

Screened for eligibility (n = 626)

Ineligible based on screen (n= 423)

Age < 50 years old, n=10
Patient approached >1 week post-operative period, n=37
Bisphosphonate use <24 months ago, n=128
Calcitonin use <24 months ago, n=2
Hormone therapy use <24 months ago, n=5
Corticosteroid use >3 months at 2.5mg/day, n=5
Stroke <3 months ago, n=2
Metastatic cancer <5 years ago, n=27
Pathological fracture, n=17
Abnormally elevated Creatinine (weight unknown), n=6
Renal Insufficiency (CrCl<30 ml/min), n=26
Renal stones in <10 years ago, n=2
Patient admitted from a long-term care facility, n=128
Traumatic fracture, n=17
Male, n=11*

* exclusion criteria was modified to include males on October 11, 2007

Eligible based on screen (n=203)

Patient approached to participate in study, n=110

Not approached to participate (n=93)

Post-operative standard orders filled, n=50
Severe cognitive illness (ie: dementia, delirium), n=8
Advised not to approach due to violent episodes, n=1
Unable to communicate (hearing impaired, language barrier), n=5
Not eligible fracture (ie:acetabular), n=11
Not from greater Hamilton area, n= 9
Post-operative life-threatening complications prevented contact with patient, n=6
Multiple comorbidities, unlikely to make 3-month timepoint, n=1
Death prior to approach, n=2

Deny consent (n=45)

Not interested, n=26
Too overwhelmed, n=4
Cannot communicate well enough to provide consent, n=10
Does not like research, or unsure about safety, n=2
This study is a burden on care-providers, n=1
Patient does not want to take another pill, n=2

**Randomized
(n= 65)**

Allocated to Group A

Placebo (n=21)

Allocated to Group B

50, 000 IU vitamin D₂ (n= 22)

Allocated to Group C

100, 0000 IU vitamin D₂ (n= 22)

Completed 4-week/discharge
assessment
(n= 17)

Completed 4-week/discharge
assessment
(n= 18)

Completed 4-week/discharge
assessment
(n = 17)

Completed follow-up assessment
n= 17

Completed follow-up assessment
n= 12

Completed follow-up assessment
n = 18