Screen for eligibility from general practice databases

Excluded: did not meet inclusion criteria by last visit general practice

Introduction letter and telephone contact for interest for participation

Excluded: refuse to participate

Randomization (n = 300)
baseline investigation: questionnaires (SF-36), demographic and anthropometric characteristics, AGE measurement, blood collection

Excluded: based on inclusion or exclusion

Assign to vitamin D group

3 months: blood collection and anthropometric measures

6 months: blood collection, AGE measurement, anthropometric parameters, questionnaires (SF-36)

Assign to placebo group

3 months: blood collection and anthropometric measures

6 months: blood collection, AGE measurement, anthropometric parameters, questionnaires (SF-36)