



Holistic Healthcare of Virginia

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A Bit on Water-Soluble Vitamins (The B's and C)

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Understanding vitamins and how to care for them can help us get the most of what we are eating (or purchasing if we buy vitamins as supplements). Let's take a moment to get to know these vital nutrients. Vitamins are either fat- or water-soluble. The fat-soluble vitamins are A, D, E & K and the water-soluble vitamins are the B Vitamins and Vitamin C. In this article, I will focus on getting the most out of water-soluble vitamins, which are more fragile and need special care to keep as much of the vitamin content as possible.

Many fruits and vegetables are high in these water-soluble vitamins. The best way to gain the vitamin content is to eat your fruits and veggies as raw as possible, or when cooking, steam, stir-fry or use a microwave with minimal amounts of water. The less processing you do, the better. Because these vitamins are water-soluble, when cooked in water they will lose their vitamin content as water leeches it out and heat exacerbates this process and destroys much of the vitamin content. As well, some vitamins are light-sensitive, particularly the B-vitamins, therefore if you are purchasing these vitamins, they should be in dark containers.

Thiamine or Vitamin B₁ is best taken with a meal for better absorption. Riboflavin or Vitamin B₂ is one of those vitamins that is light sensitive and needs to be stored in a dark container. Riboflavin is best from animal sources as the vitamin is more absorbable from animal sources than from plants. Niacin (Vitamin B₃), like the other B complex vitamins, plays an important role in energy production in the body. Niacin has been used to help lower total blood cholesterol and help with blood sugar regulation. Many meats and dairy products contain tryptophan which the body can convert to niacin. Pantothenic acid (Vitamin B₅), while found in quite a variety of foods, is easily damaged as not just processing, but also freezing and canning will reduce its content. Vitamin B₆ is not very stable as it is sensitive to heat, therefore eating raw non-citrus fruits, bananas and sunflower seeds can increase your Vitamin B₆ intake. While many vitamins are added to grain and cereal products after the milling and refining process destroyed them, Vitamin B₆ is not replaced in these enriched products. Vitamin B₆ helps keep our hormones in balance and the immune system functioning properly. The vitamin Folate really gets destroyed during processing as it is vulnerable to heat, light and air. Folate (as folic acid) is added to enriched products and found in green leafy vegetables, asparagus and broccoli and organ meats. Women in child-bearing years need to consume Folic acid because during the first couple weeks of being pregnant, this vitamin must be present to prevent birth defects. While the above vitamins can be found in plants (and some in animal sources), Vitamin B₁₂ is only found in animal sources. The body is able to store large amounts of this vitamin, where the

excess of the above vitamins are excreted out by the kidneys in the urine. For those who do not eat animal products, supplementing with Vitamin B₁₂ is advised.

Vitamin C helps protect many of the B vitamins. Vitamin C is best from fresh fruits and not cooked as cooking causes up to a 90% loss of vitamin content. As well, even exposure to air, drying, salting, mincing or mashing vegetables reduces the vitamin C content.

If you do not consume your five-a-day of fruits and vegetables, or if you cook your vegetables too long, with too high heat or in too much water, then chances are you are not getting enough of these vitamins and finding a good source to supplement what's lacking in your diet is good idea. Look for vitamins with the United States Pharmacopeia (USP) seal as these supplements have been independently tested to verify the contents with the labeling information.