# Nutritional ABCs: Strategies for Optimizing Your Energy by Balancing Your Vitamin Intake – Food Sources

## Transcript

I've taken charts directly from WH Foods because they are very easy to understand. You are welcome to go there (http://www.whfoods.com/genpage.php?tname=nutrient&dbid=106) then when we click on the different foods, you can find out more about that particular food. So it's really helpful. This is Vitamin A, and these foods are actually ranked in terms of beta-carotene, not pre-formed Vitamin A.

Pre-formed Vitamin A is something that you are going to find in animal foods only. So you'll find it in cod-liver oil; you'll find it in butter; you'll find it in some meats. But the actual beta-carotene which gets converted to Vitamin A is found in these foods listed on the chart. But the thing about it is you need to make sure that when you are eating foods that have good source of beta-carotene that you have some fat with it in order to help the uptake.

So if you are having a salad, have a nut or seed dressing on it or have a little olive oil or coconut oil or flax oil, but always have a little bit of fat. People who go on these very, very low fat crazes are actually depriving themselves of some of the fat soluble nutrients. So it's very helpful when you are eating beta-carotene rich foods to give your body some fat to go along with it.

Sweet potatoes are at the very top. They also have the most calories on there so if you rank the foods as a source of beta-carotene percentage of the calories you'd actually see some of the ones further down to be much better in terms of how good they are. The nutrient density is pretty good; that's the way to tell. So the nutrient density on a sweet potato is 21.4 whereas on a carrot it's 40.7.

So sweet potato has almost twice the amount of Vitamin A as the carrots, but they also have almost four times the amount of calories. So sweet potatoes are not as nutrient dense as carrots. Now look at spinach. Spinach has almost as much of the beta-carotene as carrots, but they have less calories plus they have a whole lot of chlorophyll, same thing with kale.

So as you go down the chart you'll see a lot of the green leafy foods in addition to those bright orange vegetables like sweet potatoes, carrots, and bell peppers. Cantaloupe is even a good source of beta-carotene rich foods.

Now we are going to look at Vitamin B1. So Vitamin B1 is very high in your plant-based foods; peas, sunflower seeds, asparagus, spinach, Brussels sprouts, cabbage, eggplant, romaine, and mushrooms are good sources of Vitamin B1. Grains are also considered good sources, but notice they didn't make it there because of the nutrient density. Again, the grains that most people eat are refined so we are actually depriving people of the B1 and then requiring the B1 in order to provide the energy from there.

For example, it's kind of ironic, if you eat a food that has some kind of glucose in it, you require it to go through the Krebs cycle to process it. The Krebs cycle requires B vitamins. But if that food you just ate is pure sugar, and all the vitamins have been stripped, you still need the B vitamins to be able to process it. So you have to find a storage of B vitamins which doesn't last very long because they are water soluble. They have to have been consumed within hours of the time, or it's going to break down the critical body tissue, or you are just not going to have energy from your food. So it's kind of interesting. So that's B1 and again these are all from http://www.whfoods.com/genpage.php?tname=nutrient&dbid=100.

Then B2, spinach is on all these lists so far and sea vegetables. And asparagus is on this list and mushrooms. So there are certain foods that are really common in here for sources of B2. You can see so far the B vitamins are pretty darn easy to get from vegetables.

So if you are eating huge quantities of vegetables and you are juicing vegetables and you are doing smoothies with vegetables, you are going to get a lot of B vitamins. Now it's possible that you need more B vitamins than you get in foods because you have either a genetic SNP or you've got some specific stress on your system or other factors that are interrupting.

Vitamin B3, niacin, you'll see that some of the animal foods bumped at the top of the niacin list as excellent sources. But we still have mushrooms and asparagus and bell peppers and tomatoes on the list of good sources of the B3.

Pantothenic acid (http://www.whfoods.com/genpage.php?tname=nutrient&dbid=87), look at the serving size and look at the amounts there on the list. The top of the list is shiitake mushrooms that have 2.6mg of pantothenic acid, B5, per half cup. But remember the amount I told you was needed to therapeutically shift you when you are in adrenal fatigue. It was 500mg three times a day. The shiitake mushroom is the top food on this list; half a cup is 2.6.

What that means is that you've got to have 200 half-cup servings. So you need 100 cups of mushrooms to get that 500mg. So in that case if you are deficient because of long standing adrenal stress, it's a good idea to supplement because you are not going to be able to eat that much, shiitake mushrooms or sweet potatoes or anything of the like.

The daily requirement is actually quite low, it's only about 5 or 6mg but what you need to replenish a severe deficiency is a lot more and that happens sometimes like Vitamin C. It's considered the recommended daily allowance is like 60, I think they might have raised it to 100. But therapeutically if you want to wipe out a bad virus or help yourself deal with a cancer situation or immune system problem, we are talking in the neighborhood of 10, 20, 30 grams which is like thousands of times more. You see this a lot with vitamins; you don't see this a lot with minerals. With minerals, the margin is a little bit narrower.

Here is B6; we've got tuna topping the list, but then we've got our good friend spinach and cabbage and bokchoy, bell peppers, turnips, garlic, and cauliflower, and then we have turkey and beef further down.

So you can see that a really well-balanced diet, whether you are on a Paleo diet and you are eating a little bit of meat and turkey and that sort of stuff, or you are on a vegan diet and you are eating a lot of raw foods and juices and smoothies, you are going to get really good amounts of these.

Biotin, the top of the list is a food I don't necessarily recommend to people which is peanuts because peanuts are high in arachidonic acid which is an inflammatory Omega-6 fat. But the other things on the list can be pretty good. There're tomatoes and almonds and onions and carrots and lettuce and cauliflower and sweet potato and oats. I'm not a big fan of eggs because they tend to be highly allergenic especially if they are not organic. Animal fats tend to concentrate toxics.

Folate is abundant in green leaves, but it has to be uncooked. Whereas some of the other nutrients are not going to be as damaged by heat, folate is very sensitive to heat, So you need to have an abundance of the raw greens.

If you are in a situation where your gut is messed up, it's inflamed and you don't do well with raw greens, then green juices work really well or very lightly steamed greens. You may get your greens with green juices, or maybe some of the green powders as a temporary measure.

Lentils top the list of folate which is surprising. But we don't tend to eat lentils raw, so if you are going to do lentils, you might want to be doing them sprouted. And just because a food tops the list, doesn't mean you go out and eat a lot of it. Like lentils, if you have problems with gas and digestion, you may not well with lentils, or you may do well. You usually cook lentils and for folate it may destroy a fair amount of that.

B12, this is the only one we've seen so far that the only sources in food are animal-based. Vitamin B12 is actually produced by gut bacteria and the problem with a lot of folks not getting enough of it is that that the gut bacteria colonies are not the way they should be. I also think that we used to be much less germ phobic and we didn't scrub our vegetables before we ate them. You used to go out in the garden and you picked the leaves of the plant. You may get some insects on there, you are going to get some bacteria that can produce the B12 from the soil, and you can produce it.

What I recommend if you are vegan or vegetarian and you don't get animal sources of food that you make sure that you take a B12 supplement. In fact, most people require some sort of extra supplementation of B12 because most people tend to have destroyed their stomach acid and don't make enough of it. So many people don't make enough of B12 because of lifestyle, because of alcohol and smoking and pesticides and caffeine and stress that all get in there and destroy. B12 is a rare exception here in that it's found just in animal-based foods.

Vitamin C, these are all the foods that are high in Vitamin C. If you tend to be someone who has problems with blood sugar balance, then you are going to be careful about some of the high glycemic foods on this list like papaya and oranges and cantaloupe. Test your blood sugars and make sure, but you've got plenty of other choices with Vitamin C.

You can see that a single serving of the top foods all have more than what the recommended daily allowance is which is quite low. But you know that if you are eating fresh whole foods, and you are eating salads, and you are eating steamed veggies, and you are eating smoothies and soups and juices, if you added up your Vitamin C, you'd be well into at least 1000mg.

This is just to remind you of the health uses of Vitamin C: improving your immune system and combatting infection. Antihistamine is really important. I've put a lot of folks on a therapeutic dose of Vitamin C, and it helped them make through the allergy season without their over the counter meds.

Reducing inflammation, like joint inflammation or inflammation of autoimmunity, making adrenaline, increasing iron uptake, healing connective tissues as an antioxidant and in wound healing, for cardiovascular health, for cancer prevention and reversal, and it also helps transport fats in the cells to be used to make ATP. So Vitamin C is super important.

Vitamin D is another one where we are not supposed to get it from food. We are supposed to get it from the sun, right? Vitamin D isn't technically a vitamin; it's a pro-hormone. There's a pro-Vitamin D in our skin. The sunlight activates it. That goes through the bloodstream. It gets further activated in the kidneys and liver, and voila! We have active Vitamin D in our system.

You can get it in some food sources. The only vegetarian sources are shiitake mushrooms, but cod-liver oil is the highest food form of it. You've also got it in the fish: salmon, sardines, and tuna, and a little bit in egg. If you are vegetarian, you can get it from shiitake mushrooms, and I will say the best way to get your D is the natural way which is going out in the sun.

This slide just reviews: the sun goes in and hits the 7-dehydrocholesterol which is a Pre-D3, turns it into D3, goes into circulation and then goes to the liver and gets activated to 25-hydroxy-D which is usually measured in the blood and then goes to the intestine and the kidney, and it goes to 125 which is the active form. This is important for bones and for immune cells. It's been found to be protective and supportive in various kinds of cancer.

Vitamin E: remember the antioxidant, really important for cardiovascular health and for overall and integrity of skin and membranes. These are some of the sources. Sunflower seed is the highest source. A quarter cup of those has 82% of your IDA of that, pretty high density. As is our good friend spinach, Swiss chard, turnip greens, asparagus, and mustard greens. I don't want you to get into the habit of limiting your diet to just the foods that are the top of the list, but it's really interesting that we see the same players over and over and over again with the exception of B12 and D.

Vitamin K: again K is abundant in green, leafy vegetables. Look at the nutrient density. This is why it really requires caution when somebody is on an anticoagulant and eating kale and other green leafy vegetables because the docs then have to be really careful about their amounts. But my guess would be - instead of putting people on anticoagulants, they can probably go on green juices. Look at the amazing amount of K in there.

There are different Ks like D; there's K1 and K2, and K2 is animal source only. There are some folks who say you have to get the K2, and others believe that you don't need the K2. So when in doubt, get a little bit of K2. If you are vegan, and you don't want to eat an animal source of vitamin K2, the Vitamin Code has a vegan form. K2 is supposed to be the most important one for the bone integrity. And if you are taking D, and you don't have adequate intake of K, then you can run into trouble.