

# Commentary to the Editor from Manucha et al.: Blood Pressure Decreases in Overweight Elderly Individuals on Vitamin D: A Randomized Trial

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The excellent manuscript by Rahme M et al., post hoc exploratory analyses of 221 ambulatory older overweight individuals supplemented with calcium and oral vitamin D3, shed light on an existing problem. We mean Vitamin D is associated with hypertension, but its supplementation did not produce positive results. They do find it in older ( $\geq 65$  years), overweight (body mass index [BMI] > 25), with a serum 25OHD between 10 and 30 ng/mL at screening, with a mean 25OHD level was 20.4 ng/mL (1)

We are surprised that the 25OHD level at 6 and 12 months is not mentioned or measured.

Grant published that the key to finding benefits in extrasosseous actions with supplementation is not the dose but the value at which it is reached (2). The level reached depends on several factors, mainly body weight, followed by the basal level from which one starts and genetic polymorphisms (3). A concrete example of this concept is the reanalysis of the D2D study, in which the transition from prediabetes to diabetes was prevented with vitamin D supplementation only if the 40 ng/mL limit was exceeded (4). Similarly, the appearance of cancer was prevented in the Vital study in non-obese subjects (5) because a fixed dose of Vitamin D produces a very slight increase in obese subjects (and probably this beneficial effect would also occur in obese subjects with higher doses).

We have published a review on Vitamin D in pregnancy in which we suggest a minimum value of 40 ng/mL to reduce maternal and fetal complications (6).

We consider that it is possible that higher doses of Vitamin D administered in obese patients may add benefits in hypertension if the value reached is higher than at least 40 ng/mL.

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