

Renal Vitamins Revisited

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RENAL VITAMINS ARE commonly prescribed for dialysis patients in the United States.¹ There are various brands and products available on the market today. The different products and formulations offer the opportunity to customize the renal vitamin to the individual's needs. Those needs may include wound healing, hyperlipidemia, or taste alterations. In addition, there are liquid and slow-dissolve options for those needing or wanting an alternative. All of the products contain the 8 B-complex vitamins along with vitamin C in varying amounts. Other vitamins and minerals present in several products include vitamin D, vitamin E, selenium, zinc, copper, and iron. The following information and Table 1 are updates to the original article published in 2006.²

Vitamin D

It was once thought that only the kidney was capable of converting 25-hydroxyvitamin D to 1,25-dihydroxyvitamin D. However, the necessary enzyme, 1- α -hydroxylase, has been found in extrarenal tissues.³ Of recent interest has been fibroblast growth factor-23 and its effect on phosphate and vitamin D.^{4,5}

Vitamin E and Selenium

Vitamin E and selenium are antioxidants. There are published studies with vitamin E supplementation for such things as reducing erythropoietin use, decreasing muscle cramping, and improving wound healing. Vitamin E may interact with some medications (e.g., statins and anticoagulants).⁶ Stockler-Pinto and colleagues used Brazil nuts, a rich source of selenium, as an anti-inflammatory and antioxidant agent in hemodialysis patients with success.⁷

Zinc and Copper

Zinc levels in people on hemodialysis tend to be lower than in healthy individuals whereas copper may be elevated.^{8,9} Guo

and colleagues found increased plasma zinc, decreased copper concentration, and lower proinflammatory cytokines after administering zinc to people on hemodialysis.¹⁰

Iron

Iron is a common supplement for dialysis patients either in intravenous or oral form. Considerations for intravenous versus oral supplementation may include cost, access, and compliance. Calcium may interfere with the absorption of iron; therefore, the timing of renal vitamins containing iron may be an issue for those on calcium-based phosphorus binders.

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Table 1. Comparison of Renal Vitamin Products 2014

Products	Folic Acid	Cobalamin (B12)	Pyridoxine (B6)	Thiamine (B1)	Riboflavin (B2)	Niacin (B3)	Pantothenic Acid (B5)	Biotin	Vitamin C	Vitamin D3	Vitamin E	Zinc	Copper	Selenium	Miscellaneous/ Other	Rx/OTC	Direct Order From company*
Dialyvitte 800†	800 mcg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	0	0	0	0	0		OTC	\$10.45/100 + \$4.00/order S&H‡
Dialyvitte 800 w/Iron†	800 mcg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	0	0	0	0	0	Iron 29 mg	OTC	\$11.55/100 + \$4.00/order S&H‡
Dialyvitte 800 w/Zinc†	800 mcg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	0	0	50 mg	0	0		OTC	\$11.60/100 + \$4.00/order S&H‡
Dialyvitte 800 w/Zinc 15†	800 mcg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	0	0	15 mg	0	0		OTC	\$11.00/100 + \$4.00/order S&H‡
Dialyvitte 800/Ultra D†	800 mcg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	2,000 IU	30 IU	15 mg	0	70 mcg		OTC	\$15.95/90 + \$4.00/order S&H‡
Dialyvitte Rx†	1 mg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	100 mg	0	0	0	0	0		Rx	N/A
Dialyvitte Rx w/Zinc†	1 mg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	100 mg	0	0	50 mg	0	0		Rx	N/A
Dialyvitte 3000, Rx†	3 mg	1 mg	25 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	100 mg	0	30 IU	15 mg	0	70 mcg		Rx	N/A
Dialyvitte 5000, Rx†	5 mg	2 mg	50 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	100 mg	0	30 IU	25 mg	0	70 mcg		Rx	N/A
Dialyvitte Supreme D Rx†	3 mg	1 mg	25 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	100 mg	2,000 IU	30 IU	15 mg	0	70 mcg		Rx	N/A
NephPlex Rx‡	1 mg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	0	0	12.5 mg	0	0		Rx	N/A
Nephronex Liquid¶	900 mcg	10 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	0	0	0	0	0		OTC	See distributor list on website
Nephronex-SL¶	800 mcg	10 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	2,000 IU	0	0	0	0		OTC	See distributor list on website
Nephro-Vite Rx*†	1 mg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	0	0	0	0	0		Rx	N/A
ProRenalQD (2 softgels)**	800 mcg	2.4 mcg	10 mg	1.5 mg	2.0 mg	20 mg	5 mg	30 mcg	60 mg	1,000 IU	10 IU	8 mg	0.9 mg	55 mcg	Ferrous Gluconate 8 mg; Fish Oil 1000, mg (EPA 330 mg, DHA 220 mg)	OTC	\$16.50/30 day supply + S&H or \$45.00/90 day supply + S&H
ProRenal Vital**	800 mcg	2.4 mcg	10 mg	1.5 mg	2.0 mg	20 mg	5 mg	30 mcg	60 mg	1,000 IU	0	8 mg	0.9 mg	55 mcg	Ferrous Fumarate 8 mg	OTC	\$13.50/30 day supply + S&H or \$33.50/90 day supply + S&H
Renal Factor††	800 mcg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	0	0	0	0	0		OTC	\$10.00/90 + No S&H
Renal Factor Plus††	800 mcg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	2,000 IU	30 IU	12.5 mg	0	70 mcg		OTC	\$14.50/90 + No S&H
Renaltab †††	1 mg	12.5 mcg	20 mg	12.5 mg	7.5 mg	50 mg	30 mg	300 mcg	125 mg	0	15 IU	15 mg	0	0	Mn 7.5 mg; Cr 150 mcg; Mo 50 mcg; Pepsin 0.5 mg; Glutamic Acid HCL 150 mg; Lipase 100 mg;	OTC	\$16.00/120 + No S&H§§

Renalab II ^{††}	1 mg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	0	0	0	0	0	OTC	\$14.00/120 + No S&H ^{§§}
Renalab Zn ^{††}	1 mg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	0	0	15 mg	0	0	OTC	\$14.00/120 + No S&H ^{§§}
Renalab Zn + D ^{††}	1 mg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	1,000 IU	0	15 mg	0	0	OTC	\$25.00/180 + No S&H ^{§§}
RenaPlex [§]	1 mg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	0	0	12.5	0	0	OTC	\$9.00/100 + \$4.95/order S&H
RenaPlex-D [§]	1 mg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	2,000 IU	35 IU	12.5 mg	0	70 mcg	OTC	\$12.00/100 + \$4.95/order S&H
Vital-D Rx [§]	1 mg	6 mcg	10 mg	1.5 mg	1.7 mg	20 mg	10 mg	300 mcg	60 mg	2,000 IU	35 IU	12.5 mg	0	70 mcg	Rx	N/A

N/A, not available; OTC, over the counter; Rx, prescription; S&H, shipping and handling.

*Direct-order prices from company websites, customer service representatives, and/or product brochures; prices subject to change at any time; prices accurate as of February 27, 2014.

†Hillestad Pharmaceuticals, USA, Woodruff, WI, (866) 358-9773, www.hillestadlabs.com, www.dialyvite.net, info@dialyvite.net.

††Hillestad Pharmaceuticals, USA, offers a discount: ≥ 4 bottles ship free.

§Nephro-Tech, Inc., Shawnee, KS, (800) 879-4755, www.nephrotech.com.

||Llorens Pharmaceutical International Division, Inc., Miami, FL, (866) 595-5598, www.llorensparm.com, info@llorensparm.com.

¶Actavis, Parsippany, NJ, (800) 272-5525, www.actavis.com.

**Nephroceuticals, Miamisburg, OH, (877) 277-6765, www.myprorenal.com.

†††Healthy Factor, LLC, Arbor Vitae, WI, (715) 358-1988, www.healthyfactor.org, sales@healthyfactor.org.

†††Renalab, Templeton, CA, (800) 345-3838, <https://www.secureorderform.com/renalab.net/>, renalab@gmail.com.

§§Renalab offers a new customer discount, multibottle discounts, ship-to-clinic discount/pricing for individual orders, and renal center bulk pricing (see website).