and remember from chapter 3 that as we get older, after the age of about 30, each subsequent year, we secrete less and less hydrochloric acid. So, as you get older, you supreme left acid, which means your absorption of minerals goes down, okay, including calcium. Also, if you don't have enough vitamin D, you don't – you won't absorb enough. And typically, we absorb only about 25% of what we're taking in and young people absorb it much more – better than older people because they have more of the acid in their stomach. If you're taking an antacid, you also are not going to be absorbing much. What inhibits absorption? Once again, the fiber. Now please know this for the quiz but also your health, too much phosphorus. Where do we get too much phosphorus? Well, soda has a lot of phosphorus as phosphoric acid and too much phosphorus inhibits absorption of calcium. So, drinking a lot of soda, you're going to lose your calcium, and again, over the years, that can cause bone loss or osteoporosis. There's some things in tea that inhibits absorption a little bit, vitamin D deficiency, like I mentioned, and as you get older, less acid means less absorption. And your blood levels are maintained at the price of the bones, meaning that if your blood levels are down, then – because you do need some calcium in your blood, then it will pull it from the bones and make your bones weaker. You want to make sure you're getting enough. Now we know that the main function is for our bones and teeth to be strong but we also need calcium to help clot your blood. We need it for your muscles to contract and for nerves to transmit impulses, so there's a lot of other

functions for all these minerals, more than one function. Research has shown that it can reduce your risk of colon cancer, having enough calcium. It also can reduce your risk of some types of kidney stones. Now other types, too much calcium can increase your risk, so it just depends. Now – and here’s – speaking of kidney stones, if you have too much calcium in your diet but you’re not getting enough magnesium, this will increase your risk of kidney stones. And a lot of people that get kidney stones, more than once, it’s really because you’re deficient – well [inaudible] the research, most of it is because you’re deficient in magnesium. Most Americans are not getting of magnesium through the foods and so taking it as a supplement might be needed in the case of someone who is having a lot of kidney stones. But it’s a good mineral to take anyway preventively and we will go through that mineral. Again, too much calcium and not enough vitamin K can increase calcification in your arteries, meaning you can get calcified arteries, which is definitely not good. Because when you take calcium, you want it out of your blood and put it in the bones, and vitamin K, as we went through the last chapter, is what takes the calcium out of the blood and puts it in your bones. If you are deficient in vitamin K, like most Americans, then the calcium tends to stay in the blood and can calcify your arteries. So, you want to make sure, if you’re taking a calcium supplement, to make – to be sure you’re taking vitamin K. All your sources, I’ll let you go through that. And you usually I don’t test on how much you need but this one’s a little bit more important. We need about 1,000 to 1200 milligrams a day. That includes your food plus supplements, so most of us don’t get enough from food alone. But let’s say you were taking a supplement and it says to take four a day. Well, four a day gives you 1,000 milligrams, you don’t need to take four a day because you can assume you getting some in your food. There’s two forms of calcium, this is just FYI, calcium carbonate and calcium citrate and you’ll see it on labels. Caltrate is calcium carbonate, for instance, citracal is citrate. The carbonate is cheaper, but it’s not very well absorbed, whereas the citrate form is more absorbable because it’s a little bit more acidic in nature. So, this one will cost more but you’ll absorb a lot more. You don’t want to overdo it because, again, it can increase your tendency to make some kidney stones, so no more than 2,500 milligrams a day, and that’s a lot. You don’t need that much. Phosphorus, we do need some phosphorus, you know, for our enzymes and cell membranes and our bones. Again, the problem is some of us are getting too much. Soda has quite a bit and again, this is the test question. But too much phosphorus intake from soda and meat, and with not enough calcium, that will lead to bone loss. And that is another question on your Nutri calc assignment. It should be the ratio of phosphorus to calcium should be about 1 to 1. So, if your ratio is showing that you have more phosphorus to calcium, then you’re at risk for bone loss, okay? So, that’s how you answer that question. Magnesium is a really important mineral. Most Americans, the research shows, are pretty deficient. We need it for our nerves to function and for heart, your heart to function properly. It helps – it’s a natural – natural way to keep your blood pressure in normal range. Because it relaxes the muscles and your blood vessels, it helps prevent diabetes, which I’ll show you about, and also lowers your risk of heart

disease. Magnesium is so important. Why? Because over 300 enzymes in your body need it to function. So, if you're deficient, like most Americans, over 300 enzymes in your body are not functioning up to their full ability and your body is not going to function well. When you're young, you get away with it, and this is why some people start falling apart as they get older. They've been missing all these nutrients, these vitamins and minerals, and enzymes are not working well, and you start falling apart. Insulin, insulin needs magnesium to function properly. This is another major problem is how many people are type 2 diabetic and they're low in magnesium, of course, mainstream doctors don't work with – they're not educated on vitamins minerals. But if you went to a nutritionist or any holistic doctor, they would definitely talk to you about needing magnesium, but insulin can't function well without magnesium, so that could be one reason why you may be diabetic type 2. There's a few other minerals that are also needed for insulin to function well, we'll go over that. Most American, like I said, are not getting enough magnesium. And if you're not absorbing things well, and you have gastrointestinal problems, you've had bypass surgery, you're diabetic, you're older, because remember, as you get older, you absorb less, so if you've had bypass surgery, you definitely absorb less. And if you're deficient, it can cause an irregular heartbeat, that is a test question, because that's pretty important. If you end up in the hospital with it, an irregular heartbeat, they will give you a – an IV drip containing magnesium. So, why wait for that, you know? Make sure you have it on a daily basis by taking a multivitamin mineral supplement. It can cause muscle weakness muscle, muscle pain. As a chiropractor, I used to recommend people take some extra magnesium for muscle pain or cramping that they may have. Again, a deficiency can increase your risk for kidney stones, seizures, again, kidney stones, too much calcium, not enough magnesium. An optimal ratio would be calcium to magnesium, meaning two to one. I've even seen one to one, but basically, we need more magnesium than what we're getting. Here's your sources, you can look through. Dark chocolate has quite a bit, but it's nuts, and seeds, and beans, avocados have quite a bit. But you might need to take an extra supplement. And again, we see deficiency if you're taking a diuretic, if you're sweating a lot, if you've been vomiting, or have diarrhea, and an alcoholic.