





Fracture Prevention for Long-Term Care 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 1200mg/day

SUGGEST:

- Calcium supplements ≤500mg/day if dietary calcium not met
- Vitamin D (≥800-2000 UNITS/day)
- 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)
- Assessment of environmental hazards
- Use of assistive devices
- Management of urinary incontinence

If resident has a fracture, reassess

RECOMMEND:

- Dietary Calcium 1200mg/day
- Calcium supplements ≤500mg/day if dietary calcium not met
- Vitamin D supplements (800-2000 UNITS/day)
- Hip protectors for those who are mobile

SUGGEST:

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

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)

RECOMMEND:

• Denosumab* (60mg subcut twice yearly)

YES

Zoledronic Acid (5mg IV yearly)

SUGGEST:

Teriparatide (20mcg subcut daily)

Bisphosphonate therapies are not

recommended

Clinical monitoring of calcium levels is recommended because of higher risk of hypocalcemia

Consider referral to specialist

Permission is required to modify, adapt or translate this tool (Email: Papaioannou@hhsc.ca)

This document is only to be used as a support decision tool.



Summary of Recommendations

For ALL Elderly Residents in LTC

STRONG RECOMMENDATIONS	CONDITIONAL RECOMMENDATIONS
Dietary interventions to increase food intake of calcium	Multifactorial interventions that are individually tailored to reduce the risk of falls and fractures
The Recommended Daily Allowance for calcium is 1200mg	

For Elderly LTC Residents at HIGH RISK of FRACTURE

STRONG RECOMMENDATIONS	CONDITIONAL RECOMMENDATIONS
 Calcium supplementation up to 500mg daily if they cannot consume 1200mg of calcium through diet Vitamin D supplements of at least 800 UNITS daily Hip protectors for those who are mobile 	Multifactorial interventions that are individually tailored to reduce the risk of falls and fractures BALANCE, STRENGTH AND FUNCTIONAL TRAINING EXERCISES be provided only when part of a multifactorial intervention to prevent falls and fractures
USE ONE OF THE FOLLOWING:	
Alendronate (weekly)	Teriparatide
 Risedronate (weekly or monthly) 	
 Denosumab for those who have difficulty taking oral medications 	Etidronate and Raloxifene NOT be used
 Zoledronic Acid for those who have difficulty taking oral medications 	
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).	
Exercise caution for people who receive other medications that could affect renal function. Creatinine should be monitored before and periodically after treatment.	

For Elderly LTC Residents **NOT** at High Risk of FRACTURE:

CONDITIONAL RECOMMENDATIONS

Fracture prevention strategies depending upon resources and resident's (or their carer's) values and preferences:

- Calcium supplementation up to 500mg daily, for those who cannot meet Recommended Dietary Allowance for calcium through food
- Vitamin D supplementation to meet the Recommended Dietary Allowance, 800 2000 UNITS/day
- 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	Most individuals should receive the intervention	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	