

# Vitamin D in Liquid Food Supplements: are labels in line with RDA?

R Inez<sup>1</sup>, A Figueiredo<sup>1,2</sup>, IM Costa<sup>1,2</sup> and MD Auxtero<sup>1,2</sup>

<sup>1</sup>PharmSci Lab/CiiEM - Innovative Solutions in Pharmaceutical Sciences, Monte de Caparica, Portugal

<sup>2</sup>CiiEM - Centro de Investigação Interdisciplinar Egas Moniz, Egas Moniz CRL, Monte de Caparica, Portugal

raquelccinez@gmail.com

## INTRODUCTION

Nowadays, it has been observed an **increased consumption in vitamins and food supplements (FS)**. In Portugal, in 2018, more than 2 million individuals reported the intake of these products (1). Media has paid particular attention to the high prevalence of vitamin D (VitD) deficiency, which may explain its highest consumption (2). This vitamin increases intestinal calcium absorption and plays a central role in its homeostasis. Although vitD toxicity is uncommon, being a fat-soluble vitamin, **excessive supplementation may result in body accumulation and toxicity (3)**.

## OBJECTIVES

The aim of this study was to **evaluate if daily dose of vitamin D claimed in FS labels is in conformity with the recommended daily allowance (RDA)** for this vitamin defined by European Union Directive and Portuguese legislation (4).

## MATERIAL & METHODS

65 FS

Sold in:

- Portuguese pharmacies
- Supermarkets
- Health shops
- Internet

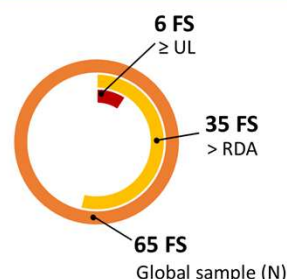
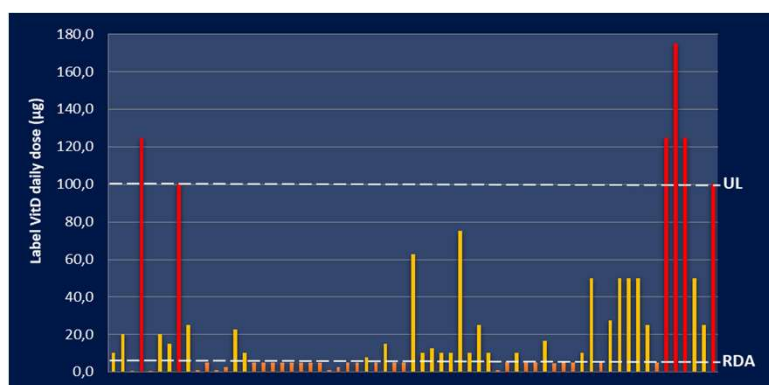
**Selection criteria:**

- Oral liquid pharmaceutical forms
- Containing vitD in its composition, as stated in the label, regardless of the purpose of the FS

Comparison with recommended values

## RESULTS & DISCUSSION

**35 FS (54%)** presented **vitD label doses above RDA** and **6 FS (9%)** indicated a **daily dose  $\geq$  the tolerable upper intake level** defined by EFSA (UL=100  $\mu\text{g}/\text{day}$ ). Results are shown in Figures 1 and 2.



Figures 1 and 2- Results of vitD FS label doses

- **VitD label dose far exceeded RDA value in most of the FS evaluated and some exceeded UL** defined by EFSA.

## CONCLUSIONS

- These products are **often taken without any medical supervision or counselling** and **vitD excess may trigger adverse effects**.
- Considering that some of these liquid formulations are for **children consumption**, it increases the concern about FS safety.
- **It is imperative that the daily doses of this vitamin are reviewed in FS, in accordance to RDA values.**

## REFERENCES

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