Do Orthomolecular Health Care Professionals Practice What They Preach?

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Abstract *A symposium was held in Wichita, KS October 2–4, 2009. Eighty-eight health care workers from around the world attended. Eight attendees came from Japan. The attendees included doctors: M.D./Ph.D., M.D., Ph.D., ND., DC, Nurses, Technicians and several interested observers. As part of their attendance, all had the opportunity to have a basic nutrient panel performed at no charge. Plasma vitamin A, C, E and urine vitamin C were included. Some surprises were found in the results. One was the highest non-intravenous C plasma vitamin C result of 7.4 mg/dL (normal 0.6 to 2.0 mg/dL.) ever found at The Center. In contrast, several participants were in the plasma Vitamin C biochemical scurvy range and 39% had 0.0 mg/dL urine vitamin C. Vitamin A results were very good for the participants; all were in the "normal range" and 17 percent were in the optimal range. A unique association was found between vitamin C and vitamin E.*

Introduction

During October 2-4, 2009, The Center presented The First Annual Riordan IVC and Cancer Symposium. The symposium, conceived and arranged by Dr. Hunninghake and The Center staff, was held at our premises, The Center for the Improvement of Human Functioning International, Wichita, Kansas (www.brightspot.org). The symposium was attended by 88 participants. As part of the meeting, delegates had the opportunity to have an antioxidant panel (vitamin A, C, E, and urine vitamin C) performed at no charge. They also had the opportunity to have one or more other nutrients or nutrient panels performed at a reduced rate.[1,2] Eighty-three of the 88 participants elected to have the "fasting" antioxidant panel performed. The results are shown in **Table 1** (p. 158).

As the data shows, 57% of the participants were male and 43% were females. The vitamin E data showed 9 males equalled or exceeded the optimal level. Several participants were at the lower range of 0.6 mg/dL. The highest level was from a male, 4.0 mg/dL. The plasma vitamin C had a few surprises. Several participants were in the biochemical scurvy range of 0.4 mg/dL (our normal range by HPLC is 0.6 to 2.0 mg/dL). Thirteen male and 3 females equalled or exceeded the optimal range. The biggest surprise was one male with a blood plasma C of 7.4 mg/dL (the test was repeated twice). This is the highest non-intravenous plasma vitamin C ever seen at the BioCenter Laboratory. When comparing 6,537 patient plasma vitamin C to urine vitamin C, the highest plasma C discovered was 5.0 mg/dL.[3] Dr. Hunninghake conducted an experiment on himself by taking 35 grams of oral vitamin C a day. Multiple plasma vitamin C tests were drawn during the oral administration.

The highest vitamin C level achieved in his plasma was 5.7 mg/dL.

The urine vitamin C screened with the VitaChek-C© showed a range of 0.0 to over 100 mg/dL.[3] Forty-six percent of the participants equalled or exceed the optimal dose (greater than 50 mg/dL), however, 39% had 0.0 mg/dL in their urine. The urine levels tended to match the plasma levels.

Vitamin A tended to be the most stable and consistent. No males or females were in the low range and 15 participants (17%) equalled or were above the optimal range.

Conclusion

When trying to interpret the data, one has to remember that the vitamins A and E are fat soluble and are stored in the liver and fat. Vitamin C is water soluble and has a half-life less than vitamin A and E. This is a variable that one has to consider, especially when some of the participants came from Japan the day before the meeting! It is possible that stress could have caused low vitamin C results.

One of the authors (JAJ) has had the opportunity to examine thousands of nutrition data results. It was very interesting to note the close relationship of vitamin E to vitamin C, a fat soluble to a water soluble vitamin. In this study, the mean plasma vitamin E level was 1.7 mg/dL and the vitamin C level was 1.8 mg/dL. The normal or reference range for each is similar; vitamin E is 0.6 to 2.7 mg/dL and vitamin C is 0.6 to 2.0 mg/dL. In a preliminary review of data from patients, it seems like if the plasma vitamin C is low, the plasma vitamin E is higher. When all the data are all examined, we will publish the results.

References

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Table 1. Results of symposium participants' blood vitamins A, C, E and urine vitamin C to give a "snap-shot" of nutrition status

	Vitamin E (mg/dL)	Plasma Vitamin C (mg/dL)	Urine Vitamin C (mg/dL)	Vitamin A (ug dL)
Mean	1.7	0.8	41	58
Males	1.9	1.8	46	64
Females	1.5	1.8	36	52
Range	0.6 to 4.0	0.4 to 7.4+	0.0 to 100 or >	29 to 97
Normal Range	0.6 to 2.0	0.6 to 2.0	=>35 ??	24 to 90
Optimal Range	2.7 to 3.2	1.7 to 2.4 or >	=>50	74 to 107
	9 male participants => optimal range	13 male & 3 female => optimal range	37 particpants => optimal range	15 participants => optimal range
		+ test repeated 2X	31 (39%) had "0" mg/dL	

-Number of participants selecting these four tests = 83*, Males = 47 (57%) and Females = 36 (43%)*
-3 declined Urine Vitamin C test . Several participants were in the biochemical scurvy range according to their vitamin C levels and 39% had "0" mg/dL urine vitamin C.
Data compiled by Bio-Center Laboratory and Paul R. Taylor BS, BA, Director of Research Information, CIHFI, Inc.