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Vitamin D3 deficiency in the aged

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Ultraviolet light B (UVB) is a technique used to investigate organic molecules. It was utilized in this study to analyze the content of vitamin D3 in face lifted female skin of subjects aged 43, 47, 51, 58, 60 and 66 years. The skin of these subjects had pigmentation of great similarity. It was kept at -40oC, defrosted to room temperature for 2 min and placed in an oven for another 2 min at 105oC. After these 2 min, we took the first UVB reading; a 2nd UVB run was done at room temperature. The amount of vitamin D3 was determined under standard conditions of 7-dehydrocholesterol (7-Dchol). The best temperature to measure D3 was when skin was at room temperature for 15 min. The D3 analysis of the UVB plots of human skin vs. the standard showed a linear decrease in human skin as compared to 7-Dchol. Because 7-Dchol is a direct precursor of vitamin D3, it appears from these results that as the skin ages, 7-Dchol concentration decreases which results in less production of vitamin D3. Conditions to increase vitamin D3 in the aged should be considered, to avoid problems of arthritis, tuberculosis and autoimmune disorders, etc.

Biography

Maria O Longas completed her PhD at New York University in 1978, and did her Post-doctoral training at Columbia University School of Medicine with Dr. Karl Mayer. She has an MA in Organic Chemistry from New York University (1973) and a BA in Chemistry from Hunter College (1971). She is a full Professor of Chemistry at Purdue University Calumet in Hammond, IN. She has more than 24 papers published in reputable journals, and served as a reviewer for several journals.

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