

Fracture Prevention for RACF Residents

Fracture Risk Assessment on Admission

- Prior hip fracture?
- Prior vertebral fracture?
- More than one prior fracture*?
- Recently used glucocorticoid and one prior fracture?
- Assessed as HIGH Risk for fracture and receiving fracture treatment PRIOR to admission?
- Vertebral fracture present? (if chest x-ray ordered, screen for vertebral fractures)
- Readmission from hospital post-fracture (*exclude hands/feet/ankle)

If **YES** to any of the above, resident is considered **HIGH RISK**

Fracture and Fall Prevention Strategies for All Residents

RECOMMEND:

- Dietary Calcium 1000 - 1300mg/day
- ### SUGGEST:
- Calcium supplements 500 - 600mg/day **if dietary calcium not met**
 - Vitamin D (1000 - 2000 units/day for mild deficiency)
 - Incorporate multifactorial fall prevention strategies:
 - Hip protectors for those who are mobile
 - Exercise (balance, strength and functional training)
 - Medication reviews (Beer's criteria or STOPP/START criteria) by a Pharmacist, GP or Medical Specialist
 - Assessment of environmental hazards
 - Use of assistive devices
 - Management of urinary incontinence

If resident has a fracture, reassess

RECOMMEND:

- Dietary calcium intake 1000 - 1300mg/day
- Calcium supplements 500 - 600mg/day **if dietary calcium is not/cannot be met**
- Vitamin D supplements (1000 - 2000 UNITS/day for mild deficiency)
- Hip protectors for those who are mobile

SUGGEST:

- Exercise program **ONLY** when part of multifactorial fracture and fall prevention program

Is resident life span >1 year?

YES

NO

Pharmacological therapy not appropriate

Is CrCl ≥ 30 ml/min?

YES

NO

Does the resident have dysphagia?

YES

RECOMMEND:

- Denosumab* (60mg subcut twice yearly)
- Zoledronic Acid (5mg IV yearly)

SUGGEST:

- Teriparatide (20mcg subcut daily)
- Romosozumab (x2 105mg subcut monthly for 12 months)

For residents with CrCl 15-35ml/min
RECOMMEND:
• Denosumab* (60mg subcut twice yearly)

*Bisphosphonate therapies are not recommended
Clinical monitoring of calcium levels is recommended because of higher risk of hypocalcemia
Consider referral to specialist*

RECOMMEND:

- Alendronate (70mg weekly)
- Risedronate (35mg weekly or 150mg monthly)
- Denosumab* (60mg subcut twice yearly)
- Zoledronic Acid (5mg IV yearly)

SUGGEST:

- Teriparatide (20mcg subcut daily)
- Romosozumab (x2 105mg subcut monthly for 12 months)

Summary of Recommendations

For ALL Elderly Residents in LTC

STRONG RECOMMENDATIONS	CONDITIONAL RECOMMENDATIONS
<ul style="list-style-type: none"> Dietary interventions to increase food intake of calcium <p><i>The Recommended Daily Allowance for calcium is 1200mg</i></p>	Multifactorial interventions that are individually tailored to reduce the risk of falls and fractures

For LTC Residents at HIGH RISK of FRACTURE

STRONG RECOMMENDATIONS	CONDITIONAL RECOMMENDATIONS
<ul style="list-style-type: none"> Calcium supplementation up to 500 - 600mg daily if resident cannot consume 1000 - 1300mg of calcium through diet Vitamin D supplements of at least 1000 - 2000 UNITS daily for mild deficiency Hip protectors for those who are mobile <p>USE ONE OF THE FOLLOWING:</p> <ul style="list-style-type: none"> Alendronate (weekly) Risedronate (weekly or monthly) Denosumab (every six months) Zoledronic (yearly) 	<p>Multifactorial interventions that are individually tailored to reduce the risk of falls and fractures</p> <p>BALANCE, STRENGTH AND FUNCTIONAL TRAINING EXERCISES to be provided only when part of a multifactorial intervention to prevent falls and fractures</p> <ul style="list-style-type: none"> Teriparatide Romosozumab <i>Etidronate and Raloxifene NOT be used</i>

These recommendations apply to the elderly with life expectancy greater than one year. Alendronate and Risedronate are not recommended for elderly with severe renal insufficiency (CrCl <35ml/min or <30ml/min respectively).
Zoledronic Acid should not be administered in people with severe renal impairment (CrCl <30ml/min).
Romosozumab is contraindicated in people with hypocalcemia; pre-existing hypocalcemia must be corrected prior to initiating therapy with romosozumab.
Exercise caution for people who receive other medications that could affect renal function. Creatinine should be monitored before and periodically after treatment.

For LTC Residents NOT at High Risk of FRACTURE:

CONDITIONAL RECOMMENDATIONS
<p>Fracture prevention strategies depending upon resources and resident's (or their carer's) values and preferences:</p> <ul style="list-style-type: none"> Calcium supplementation up to 500 - 600mg daily, for those who cannot meet Recommended Dietary Allowance for calcium through food Vitamin D supplementation to meet the Recommended Dietary Allowance, 1000 – 2000 UNITS/day for mild deficiency Balance, strength and functional training exercises to prevent falls Hip protectors for those who are mobile

Interpretation of Strong and Conditional Fracture Prevention Recommendations

IMPLICATIONS	STRONG RECOMMENDATION ('RECOMMEND')	CONDITIONAL RECOMMENDATION ('SUGGEST')
FOR PATIENTS	Most individuals in this situation would want the recommended course of action, and only a small proportion would not	The majority of individuals in this situation would want the suggested course of action, but many would not
FOR CLINICIANS	<i>Most individuals should receive the intervention</i>	Clinicians recognize that different choices will be appropriate for each individual and that clinicians must help each individual arrive at a management decision consistent with his or her values and preferences