

>> Rona Brynin: Okay, vitamin C is really important. I think we take this vitamin for granted but, it helps you make a protein in your body called collagen. Some of you may have heard of it. Collagen is throughout our bodies, found in all of our connective tissue, our skin, our bones, teeth, tendons, blood vessels. It helps— so, you know, you don't have enough vitamin C, your collagen may not be able, be as strong as it can be or as abundant. Collagen helps prevent wrinkles. Nowadays, in Hollywood, people are injecting collagen. I'll show you a picture of that in a minute. Vitamin C helps you heal your wounds. So, if you have cuts, scrapes, broken bones, any kind of surgery, increasing your vitamin C will help heal. It's also a very potent antioxidant, which means it helps prevent chronic diseases. It's very important. So here we have people injecting collagen in lips to plump them up. Okay? If you take too much vitamin C, some people over do it when they're sick. It can cause diarrhea. But this is not stated right. It's not synthesized in the body from glucose. If you have a lot of sugar, if you eat too much sugar, it interferes with your vitamin C uptake. So, and that's one way sugar does decrease your immune system strength. Because it's such a potent antioxidant, and it does help prevent many cancers. It helps prevent cataracts, which we talked about earlier; it's an antioxidant. It does help you absorb iron; that is a test question. If you're anemic and you're taking iron, taking it with vitamin C will help you absorb new iron. And again, it's really good for your immune system. A lot of people just start taking it when they're sick, but you can take it regularly; it'll help, hopefully, strengthen your immune system so you don't get colds and flues. Here's your sources. It's basically— everyone always thinks oranges, but it's in all fruits and vegetables. And when you cook the vegetables and fruit, you lose most of it. So canned, well particularly canned fruit people eat is again, pretty useless. If you smoke, because of the added stress on your tissues and lungs, you need extra vitamin C. We see a lot of deficiency in alcoholics, again, because of their poor diet and they urinate out a bunch of other things. And sometimes older people are not eating enough fruits and vegetables. Choline, don't worry about this. I kind of added this in just— it was in your book. Kind of interesting. Choline is part of a brain chemical called acetylcholine, which you need for your memory and to learn; I kind of put that in for students that are trying to learn and memorize things. You can get it from food, it's in peanuts, lecithin, liver, a little bit in milk. You can also buy supplements. Lastly, you know, what do you think? Do you— after hearing all this, do you think you need to take a vitamin/mineral supplement? And I'd like you to take a look at your nature calc assignment, once you finish that, and see, did you even get the limited, the very minimal amounts set by the RDA? It lists out all your vitamins and minerals and you should get at least 100% of every single one of them. That means, remember, the RDAs are set for minimal levels, not for optimal health. Okay? So, if you're not getting 100% at least the minimal levels, I say definitely take a multivitamin/mineral supplement. Keep in mind they're not regulated by the FDA, so when you buy a supplement, you get what you pay for. You know, the quality of a vitamins in a brand from Target or Wal-Mart is going to be different from a high quality supplement you might get at a health food store. You know, definitely get a

capsule, not a tablet. Tablets don't absorb very well. Many of them you end up pooping out because you don't break them down and absorb them. So definitely get a capsule. So, you know, I recommend going to a health food store and getting a good brand, but you know, spending a couple extra bucks on a good quality one, you know, you spend five bucks on a poor quality that does you no good, it's you know, doesn't make much sense. If you'd like me to look at your vitamins, you can come by my office during my office hours and I'd be more than happy to look and see and show you how to tell if you're taking a quality vitamin. Most nutritionists and medical scientists are now recommending that everybody at least take a multivitamin/mineral supplement. And the Journal of the American Medical Association, that's right here, has also posted, or published articles, over the last number of years, how supplements help decrease your risk of chronic diseases. Don't think of a vitamin as it being, replacing foods. I've had people tell me, "Oh, I don't eat well, but I take a multivitamin". It's not the same, okay? You can't make up for poor diet by taking a multivitamin. Keep in mind that some vitamins interfere with certain medications. So you always want to check with someone like a nutritionist to see if that's the case. Like I mentioned earlier, taking vitamin E would interfere with taking an anticoagulant. And certain disease states, you don't want to take certain vitamins. So you always want to check with someone who's knowledgeable. Here's a summary from your book of all the different body functions that require all these different vitamins. So you can see, if you're deficient, you know, most of us can't tell, "Oh, I can tell my body's breaking down; I don't have enough B3." You know, but more than likely, you know, if you're not feeling well, you don't have the energy, you know, take a multivitamin/mineral supplement. It's good insurance. Not just for now, but for later in life so that you don't break down quite as quickly, as if you were deficient. Sales of supplements has really grown over the years. More and more people are aware that vitamin supplements are beneficial for their health. So, you know, I encourage you to Google and get more information on them. USP 96 pharmacopeia; sometimes you might see this on a bottle of vitamins. It just shows that the company has paid extra to have this independent company test the supplement to be sure, and verify, that it has what it says it has. There's companies out there, remember it's not, they're not regulated. You know, someone can say 500 milligrams of vitamin C and when it's tested, maybe it only has 400 milligrams. Or maybe it doesn't even dissolve in the intestine, intestinal tract. So, seeing USP is a good indication that it's a good brand. And keep in mind too, look at the ingredients, just like you would look at the ingredients in food. Here's an example of vitamin D and calcium. Which, by the way, 200 international units is very little. But in any case, and I think I mentioned this a couple chapters ago, the RDA for vitamin D is set so low; I think it's set at, I want to say, 400 international units. Right, that makes sense because this is 200 which is 50%. 400 international units is not enough to get your blood levels up. If you recall earlier, I said you need to get your blood level up to 50 to 70. You will never get it up there by taking 400 international units. But 400 international units will help prevent rickets and remember, the RDAs were set for minimal levels, to prevent these

deficiency syndromes, and they're not for optimal health. So if you're trying to prevent colds and flues and strengthen your immune system and help prevent cancer and heart disease and all these other diseases that have been shown to be helped by taking vitamin D, helped prevent them, you need to take several thousand international units of vitamin D. But back to the ingredient list. So it's calcium, but is it good calcium? Well, it's calcium carbonate, which is not a very good absorbable form of calcium. We'll talk about that in the next chapter, but calcium citrate is much more absorbable, but carbonate is cheaper. And that's why they tend to use it. This is a tablet, you see here. Remember I said try to stay away from tablets because they add a bunch of junk. Case in point, they added maltodextrin, which is a sugar; starch; they added hydroxypropyl methylcellulose. What? Why do we need this chemical in our vitamin that we're taking every day? Or mineral? Hydroxypropyl methylcellulose. It has talc, cellulose, croscarmellose, sodium, hydroxypropyl cellulose, titanium dioxide, these are chemical preservatives. Silicon dioxide, magnesium stearate, polysorbate 80, this is the vitamin D. Polyethylene glycol 3350, they put that in radiator fluids to preserve it. Sodium citrate and lake 6 which is [inaudible]. This is horrible. This is a tablet, made by, distributed by Nutra-Vite. It doesn't say who the manufacturer is. And this is a typical vitamin. Yes, it has the USP stamp, but it just means it has what it says it has and it dissolves, but you don't want all this junk. If you're just taking a good quality D and calcium, it should just list calcium and vitamin D. So please be sure—you don't to be taking all this extra stuff. Particularly on a daily basis. And look at your children's vitamins. Because they a lot of times contain sugar and a bunch of other junk too. So read the ingredients. Lastly, keep in mind this is kind of a summary from your book. Your childbearing years, remember to take 600 micrograms of folate; iron if you're in your menstrual years; iron, folate, calcium if you're pregnant or breastfeeding or just take a good prenatal vitamin. If you're on a diet, and you're not taking in enough calories, definitely be taking a multivitamin/mineral supplement. Or if you're on a typical student, junk diet, I would take a supplement. If you don't drink milk or you're limiting your sunlight or you're breastfeeding or you're elderly, definitely need vitamin D. Everybody needs vitamin D. Lactose intolerant, perhaps taking calcium. Over the age of 50, B-12 we talked about. Low fat diets, vitamin E. Smokers or people that drink a lot of alcohol, definitely need to take a supplement. And keep in mind that if you're a male, a grown male or post-menopausal women, you do not need to take iron in supplement form, and I'll talk about that in the next chapter, chapter 9. So that concludes chapter 8.