Position statement AME: deficit di vitamina D nell'adulto. Situazioni particolari e interferenze farmacologiche.

Fabio Vescini

Conflitti di interesse

Ai sensi dell'art. 3.3 sul conflitto di interessi, pag 17 del Regolamento Applicativo Stato-Regioni del 5/11/2009, dichiaro che negli ultimi 2 anni ho avuto rapporti diretti di finanziamento con i seguenti soggetti portatori di interessi commerciali in campo sanitario:

- GILEAD SCIENCES LTD
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ITALIAN CHAPTER

Italian Association of Clinical Endocrinologists (AME) and Italian AACE Chapter Position Statement Clinical Management of Vitamin D Deficiency in Adults

Roberto Cesareo[1*], Roberto Attanasio[2], Marco Caputo[3], Roberto Castello[4], Iacopo Chiodini[5], Alberto Falchetti[6], Rinaldo Guglielmi[7], Enrico Papini[7], Assunta Santonati[8], Alfredo Scillitani[9], Vincenzo Toscano[10], Vincenzo Triggiani[11], Fabio Vescini[12], and Michele Zini[13]

5.2. Vitamin D and Drugs Interactions: What We Need to Know

Mechanism of Action	Drugs
Drugs that interfere with vitamin D absorption	Bile acid sequestrants (Cholestyramine) Lipase inhibitors (Orlistat)
Drugs that interfere with vitamin D metabolism	Antiepileptic drugs (phenobarbital, phenytoin) Corticosteroids Statins Antimicrobials (Rifampicin, Isoniazid, Hydroxychloroquine) Immunosuppressive agents (cyclosporine, tacrolimus) Chemotherapeutic agents Highly active antiretroviral agents Histamine H2-receptor antagonists
Drug-vitamin D interactions that may induce side effects	Thiazides

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5.2. Vitamin D and Drugs Interactions: What We Need to Know

We suggest the evaluation of concomitant medical treatments for a potential interference with vitamin D absorption and metabolism.

We suggest the correction of vitamin D deficiency even in patients on teriparatide.

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6.1. Vitamin D and Pregnancy

Many pregnant women are at risk of vitamin D deficiency [6], a condition associated with increased risk of pregnancy complications, mainly pre-eclampsia and cesarean section [6]. A correlation between maternal vitamin D deficiency (<20 ng/mL, <50 nmol/L) and gestational diabetes, small for gestational age (SGA) newborns, preterm delivery, and pediatric asthma is reported [128,129]. Accordingly, these complications appear less frequent in pregnant women whose 25(OH)D levels are above 40 ng/mL (100 nmol/L) [128,130].

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6.1. Vitamin D and Pregnancy

Vitamin D supplementation in pregnancy is safe up to 4000 IU/day [129]. A systematic review of RCTs demonstrated that prenatal vitamin D supplementation is associated with increased mean birth weight, reduced risk of SGA, reduced risk of wheeze in offspring, and increased infant length at one year of age, with no effect on preterm birth [131].

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6.1. Vitamin D and Pregnancy

We suggest to assay 25(OH)D levels in pregnancy to screen for its deficiency.

We suggest the supplementation of pregnant women with cholecalciferol, aiming at a serum 25(OH)D level > 40 ng/mL (100 nmol/L).

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6.2. BMI and Vitamin D Treatment: Does It Matter?

The relationship of serum 25(OH)D levels with BMI is controversial because both a negative and a positive correlation between these parameters, or its absence, were reported [135]. This variability may be explained by the cross-sectional design of most studies, but other variables may be relevant: latitude, season, gender (especially different adiposity between men and women with the same BMI) [136], dress customs [137], public health intervention on vitamin D supplementation [138], and living in developed or developing countries [139].

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6.2. BMI and Vitamin D Treatment: Does It Matter?

A well-conducted meta-analysis of 34 cross-sectional studies with adequate quality [135] demonstrated a weak, negative correlation between serum 25(OH)D levels and BMI in healthy adults, males and females, living in developed countries. The same correlation was evident also for men living in developing countries, but not for women.

Obese patients (BMI > 30 kg/m^2) might require 2–3 times more vitamin D to both treat and prevent vitamin D deficiency and insufficiency [141]. Due to its pharmacokinetic profile, calcifediol might represent an alternative option [103,142–144].

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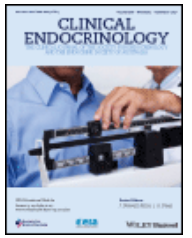
6.2. BMI and Vitamin D Treatment: Does It Matter?

We suggest to consider obese patients at high risk for vitamin D deficiency.

We suggest a duplicated, or triplicated, dose of vitamin D in obese patients and the use of calcifediol instead of vitamin D in this setting.

Clinical Endocrinology (2013) **79**, 784–790 doi: 10.1111/cen.1221(



ORIGINAL ARTICLE

Vitamin D status in primary hyperparathyroidism: a Southern European perspective

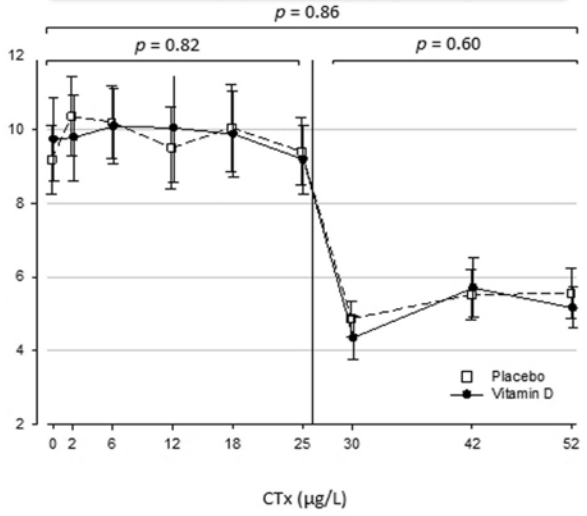
Francesco Tassone*, Laura Gianotti*, Claudia Baffoni*, Gianluca Visconti†, Micaela Pellegrino*, Sara Cassibba*, Chiara Giulia Croce*, Giampaolo Magro*, Flora Cesario*, Roberto Attanasio‡ and Giorgio Borretta*

	Plasma 25OHD		
	<20 ng/ml (n = 75)	≥20 ng/ml (n = 131)	P
Femoral BMD (g/cm^2)	0·69 ± 0·14	0·76 ± 0·19	<0·017
Femoral T-score	−2·28 ± 1·2	−1·85 ± 1·26	<0·025
Lumbar BMD (g/cm^2)	0·77 ± 0·17	0·84 ± 0·17	<0·005
Lumbar T-score	−2·79 ± 1·36	−2·36 ± 1·42	<0·045
Forearm BMD (g/cm^2)	0·38 ± 0·11	0·44 ± 0·13	<0·001
Forearm T-score	−2·85 ± 1·68	−1·94 ± 1·58	<0·00045

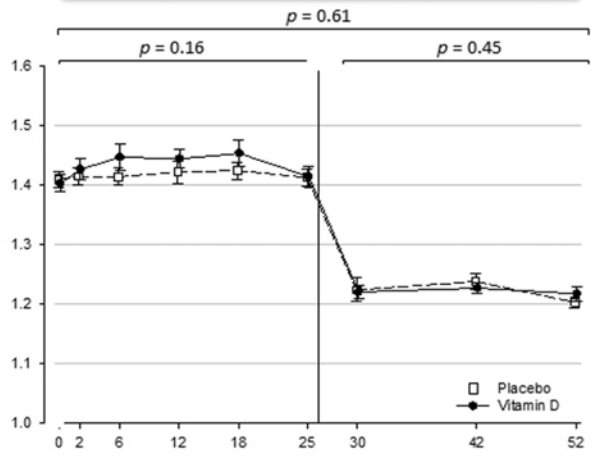
Vitamin D Treatment in Primary Hyperparathyroidism: A Randomized Placebo Controlled Trial

Lars Rolighed, Lars Rejnmark, Tanja Sikjaer, Lene Heickendorff, Peter Vestergaard, Leif Mosekilde, and Peer Christiansen

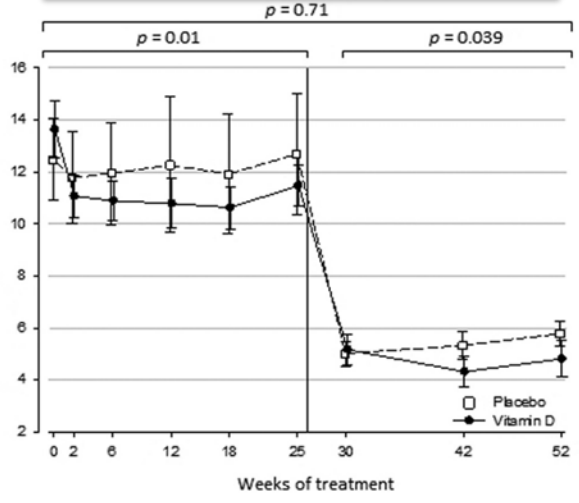
24h-urinary calcium (mmol/day)



Ionized plasma calcium (mmol/L)



PTH (pmol/L)

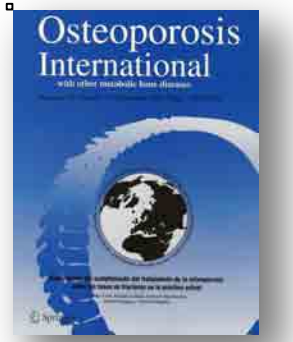


Intervention:

cholecalciferol 2800 IU/d or placebo for 52 weeks. (26 weeks before PTX and 26 weeks after PTX)

Primary hyperparathyroidism: review and recommendations on evaluation, diagnosis, and management. A Canadian and international consensus

A. A. Khan[1,2] · D. A. Hanley[3] · R. Rizzoli[4] · J. Bollerslev[5] · J.E.M Young[1] · L. Rejnmark[6] · R. Thakker[7] · P. D'Amour[8] · T. Paul[9] · S. Van Uum[9] · M. Zakaria Shrayyef[10] · D. Goltzman[11] · S. Kaiser[12] · N. E. Cusano[13] · R. Bouillon[14] · L. Mosekilde[15] · A. W. Kung[16] · S. D. Rao[17] · S. K. Bhadada[18] · B. L. Clarke[19] · J. Liu[20] · Q. Duh[21] · E. Michael Lewiecki[22] · F. Bandeira[23] · R. Eastell[24] · C. Marcocci[25] · S. J. Silverberg[26] · R. Udelsman[27] · K. Shawn Davison[28] · J. T. Potts Jr[29] · M. L. Brandi[30] · J. P. Bilezikian[26]



Osteoporos Int (2017) 28:1–19

- Vitamin D insufficiency has been associated with increased parathyroid gland weight
- Vitamin D inadequacy appears to be associated with a more severe bone disease and, consequently, a greater risk of hungry bone syndrome following PTx
- It is recommended that vitamin D deficiency/ insufficiency be corrected and optimal vitamin D levels >50 nmol/L be maintained, or even at >75 nmol/L

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I.N.F.R.

SOC Endocrinologia e Malattie del Metabolismo
Direttore: dr Franco Grimaldi