



FONDAZIONE
CASSA DI RISPARMIO
DI PISTOIA E PESCIA

Centro Monteoliveto

"Casa dell'Anziano"

5° CONVEGNO NAZIONALE SUI CENTRI DIURNI ALZHEIMER

6 – 7 Giugno 2014

Auditorium
Via Panconi, 14 - Pistoia



**5° CONVEGNO
NAZIONALE
SUI CENTRI
DIURNI
ALZHEIMER
Pistoia, 6 - 7
Giugno 2014**

**Le Linee di Indirizzo sui Centri Diurni
Alzheimer: update 2014**

**I farmaci come fattori di rischio e di
protezione dalle cadute**

**Elisabetta Tonon
U.O. Geriatria, Azienda U.S.L. 3 di Pistoia**

.... La valutazione del rischio di caduta sarà discussa dall'infermiere, dal fisioterapista e dal geriatra dopo raccolta anamnestica (anamnesi patologica e farmacologica), esame obiettivo e valutazione della performance degli arti inferiori (ad esempio mediante la scala di Tinetti). Verrà quindi inclusa nel piano assistenziale, concordato con il MMG, la necessità di strategie assistenziali e riabilitative mirate, prescrizione di ausili, oltre ad eventuali modificazioni della terapia farmacologica ed approfondimenti diagnostici.

RESEARCH ARTICLE

Open Access

Fall risk-increasing drugs and falls: a cross-sectional study among elderly patients in primary care

Veronica Milos^{1,6*}, Åsa Bondesson^{2,3}, Martina Magnusson⁴, Ulf Jakobsson¹, Tommy Westerlund⁵ and Patrik Midlöv¹

Abstract

Background: Falls are the most common cause of injuries and hospital admissions in the elderly. The Swedish National Board of Health and Welfare has created a list of drugs considered to increase the fall risk (FRIDs) and drugs that might cause/worsen orthostatism (ODs). This cross-sectional study was aimed to assess FRIDs and their correlation with falls in a sample of 369 community-dwelling and nursing home patients aged ≥ 75 years and who were using a multi-dose drug dispensing system.

Methods: Data were collected from the patients' electronic medication lists. Retrospective data on reported falls during the previous three months and severe falls during the previous 12 months were collected. Primary outcome measures were incidence of falls as well as numbers of FRIDs and ODs in fallers and non-fallers.

Results: The studied sample had a high incidence of both reported falls (29%) and severe falls (17%). Patients were dispensed a mean of 2.2 (SD 1.5) FRIDs and 2.0 (SD 1.6) ODs. Fallers used on average more FRIDs. Severe falls were more common in nursing homes patients. More women than men experienced severe falls. There were positive associations between number of FRIDs and the total number of drugs ($p < 0.01$), severe falls ($p < 0.01$) and female sex ($p = 0.03$). There were also associations between number of ODs and both total number of drugs ($p < 0.01$) and being community dwelling ($p = 0.02$). No association was found between number of ODs and severe falls. Antidepressants and anxiolytics were the most frequently dispensed FRIDs.

Conclusions: Fallers had a higher number of FRIDs. Numbers of FRIDs and ODs were correlated with the total number of drugs dispensed. Interventions to reduce falls in the elderly by focusing on reducing the total number of drugs and withdrawal of psychotropic medications might improve the quality and safety of drug treatment in primary care.

Keywords: Elderly, Falls, Prevention, Drug therapy, Fall risk-increasing drugs

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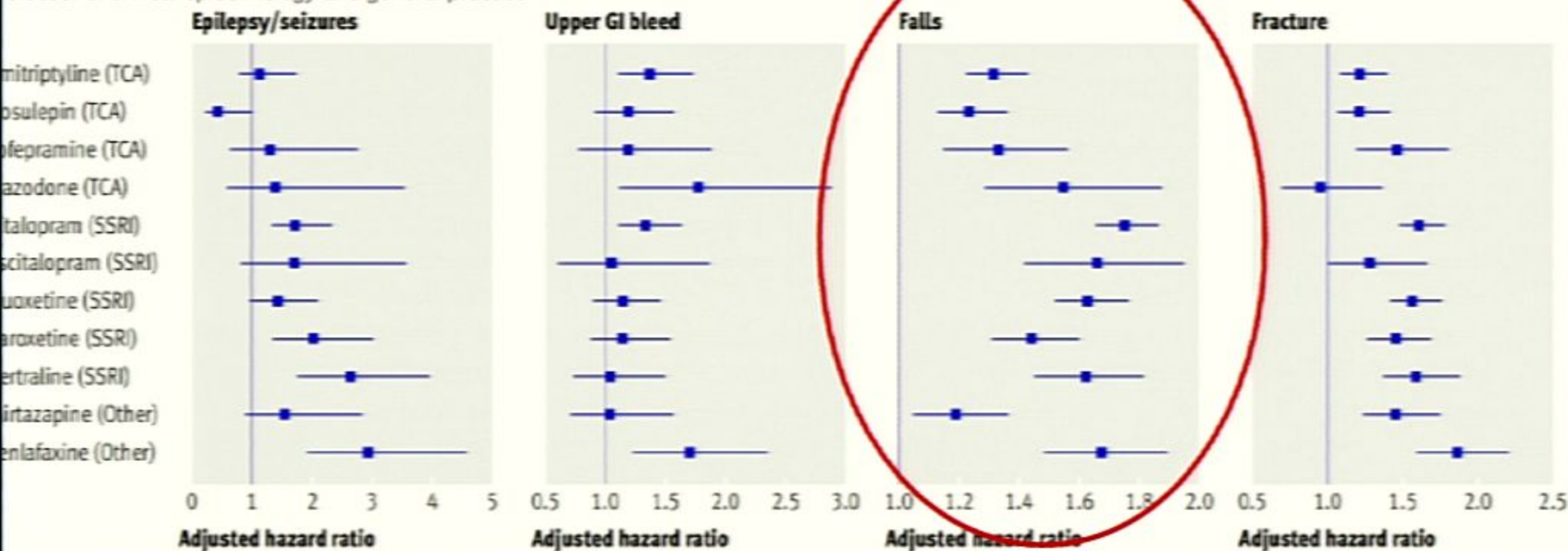
ATC* code	Drugs/group of drugs
Increase the fall risk	
N02A	Opioids
N05A (N05AN excluded)	Antipsychotics (lithium excluded)
N05B	Anxiolytics
N05C	Hypnotics and sedatives
N06A	Antidepressants
May cause or worsen orthostatism	
C01D	Vasodilators used in cardiac diseases
C02	Antihypertensives
C03	Diuretics
C07	Beta blocking agents
C08	Calcium channel blockers
C09	Renin-angiotensin system inhibitors
G04CA	Alpha-adrenoreceptor antagonists
N04B	Dopaminergic agents
N05A (N05AN excluded)	Antipsychotics (lithium excluded)
N06A	Antidepressants

*Anatomical Therapeutic Chemical classification system.

RESEARCH

Antidepressant use and risk of adverse outcomes in older people: population based cohort study

Carol Coupland *associate professor in medical statistics*¹, Paula Dhiman *research statistician*¹, Richard Morriss *professor of psychiatry and community mental health*², Antony Arthur *associate professor in elder care*³, Garry Barton *senior lecturer in health economics*⁴, Julia Hippisley-Cox *professor of clinical epidemiology and general practice*¹



Increased risk of hip fracture among older people using antidepressant drugs: data from the Norwegian Prescription Database and the Norwegian Hip Fracture Registry.

Bakken MS¹, Engeland A, Engesaeter LB, Ranhoff AH, Hunskaar S, Ruhs S.

⊕ Author information

Abstract

BACKGROUND: hip fractures are usually caused by a combination of reduced bone mineral density and falls; using antidepressant drugs may affect both of these.

OBJECTIVE: we aimed to examine associations between exposure to antidepressant drugs and the risk of hip fracture among older people, and, provided associations found, to estimate the attributable risk of hip fracture.

DESIGN: we conducted a nationwide prospective cohort study of the 906,422 people in Norway born before 1945.

METHODS: information on all prescriptions of antidepressants dispensed in 2004-10 and all primary hip fractures in 2005-10 was obtained from the Norwegian Prescription Database, and the Norwegian Hip Fracture Registry, respectively. The incidence rates of hip fracture during the time people were exposed and unexposed to antidepressant drugs were compared by calculating the standardised incidence ratio (SIR).

RESULTS: altogether 39,938 people (4.4%) experienced a primary hip fracture. The risk of hip fracture was increased for people exposed to any antidepressant [SIR = 1.7, 95% confidence interval (CI) 1.7-1.8]; tricyclic antidepressants (SIR = 1.4, 95% CI: 1.3-1.5); selective serotonin reuptake inhibitors (SSRIs) (SIR = 1.8, 95% CI: 1.7-1.8) and other antidepressants (SIR = 1.6, 95% CI: 1.5-1.7). The risk of hip fracture attributable to exposure to antidepressant drugs was 4.7%.

CONCLUSIONS: this study indicated an increased risk of hip fracture among people exposed to antidepressants, especially those with serotonergic properties such as SSRIs. This association needs to be explored further in clinical studies.

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CONCLUSIONS: this study indicated an increased risk of hip fracture among people exposed to antidepressants, especially those with serotonergic properties such as SSRIs. This association needs to be explored further in clinical studies.

ATYPICAL ANTIPSYCHOTIC USE IN PATIENTS WITH DEMENTIA: MANAGING SAFETY CONCERNS

Martin Steinberg, M.D. and Constantine G. Lyketsos, M.D., M.H.S.
Johns Hopkins Bayview Medical Center, Baltimore, MD

- ★ highest risk [of falls] in patients treated with SSRIs
- ★ both typical and atypical antipsychotics increased the risk of femur fracture, with highest risks found for risperidone and haloperidol
- ★ the risk of hip fracture with atypical antipsychotics in the elderly was highest in the first week of treatment and then declined, albeit still significantly increased, with longer (>12 week) continuous exposure. With conventional antipsychotic use, the risk was increased one week after beginning treatment and persisted with longer continuous use
- ★ a small increased risk (OR= 1.26) of hip fracture with antipsychotic use in dementia, with atypical antipsychotics conferring a slightly lower risk than conventional agents.
- ★ pre-existing Parkinsonism may increase fall risk

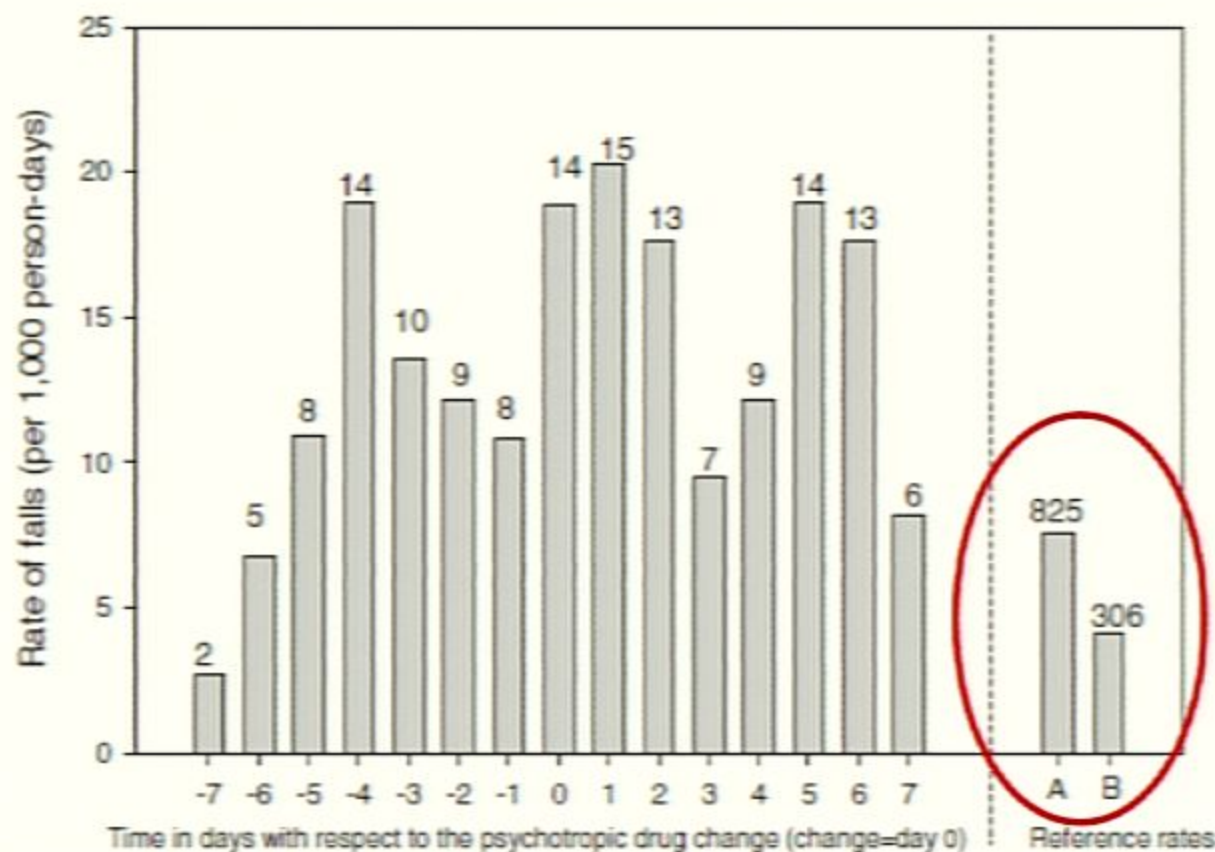
Bolton JM, et al, *J Clin Psychopharmacol.* 2008. Liperoti R, et al, *J Clin Psychiatry.* 2007.
Pratt N, et al, *Drug Saf.* 2011. Jalbert JJ, et al, *J Am Med Dir Assoc.* 2010.
Dore DD, et al, *Mov Disord.* 2009; 24:1941–1948.

RESEARCH ARTICLE

Open Access

Psychotropic drug initiation or increased dosage and the acute risk of falls: a prospective cohort study of nursing home residents

Murray A Echt^{1,2}, Elizabeth J Samelson^{1,3}, Marian T Hannan^{1,3}, Alyssa B Dufour¹ and Sarah D Berry^{1,3*}



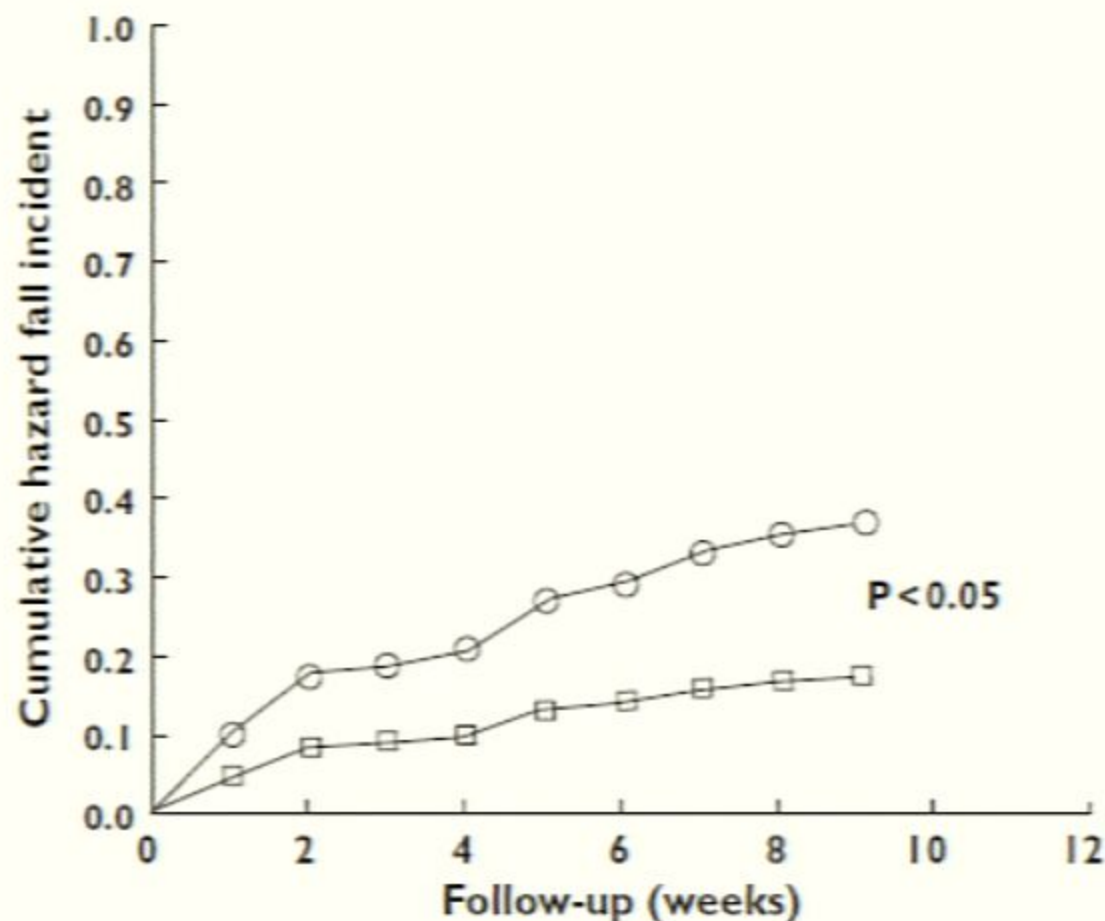
- ✓ 851 nursing home residents contributed a mean of 262 person-days of follow-up
- ✓ Mean age of residents was 87 years and 75% were female.
- ✓ Forty-eight percent were prescribed a new psychotropic medication or an increased dose of a psychotropic medication.

Risk of falls after withdrawal of fall-risk-increasing drugs: a prospective cohort study

Nathalie van der Velde,^{1,2,3} Bruno H. Ch. Stricker,^{1,3} Huib A. P. Pols¹ & Tischa J. M. van der Cammen^{1,2}

¹Department of Internal Medicine, Erasmus University Medical Center, ²Section of Geriatric Medicine, Erasmus University Medical Center and ³Department of Epidemiology & Biostatistics, Erasmus University Medical Center, Rotterdam, the Netherlands


Withdrawal of fall-risk-increasing drugs appears to be effective as a single intervention for falls prevention in a geriatric outpatient setting.



Spunti di riflessione I

- elevato utilizzo negli anziani e nei dementi di farmaci associati ad un aumentato rischio di cadere ed ad una aumentata frequenza di caduta**
- tutti i farmaci ad azione psicotropa hanno questa azione e non sembra che gli antidepressivi, in particolare gli SSRI, siano più “sicuri” di antipsicotici e benzodiazepine**
- cambiare farmaco può comportare una maggiore predisposizione a cadere (effetto protettivo della sospensione!)**

RESEARCH

Vitamin D and multiple health outcomes: umbrella review of systematic reviews and meta-analyses of observational studies and randomised trials OPEN ACCESS

Evropi Theodoratou *research fellow*¹, Ioanna Tzoulaki *lecturer*^{2,3}, Lina Zgaga *associate professor*⁴, John P A Ioannidis *professor*^{5,6}

Table 6| Evidence of relation between high vitamin D concentrations or vitamin D supplementation and clinical outcomes

Evidence category*	Health benefits	Health risks
Convincing	None	None
Probable	Decreases risk of dental caries in children Increases levels of birth weight and maternal vitamin D concentrations at term Decreases levels of parathyroid hormone concentrations in CKD RD	None
Suggestive	Decreases risk of colorectal cancer, non-vertebral fractures, CVD, CVD prevalence, hypertension, ischaemic stroke, stroke, cognition, depression (cohort studies), body mass index, metabolic syndrome prevalence, type 2 diabetes, small for gestational age birth, gestational diabetes mellitus Decreases levels of balance sway, alkaline phosphatase concentrations in CKD RD, parathyroid hormone concentrations in CKD NRD Increases levels of head circumference at birth, LDL, bone mineral density in femoral neck, muscle strength	Increases rate of falls (community) and risk of hypercalcaemia in CKD NRD
No conclusion	Decreases risk of ankylosing spondylitis, Crohn's disease, multiple sclerosis, osteoarthritis, rheumatoid arthritis, rheumatoid arthritis activity, scleroderma, systemic lupus erythematosus, thyroid autoimmunity, type 1 diabetes, type 1 diabetes in childhood (maternal vitamin D status), vitiligo, breast cancer, breast cancer prognosis, colon cancer, colorectal adenoma, colorectal adenoma recurrence, colorectal cancer prognosis, lung cancer, melanoma prognosis, non-Hodgkin's lymphoma, non-small cell lung cancer prognosis, oesophageal cancer, ovarian cancer, prostate cancer prognosis, rectal cancer, renal cancer, stomach cancer, CVD in ethnic minorities, CVD mortality, hypertension in children, ischaemic heart disease, myocardial infarction, Alzheimer's disease, depression (case-control studies), active tuberculosis, acute respiratory infection, infectious disease mortality, metabolic syndrome in ethnic minorities, obesity in ethnic minorities, type 2 diabetes in ethnic minorities, type 2 diabetes prevalence, allergic rhinitis and atopic dermatitis/eczema (maternal vitamin D status), cerebral function and diseases (maternal vitamin D status), childhood infections (maternal vitamin D status), wheezing and asthma in childhood (maternal vitamin D status), bacterial vaginosis in pregnant women, fertility, postpartum depression, pre-eclampsia in pregnant women, pregnancy associated breast cancer, bone health in pregnant and lactating women, bone pain in CKD RD, falls, rate of falls (care facilities), fractures in older people, fractures in CKD RD, hip fractures, non-vertebral non-hip fractures, vertebral fractures or deformity, performance measures in older people, rickets in children, all cause mortality, mortality in CKD, risk of requiring dialysis in CKD NRD, parathyroidectomy in CKD RD, subperiosteal erosions in CKD RD, mammographic breast density Decreases levels of HDL in children, LDL in children, triglycerides in children, insulin/glucose metabolism in children, triglycerides, insulin resistance of diabetes patients, bone mineral density, bone mineral density in forearm, alkaline phosphatase concentrations in CKD NRD, creatinine clearance in CKD Increases levels of total cholesterol concentrations, neonatal and infant growth, length of gestation, bone mineral content in infants, bone mineral density in hip, bone mineral density in lumbar spine (children)	Increases risk of pancreatic cancer, hyperphosphataemia in CKD, vascular calcification in CKD RD, hypercalcaemia in CKD RD
Substantial effect unlikely	Decreases risk of aggressive prostate cancer, premenopausal breast cancer, postmenopausal breast cancer, cancer mortality, kidney cancer, prostate cancer, caesarean section Decreases levels of fasting glucose in diabetes patients, HDL, adiposity in children (maternal vitamin D status) Increases levels of birth length (maternal vitamin D status), bone mineral density in children, bone mineral density in forearm in children, bone mineral density in hip in children, bone mineral density in lumbar spine, lower extremity strength	None

Table 6| Evidence of relation between high vitamin D concentrations or vitamin D supplementation and clinical outcomes

Evidence category*	Health benefits	Health risks
Convincing	None	None
Probable	Decreases risk of dental caries in children Increases levels of birth weight and maternal vitamin D concentrations at term Decreases levels of parathyroid hormone concentrations in CKD RD	None
Suggestive	Decreases risk of colorectal cancer, non-vertebral fractures, CVD, CVD prevalence, hypertension, ischaemic stroke, stroke, cognition, depression (cohort studies), body mass index, metabolic syndrome prevalence, type 2 diabetes, small for gestational age birth, gestational diabetes mellitus Decreases levels of balance sway, alkaline phosphatase concentrations in CKD RD, parathyroid hormone concentrations in CKD NRD Increases levels of head circumference at birth, LDL, bone mineral density in femoral neck, muscle strength	Increases rate of falls (community) and risk of hypercalcaemia in CKD NRD
No conclusion	Decreases risk of ankylosing spondylitis, Crohn's disease, multiple sclerosis, osteoarthritis, rheumatoid arthritis, rheumatoid arthritis activity, scleroderma, systemic lupus erythematosus, thyroid autoimmunity, type 1 diabetes, type 1 diabetes in childhood (maternal vitamin D status), vitiligo, breast cancer, breast cancer prognosis, colon	Increases risk of pancreatic cancer, hyperphosphataemia

falls, rate of falls (care facilities), fractures in older people, fractures in CKD RD, hip fractures, non-vertebral non-hip fractures, vertebral fractures or deformity, performance measures in older people

Decreases levels of HDL in children, LDL in children, triglycerides in children, insulin/glucose metabolism in children, triglycerides, insulin resistance of diabetes patients, bone mineral density, bone mineral density in forearm, alkaline phosphatase concentrations in CKD NRD, creatinine clearance in CKD

Increases levels of total cholesterol concentrations, neonatal and infant growth, length of gestation, bone mineral content in infants, bone mineral density in hip, bone mineral density in lumbar spine (children)

Substantial effect unlikely | Decreases risk of aggressive prostate cancer, premenopausal breast cancer, postmenopausal breast cancer, cancer mortality, kidney cancer, prostate cancer, caesarean section | None

Decreases levels of fasting glucose in diabetes patients, HDL, adiposity in children (maternal vitamin D status)

Increases levels of birth length (maternal vitamin D status), bone mineral density in children, bone mineral density in forearm in children, bone mineral density in hip in children, bone mineral density in lumbar spine, lower extremity strength

Interventions for preventing falls in older people in care facilities and hospitals.

Cameron ID¹, Gillespie LD, Robertson MC, Murray GR, Hill KD, Cumming RG, Kerse N.

⊕ Author information

Abstract

BACKGROUND: Falls in care facilities and hospitals are common events that cause considerable morbidity and mortality for older people. This is an update of a review first published in 2010.

OBJECTIVES: To assess the effectiveness of interventions designed to reduce falls by older people in care facilities and hospitals.

SEARCH METHODS: We searched the Cochrane Bone, Joint and Muscle Trauma Group Specialised Register (March 2012); The Cochrane Library 2012, Issue 3; MEDLINE, EMBASE, and CINAHL (all to March 2012); ongoing trial registers (to August 2012), and reference lists of articles.

SELECTION CRITERIA: Randomised controlled trials of interventions to reduce falls in older people in residential or nursing care facilities or hospitals.

DATA COLLECTION AND ANALYSIS: Two review authors independently assessed risk of bias and extracted data. We used a rate ratio (RaR) and 95% confidence interval (CI) to compare the rate of falls (e.g. falls per person year) between intervention and control groups. For risk of falling we used a risk ratio (RR) and 95% CI based on the number of people falling (fallers) in each group. We pooled results where appropriate.

MAIN RESULTS: We included 60 trials (60,345 participants), 43 trials (30,373 participants) in care facilities, and 17 (29,972 participants) in hospitals. Results from 13 trials testing exercise interventions in care facilities were inconsistent. Overall, there was no difference between intervention and control groups in rate of falls (RaR 1.03, 95% CI 0.81 to 1.31; 8 trials, 1844 participants) or risk of falling (RR

In care facilities, vitamin D supplementation reduced the rate of falls (RaR 0.63, 95% CI 0.46 to 0.86; 5 trials, 4603 participants), but not risk of falling (RR 0.99, 95% CI 0.90 to 1.08; 6 trials, 5186 participants).

Interventions for preventing falls in older people living in the community.

Gillespie LD¹, Robertson MC, Gillespie WJ, Sherrington C, Gates S, Clemson LM, Lamb SE.

+ Author information

Abstract

BACKGROUND: Approximately 30% of people over 65 years of age living in the community fall each year. This is an update of a Cochrane review first published in 2009.

OBJECTIVES: To assess the effects of interventions designed to reduce the incidence of falls in older people living in the community.

SEARCH METHODS: We searched the Cochrane Bone, Joint and Muscle Trauma Group Specialised Register (February 2012), CENTRAL (The Cochrane Library 2012, Issue 3), MEDLINE (1946 to March 2012), EMBASE (1947 to March 2012), CINAHL (1982 to February 2012), and online trial registers.

SELECTION CRITERIA: Randomised trials of interventions to reduce falls in community-dwelling older people.

DATA COLLECTION AND ANALYSIS: Two review authors independently assessed risk of bias and extracted data. We used a rate ratio (RaR) and 95% confidence interval (CI) to compare the rate of falls (e.g. falls per person year) between intervention and control groups. For risk of falling, we used a risk ratio (RR) and 95% CI based on the number of people falling (fallers) in each group. We pooled data where appropriate.

vitamin D did not reduce rate of falls (RaR 1.00, 95% CI 0.90 to 1.11; seven trials; 9324 participants) or risk of falling (RR 0.96, 95% CI 0.89 to 1.03; 13 trials; 26,747 participants), but may do so in people with lower vitamin D levels before treatment

Recommendations Abstracted from the American Geriatrics Society Consensus Statement on Vitamin D for Prevention of Falls and Their Consequences

American Geriatrics Society Workgroup on Vitamin D Supplementation for Older Adults¹

STATEMENT 1a: Clinicians are strongly advised to recommend vitamin D supplementation of at least 1,000 international units (IU)/d, as well as calcium supplementation, to community-dwelling older adults (≥ 65) to reduce the risk of fractures and falls.

STATEMENT 1b: There are insufficient data at this time to support a recommendation for increased vitamin D supplementation without calcium for older persons residing in the community or in institutional settings..

STATEMENT 2: Clinicians are strongly advised to recommend vitamin D supplementation of at least 1,000 IU/d with calcium to older adults residing in institutionalized settings to reduce the risk of fracture and falls.

STATEMENT 4a: Routine laboratory testing for 25(OH)D serum concentrations before supplementation begins is not necessary..

STATEMENT 5: Because of the different pharmacokinetic profiles of vitamin D2 and vitamin D3, clinicians should recommend vitamin D3 supplementation intervals of 4 months or less and vitamin D2 supplementation intervals of 14 days or less.

Clinicians should not recommend large bolus doses of vitamin D2 or D3 ($\geq 300,000$ IU).

Spunti di riflessione II

- **la sola supplementazione di vit. D non può essere considerata una terapia preventiva delle cadute**
- **una carenza o un'insufficienza di di 25-OH-Vit. D3 aumenta il rischio di cadere**
- **solo strategie combinate di intervento si sono dimostrate in grado di ridurre cadute (e fratture)**
- **il CD contesto ideale**



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