Nordic Nutrition Recommendations 2012 – vitamin D

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Review of DRVs - documentation

- SR by an expert group
- RQs
  - Effect of oral vit D sources on S-25-OH-D
  - Association between S-25-OH-D / oral vit D – health outcomes
  - Effect of sun/UVB exposure on health outcomes
  - Tolerable upper level (UL) of vit D for health outcomes
  - Interaction with Ca – different health outcomes
  - Difference in biopotency between D2 and D3

Conclusions

- Oral vit D – s-25-OH-D
  - variable, but clear dose-response. Depends on baseline level
  - 9 µg/d --> 50 nmol/L (md), meta-regression analysis
- Bone health
  - Vit D (10-20 µg/d + Ca) reduced risk of *total and hip fracture*, mainly among institutionalized elderly
  - Fair evidence of reduced risk of *falls*, some evidence for *muscle strength*
- Total mortality
  - 10-20 µg + Ca associated with lower mortality. Role of Ca uncertain.
  - Cohort studies indicate J-shaped association

Conclusions, cont.

- CVD
  - low 25-OH-D (<37.5/50 nmol/L) associated with increased mortality
- Cancer – generally weak evidence
  - Some evidence for inverse association with colorectal cancer
- Vit D form
  - D3 more effective than D2 for raising S-25-OH-D

Proposal for DRVs

- Recommended Intake (RI)
  - Children < 2 yr : 10 µg/d (no change)
  - Children/adults ≥ 2–60 yr: 10 µg/d (7.5 µg/d)
  - 61-74 yr: 10 µg/d (no change)
    - 20 µg /d for those with limited or no sun exposure (no change)
  - > 75 yr: 20 µg/d (10 µg/d)
- UL: no change (50 µg/d for adults, 25 µg/d for children)