

Interview: Lyle MacWilliam, Biochemist

A former member of Canadian Parliament, Lyle MacWilliam is the author of *The Comparative Guide to Nutritional Supplements*, which takes the confusion out of choosing the right vitamins. He chats to bd about why he believes a balanced diet alone just doesn't cut it anymore, and which vitamins to avoid.

The Comparative Guide to Nutritional Supplements rates more than 72 vitamin companies and over 200 vitamin products. What sort of criteria was used to determine these ratings?

We have developed a standard that is based on the published recommendations of 12 noted nutrition authorities. Rather than develop our own standard, I felt it was a better approach to review what has already been put forward.



We arrived at 47 nutrient categories that we feel are desirable in an ideal (and therefore highly rated) nutritional supplement - nutrients that are going to do more than simply provide the basic nutritional foundation. At the appropriate dosages, these nutrients should provide a high measure of protection against a lot of the degenerative diseases that are so prevalent in our modern world, for example, type 2 diabetes, heart disease, or osteoporosis.

Are the lower rated brands helpful – or at worst - detrimental to health at all?

They won't be detrimental at all, they just won't provide an ideal nutritional value. You do get what you pay for when buying supplements though, as quality is definitely a reflection of price. Many nutrients that are highly beneficial to the body, such as co-enzyme Q10, are also expensive to manufacture, so they're left out of a lot of the lower priced vitamins. However, co-enzyme Q10 is a really important nutrient for energy in the body, and it tends to wane as we get older.

How do you define a natural supplement, as so many today are synthesised?

I think the word natural is a bit of a 'buzz' word. You will find that most tableted supplements contain ingredients that can be termed natural, but most of them will be isolated, purified or synthesised. As long as it's done to pharmaceutical standards, it will be recognised by the body. For example, synthetic vitamin C, which you could make in a lab, is exactly the same as the vitamin C you will find in an orange. The only exception to this rule is vitamin E, which is better taken in a natural form, as half of the synthetic form is not recognised by the body.

Is it possible to receive all necessary vitamins through a balanced diet?

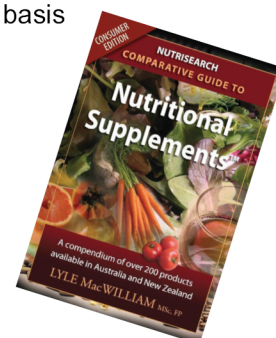
That statement would have been true a hundred years ago, but because of today's agricultural practices and the chemical fertilisers, pesticides etc, we're leeching the nutritional value out of the soil that grows our food. So even if you think you're eating well, the fact is I can almost guarantee you'll be nutritionally deficient in at least three or four of the very important nutrients that you require.

With a myriad of vitamin options on the market, how can consumers determine which ones are the best choice for them?

It's hard – most people go with the lowest cost choice, which is probably the worst thing they can do. This confusion is actually why I wrote *The Comparative Guide to Nutritional Supplements*.

To put it in a nutshell, you have to look for a supplement that provides the full spectrum of supplementation. We've identified 47 nutritional categories, and if you can get a supplement that is touching on most of those, that's a great start. The recommended daily intakes don't reflect what science is showing is required for disease prevention, so it's good to provide a high level of all these nutrients so the cells of the body can make decisions on a daily basis over whether it needs it or not.

The body is an amazingly efficient biological machine, and it has the capability to determine its nutritional needs on a moment-to-moment basis. You'll know you have taken too much of one vitamin if your urine is brightly coloured. If you're under stress and need more of a particular vitamin, the body's physiological needs will require more of that nutrient, so you'll find that your urine becomes clear.



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Why do you recommend avoiding supplements containing pre-formed vitamin A, retinol or iron when some doctors actually prescribe them (as in the case of iron)?

These are nutrients that are problematic in a general supplement. Preformed vitamin A or retinol in high doses can, over a long period of time, cause the body to develop cumulative toxicity, because this vitamin is stored in the fatty tissue. For women that may be pregnant or looking to become pregnant, high intakes of vitamin A can cause foetal deformity, or foetal toxicity. For these women, it's much safer to take their vitamin A in the form of beta-carotene, which can be changed into vitamin A by the body as it needs it. If you look at the top quality supplements, they stay away from vitamin A, or they have only a minimal amount.

Iron is a problem because it's hard to get rid of from the body. There is a certain percentage of the population that expresses a genetic variation in which they accumulate too much iron. The trouble is, they won't know they carry this gene unless they've had genetic testing. When there is too much iron in the blood, it becomes a very aggressive oxidant and can actually accelerate diseases such as heart disease, and the ageing process itself. Rather than taking iron through supplements, it's safer to take it via protein.

How has the rise of the organic food industry impacted the vitamin industry?

I think that they're complementary myself, although I haven't really researched the issue. I think that people who are health conscious will probably be eating organic food, and they will also be the ones taking that extra step to supplement with vitamins.

I highly encourage the consumption of organic food. The high nutrient content has been shown by analysis, and secondly you won't be ingesting a lot of the contaminants such as pesticides and fertilisers. Some fruit and vegetables are really heavily doused with this stuff, and over a period of time, those pesticides will accumulate in your body tissues. We are just now understanding that the body's inability to deal with this heavy toxicity is one of the mechanisms with which diseases such as cancer start to unfold. By using organic products, you're not completely eliminating this, but you are substantially reducing your exposure to some of these agents.

