Bone Health Protocol for Hip Surgery

1. All patients who have joint replacement surgery need a DEXA scan within 1 year preop and a recent Vitamin D level.

2. Men with osteoporosis should consider having their testosterone level checked by their PMD.

3. Hip resurfacing patients need a scan within 6 months of both femoral necks and LS. (Exception if they have metal in a hip)

4. The Standard protocol is bilateral femoral necks and LS (L1-L4). It must be reported as a T score.

5. If the Vit D level is not done in advance, it should be ordered preop at the hospital; But the problem is that we won't get it back on time to tell the patient before discharge.

6. Patients who need DEXA scans before their visit to Columbia:
    a. Patients who wish rapidly staged bilateral surgery.
    b. Women $\geq$ 60 years who wish HSR.
    c. Men $\geq$ 65 who wish HSR
    d. Patients with a history of osteoporosis

7. All other patients should be done in our DEXA scanner if possible. Too many tests are done incorrectly at other facilities. Precert them in advance if possible.

8. The cash price for a DEXA is only $150; no patient should be operated on without a scan.

9. I generally recommend HSR in all patients unless:
    a. Bone loss in the acetabulum or femur is extreme.
    b. Patients older than 65 with T, -2.5 of the operative hip.
    c. Patients who are fearful about metal allergy or are convinced that they have such an allergy (there are no clinically validated predictive tests)
    d. Patients who are high risk for persistent pain after joint replacement (work comp, greater than 4 listed allergies, severe depression or anxiety, or exhibiting pain catastrophising). If patients have persistent pain after polyethelene bearing THR they won't be subjected to a revision for unexplained pain, while patients with a M/M bearing will.

10. After surgery all patients should (for 6 months):
    a. Take Vitamin D 1000 units daily.
    b. Take biologically based (algae)calcium 2000mg daily.
    c. Avoid smoking.
    d. Avoid alcohol intake greater than 2 drinks / day.

11. For HSR or THR patients additional treatment is needed:
    a. If DEXA scan of the operative femoral neck is T< 0:
        i. Fosamax for 6 months.
    b. If DEXA scan of the operative femoral neck is T≤ -1.5:
        i. Fosamax for 1 year
        ii. Slow down program (crutches 6 weeks + cane 1 month).
    c. If BMI > 29 (obesity):
        i. Fosamax for 6 months.
    d. Hardware removal is required:
        i. Fosamax for 6 months
        ii. Slow down program
    e. If T score is ≤-2.5:
        i. Special risk counseling
        ii. Fosamax for 1 year.
        iii. Slow down program.
        iv. No high impact activities for 1 year

12. For all non Hip Surgery patients
    a. If T score≤-1.5: Fosamax for 6 months.
    b. If T<-2.5 they should start Fosamax for 1 year and be referred to Dr. Armsey or their PMD.

13. All patients who are on Fosamax for 1 year should have their DEXA rechecked at that time; the operative hip cannot be checked. It is best if this scan is done at our scanner at the follow-up visit. The patient must remember to call in advance so that it can be precerted.

14. After 6 months there is no longer any fracture risk; all desired activities could be resumed. Patients with T < -1.5 should be encouraged to *gradually* begin some impact activities such as step aerobics or jogging.

15. Patients with Vitamin D level of > 30 are normal.

16. If the Vit D level is < 30 they should take Vit D 1000 units daily for three months and then have it rechecked by their PMD periodically.

17. Patients who don't keep a check on their Vit D level, may expect their bone quality to deteriorate after many years.

18. At the 6- week follow-up visit we should **check** the patients fosamax and WB protocol to make sure that they are on the correct program.

19. If patients are unable to take fosamax, we can try bimovo (effervescent fosamax), prolia is the next step, more costly but also more effective.