



**TITLE:** Vitamin D Toxicity Associated with Different Vitamin D Dosing Regimens: Safety

**DATE:** 02 December 2014

## RESEARCH QUESTION

What is the clinical evidence regarding toxicity associated with different vitamin D dosing regimens?

## KEY FINDINGS

Three systematic reviews (including one meta-analysis), 24 randomized controlled trials, and six non-randomized studies were identified containing clinical evidence regarding toxicity associated with different vitamin D dosing regimens.

## METHODS

A focused search with main concepts appearing in title and focused subject headings was conducted on key resources including PubMed, The Cochrane Library (2014, Issue 11), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, and non-randomized studies containing safety data. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and November 26, 2014. Internet links were provided, where available.

## SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

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**Table 1: Selection Criteria**

<b>Population</b>	Adults receiving vitamin D supplementation
<b>Intervention</b>	>600 IU of vitamin D
<b>Comparators</b>	None Placebo Various vitamin D doses
<b>Outcomes</b>	Safety (harms associated with toxicity)
<b>Study Designs</b>	Health technology assessment reports, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies (safety only).

## RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, and non-randomized studies.

Three systematic reviews (including one meta-analysis), 24 randomized controlled trials, and six non-randomized studies were identified containing clinical evidence regarding toxicity associated with different vitamin D dosing regimens. No relevant health technology assessment reports were identified.

Additional references of potential interest are provided in the appendix.

### Health Technology Assessments

No literature identified.

### Systematic Reviews and Meta-analyses

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See: *Ottawa EPC Report, page 341; Table 68*  
*Adverse events reported in RCTs, page 342*
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See: *Adverse effects of the intervention, page 8*
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**Randomized Controlled Trials***Vitamin D Therapy (<50,000 IU)*

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*Vitamin D Therapy (≥50,000 IU)*

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**APPENDIX – FURTHER INFORMATION:****Systematic Reviews and Meta-analyses – Dosing Unspecified**

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**Randomized Controlled Trials – Lead Poisoning**

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See: *Vitamin D Upper Levels: Review of Potential Indicators and Selection of Indicators*, page 424  
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