Micronutrients - Vitamins: Vitamin B Complex

Transcript

Hello and welcome to our micro-nutrients presentation on "The Vitamin B Complex". As you know, the complex consists of many vitamins. The complex itself is just the name for the whole group. I thought I'd do a presentation just to introduce you to the B complex, to all the B vitamins, with a little overview. Then we'll jump in and do all the individual ones. As usual, everything that I'm teaching you and, thus, everything that you're teaching your clients is in the spirit of education. There's no medical diagnosis and it's certainly not offering a cure for any diseases.

However, if you're under the care of a doctor and you want to apply the things that I'm teaching, are you on medication, just make sure that you check with that doctor before going ahead and doing anything that I'm educating you about. Let's just jump right in then and look at the B vitamins. I've created this chart for you, and you will also have this chart as a separate PDF document on the website. It's basically a list of all the B vitamins with a little, tiny summary of each. I've got some more charts to share with you in a bit.

Vitamin B1 is also called thiamine. One of the forms you may see it at, which has become very popular in supplements, is benfotiamine. It's a challenging word to say. I'm not sure if that's the correct pronunciation of it. I've heard a lot of different pronunciations from various people. It is basically a fat soluble form of vitamin B1. It's a very popular form and we'll talk more about it in the B1 presentation. In a nutshell, the actions that thiamine or vitamin B1 takes are related to creating energy in Krebs cycle, heart, muscle, and nerve function, so a little bit important would you say? Yes.

Vitamin B2 is also called riboflavin. The active forms that we see in a lot of the supplements that are of better quality is called riboflavin 5 phosphate or R5P sometimes, for short. It's involved with energy, red blood cells, and vision. B3 is niacin, also known as nicotinic acid. Niacin, there are all slightly different variations on niacin, B3. It's involved with energy, nerve function, circulation, and heart. We've seen, just in looking at the first three, that they're all related to energy and that's why the B vitamins tend to get the name, "Oh, they're the energy vitamins or they're the stress vitamins." Because they all help in the production of energy. If you were to go back to our module on energy production and look at the Krebs cycle, you'll see places where the various B vitamins are interjected there.

The next one is technically not one of the official B vitamins but sometimes these substances, choline, adenine, and carnitine are referred to in the literature as vitamin B4. They're loosely considered B vitamins. They're related to cell membrane integrity, memory, and neuromuscular function. If you see somebody say B4 you'll know what it means. It's very rarely listed that way but I thought I'd put it in there like that for completeness. B5 we talk a lot about when we talk about adrenal health, pantothenic acid. Pantothenic acid can convert to co-enzyme A which is involved in a lot of functions throughout the body. One most notably it's related to is the creation of cholesterol and a conversion from cholesterol to pregnenolone, which is why it's so important for the adrenals. It's also involved in skin health.

Vitamin B6 which is called pyridoxine. The active form is known as pyridoxal 5 phosphate. Sometimes that's called PLP. The phosphate form is the active form in the functions in the body. It's related to brain and nerve function, hormones, protein synthesis. When we look at the brain, we're going to see vitamin B6 is related to the creation of many of our neurotransmitters. Vitamin B7, usually it's more known as biotin. It's very well known for its role in hair. A lot of people who find that their hair is starting to lose its shine or if it's starting to fall out, oftentimes biotin can be very helpful. It's also involved in various metabolic functions.

Vitamin B8, again loosely considered to be vitamin but you'll hear about inositol quite a bit. Sometimes it's referred to as B8 so I thought I'd list it that way. “I could have had a B8.” No, that's a V8, sorry about that. Then we have B9, with most goes by its name, folate. A lot of people call it folic acid but in the more current literature we're referring to folic acid as the synthetic form of folate. Folate, being the more active form, methylfolate, is another form. That's the form that's most active in the methylation pathways obviously, and then folinic acid.

Then, vitamin B10. Again, another loosely called ... It's really a form of folate and it's sometimes known as para-aminobenzoic acid. That's really where you see it most, but it's also known as pteroylmonoglutamic acid or para-aminobenzoic acid. Form of folate and good for protection of the skin. Vitamin B11, again, it's loosely, it's not technically a vitamin but it's sometimes put in that category. That's salicylic acid. Then B12 is cobalamin which we all know as vitamin B12. Yay! Responsible for red blood cells, DNA repair, nervous system, and the like. It's really, really important that you know the main ones, and we've filled in the gaps so we have all the way to 12. We've got B4 that we don't usually call a vitamin. We've got B8 which we don't normally refer to, and B10 and 11.

The others are all very, very well known and we have a presentation on each and every one of those. I’ve given you this. This is a reference. We’re not going to give you all this today Because we're going to go through all this in individual form for when we go through each individual vitamin. This chart in its entirety is also in a document, a PFD document that's on the website. You can print it out and put it in your reference notebook which hopefully you all do and have a folder that you can just keep on your desk when you're working with people.

This gives you a shortcut summary of what each of these are and what their molecular structures look like. This is a continuation of this. This goes all the way to B12 and that doesn't include the sort of construed as vitamins pieces.

Then, I've got you a chart of the classic deficiency symptoms. I managed to fit it all on one chart. You may not be able to see it very well but you can, definitely when you print it out, you'll have it there. Again, for reference, if you want to look up, "What are those deficiency signs for B12 and B6 and all that?" You've got that chart. These are taken from Wikipedia. Then, here's the excesses, if there's too much. If you exceed the upper tolerable limit. If there is a tolerable upper limit, then what kind of symptoms might you see? Most of the B vitamins do not have a toxicity, except if you get into super, super high doses. B6 is one of the ones that is most known for neurological problems when it exceeds consistently 500 mg a day, but most people don't take anywhere near that much. That's it for those. Then there's a list of our resources. That's the end of our vitamin B complex presentation.