

# Effect of daily intake of milk enriched with a high dose of vitamin D in healthy postmenopausal women: Preliminary results from a randomized, controlled and double-blind nutritional trial (The EFICALCIO Study).

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**BACKGROUND AND OBJECTIVES:** Vitamin D deficiency is highly prevalent and can be associated with adverse health outcomes. Few studies have evaluated the effects of daily consumption of milk fortified with a high dose of vitamin D in a large cohort of healthy postmenopausal women. Our objective was to determine the effect of daily intake of milk enriched with vitamin D [with or without fructooligosaccharides (FOS)] on vitamin D status, bone mass and cardiovascular risk factors.

**DESIGN, SETTING AND PATIENTS:** This was a 2-year randomized controlled study in which five hundred healthy postmenopausal women (mean age 58.1±4.8 years) were assigned to receive 500 ml/day of a dairy product to one of three groups:

- Control group (C) with skimmed milk (120 mg/100 ml calcium and vitamin D 0.75 ug/100 mL)
- Group A with skimmed milk enriched with calcium and vitamin D (180 mg/100 mL and 3 ug/100 mL)
- Group B with skimmed milk enriched with calcium and vitamin D (180 mg/100 mL and 3 ug/100 mL) and FOS (5 g/L).

- We evaluated serum levels of 25-OH-vitamin D. We also measure anthropometric parameters, biochemical data of glucose metabolism and lipid profile, and body composition by electrical impedance.

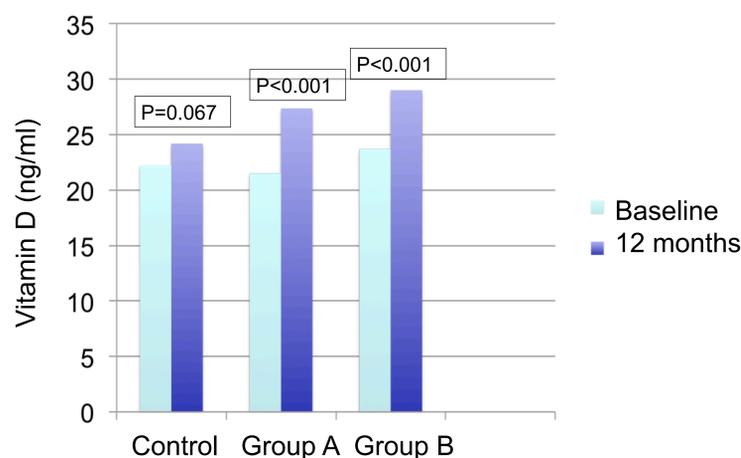
- Preliminary results showing changes in vitamin D concentrations in 292 postmenopausal healthy women after 12 months of the nutritional intervention are presented.

## RESULTS:

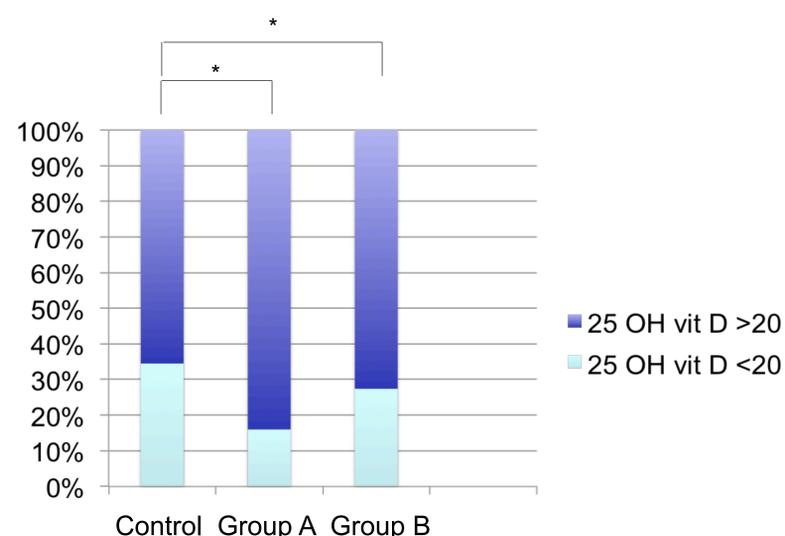
**Table 1.** Baseline parameters of study subjects.

	Control	Group A	Group B
Age (years)	58 ± 4	58 ± 5	58 ± 5
BMI (Kg/m <sup>2</sup> )	27.3 ± 4.4	29 ± 5	27.5 ± 4.5
Vitamin D (ng/ml)	22.2 ± 7.5	21.5 ± 6.5	23.7 ± 10.7

**Figure 1.** Changes in vitamin D concentrations after 12 month intervention



**Figure 2.** Percentage of women reaching adequate vitamin D concentrations according to group of intervention



\*p < 0.01 for the comparison between Group A and Group B with control group

## CONCLUSIONS:

Preliminary data confirms that daily intake of milk highly enriched with vitamin D, with or without FOS, in postmenopausal healthy women induces a significant improvement in vitamin D status.

Conflicts of interest: none.