OPTIFORD: Towards a strategy for optimal vitamin D fortification

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Vitamin D and osteoporosis

• Every 30 seconds someone in EU has a fracture as a result of osteoporosis

• Annual incidence of hip fractures in EU estimated to more than double over next 50 years

• Vitamin D plays an important role in the incorporation of calcium in bones

• Vitamin D deficiency is a risk factor for hip fracture
Objectives and main expected achievements

The main questions:
• Will fortification of food with vitamin D be a feasible strategy to remedy the insufficient vitamin D status of large population groups in Europe?

• If so, at what level should we fortify?

• If not, should supplementation be recommended for risk groups?
Context of OPTIFORD

WP1: Adolescent Girls (intervention)

WP2: The elderly (intervention)

WP3: Immigrants (intervention)

WP4: Five countries (observational)

WP5: Fortification of bread (technological)

Peak bone mass
Age
Lack of sun exposure
Comparing
Develop fortified bread
New findings from OPTIFORD

- For the first time, the parameters affecting vitamin D status and bone health among girls and elderly women are investigated in a comparable way across Europe
- Vitamin D deficiency is present in Europe
- OPTIFORD is providing valid data to assess relevance and indicate appropriate level of fortification or supplementation
- OPTIFORD is also enabling advances in our technological know-how regarding fortification of bread
Conclusion and future challenges

• Low vitamin D status in Europe
• Assess the lowest effective dose of vitamin D
• Assess the optimal strategy of vitamin D fortification
• Investigate vitamin D status in healthy European population
• Epidemiological documentation for preventive effect of fortification programme
• Investigate other effects of vitamin D (diabetes, cancer)
• Vitamin D deficiency and muscle pain