

Vitamin D Levels in a Single Primary Care Practice Near Boston

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There are no national or World Health Organization guidelines about how doctors should screen men for Osteoporosis prevention.

Therefore, the apparent number of men who have Osteoporosis does not reflect the total number of such men, since “routine screening” would undoubtedly pick up additional patients with Osteoporosis.

Doctors typically screen women for Osteoporosis in the following ways:

1. Bone Density Scans are done at age 50 (since estrogen wanes then)
2. Vitamin D levels are done at age 50
3. Counseling about adequate Calcium intake is started at any age over 20

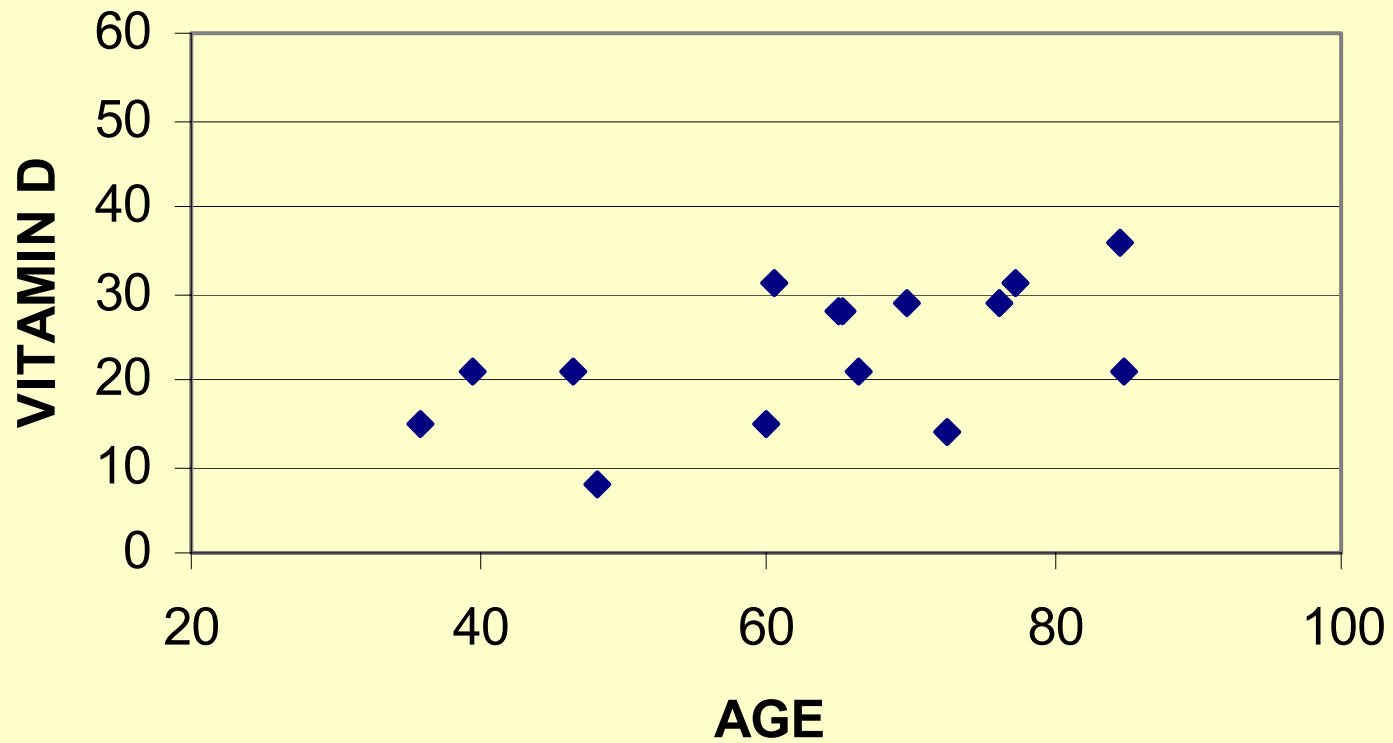
How this project got started:

- 46 yo Caucasian male who had a routine physical, with no particular complaints, routine blood work was done in Dec. 2004.
- Alkaline phosphatase came back high.
- “Bone Disorder” Endocrinologist suggested I check Vitamin D levels, since Vitamin D deficiency could cause isolated elevated Alkaline phosphatase.
- Vitamin D level was 12 (20-50 is “normal”).

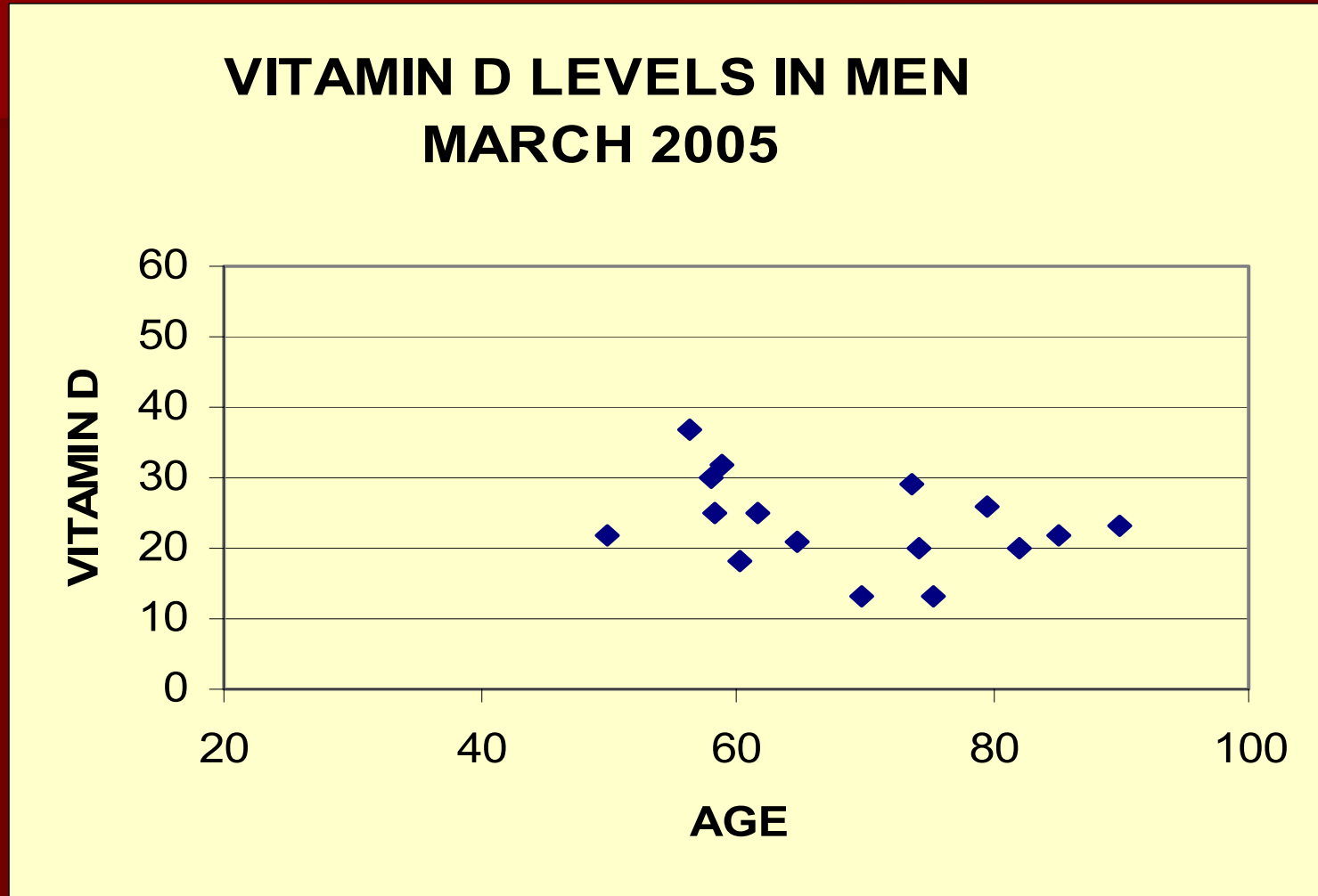
Next steps: Jan. – Feb. 2005

- Vitamin D levels (ng/ml) were checked when men came into the office and seemed to be generally frail (elderly, underweight).
- Three underweight software engineers who were born in India were tested.
- Results showed it to be unexpectedly common to have low levels of Vitamin D.
- All Indian-born patients tested had low levels of Vitamin D.

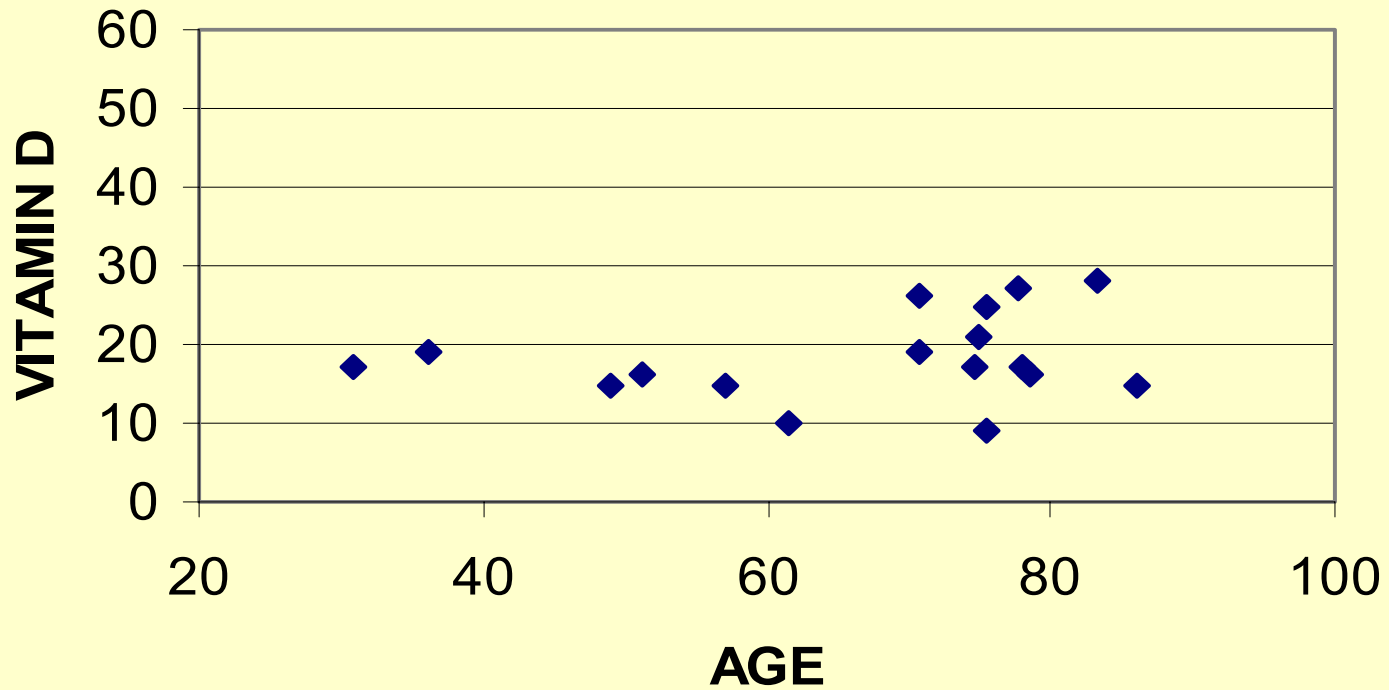
VITAMIN D LEVELS IN MEN JAN 21 through FEB 28, 2005



Starting more widespread testing

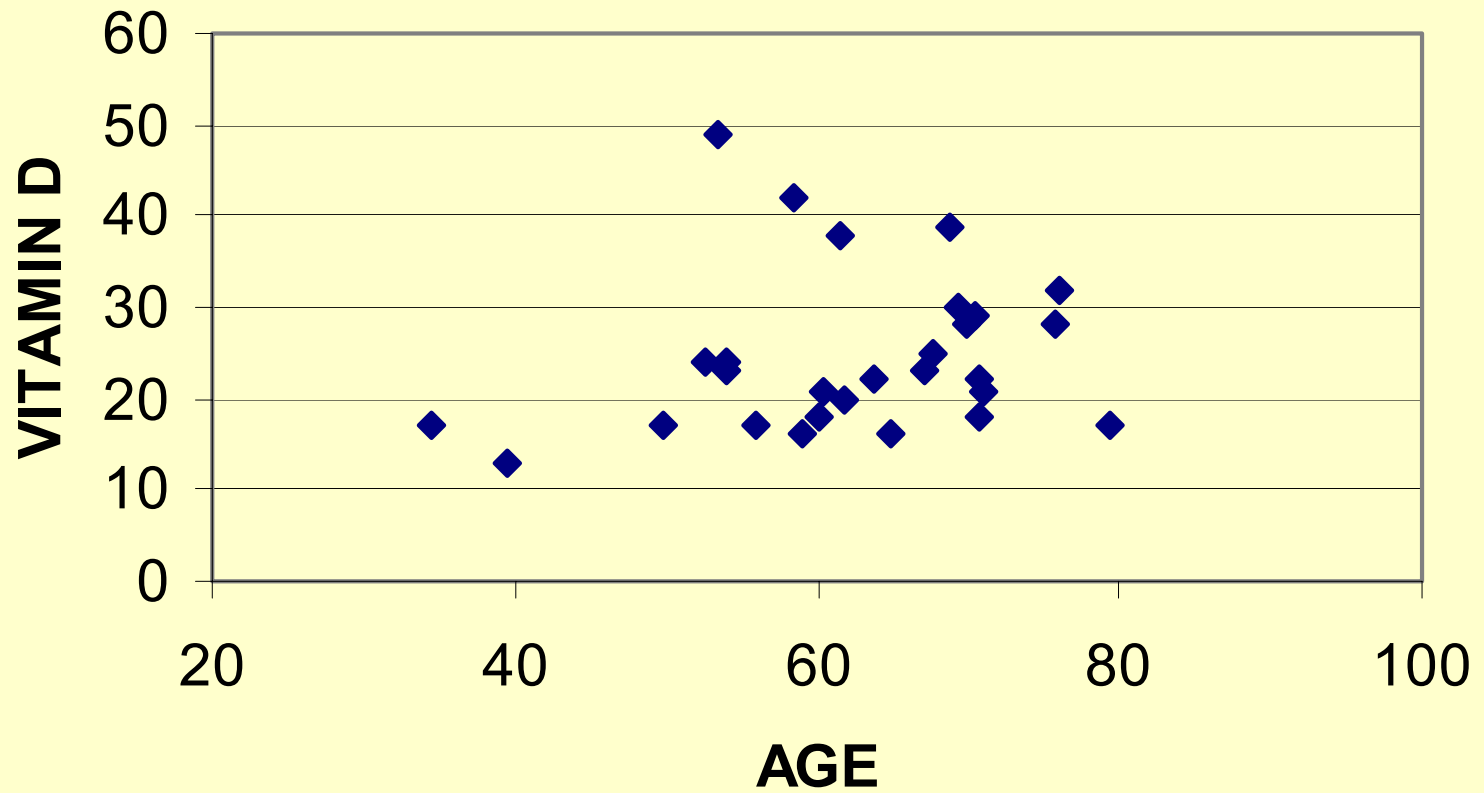


VITAMIN D LEVELS IN MEN APRIL 2005



Starting to test “all comers” of
patients who came for
physicals: May – August 2005

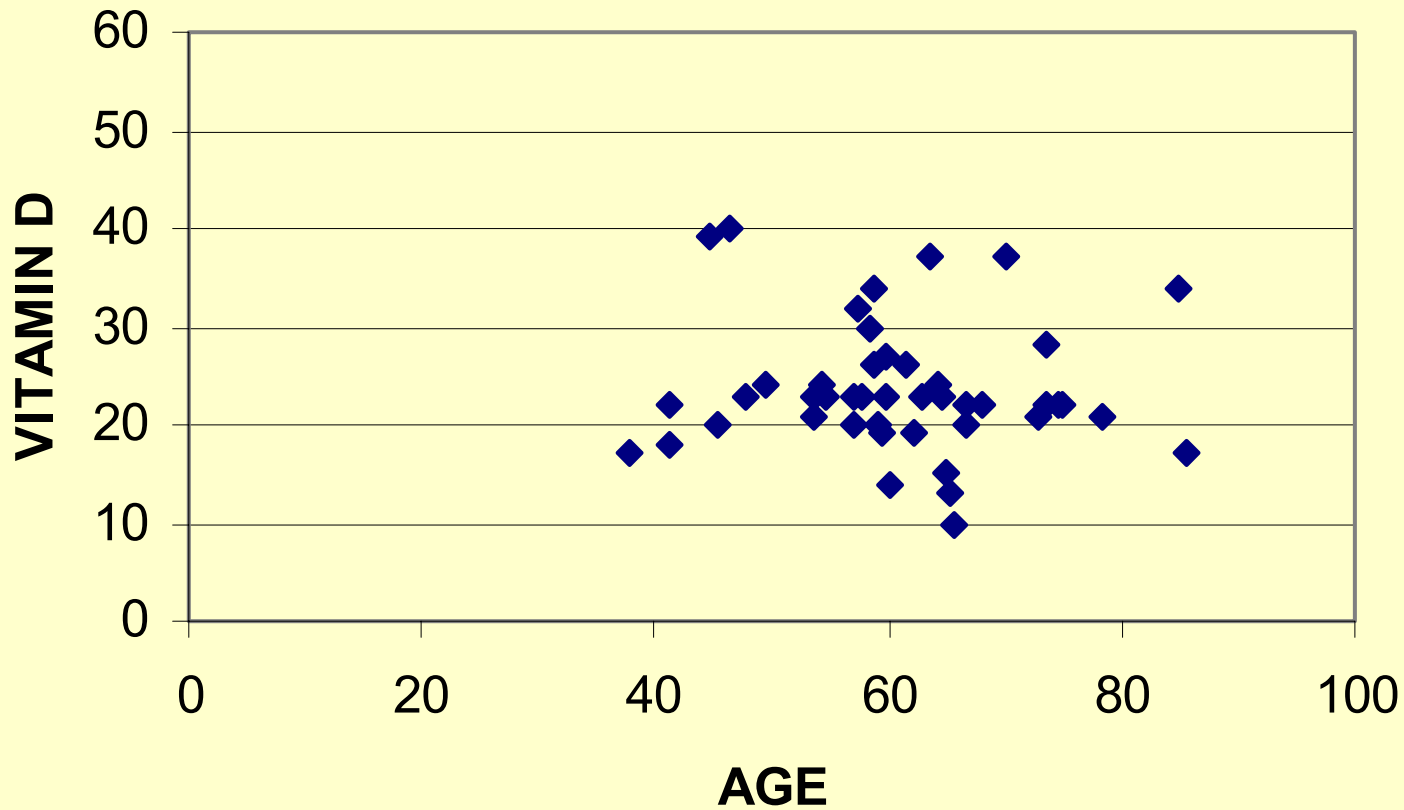
VITAMIN D LEVELS IN MEN MAY 2005



Starting to test “all comers” of patients who came for physicals: May – August 2005

- Of the 28 men who came in for physicals in May, 9 had Vitamin D levels below 20, another 13 had levels between 20 and 30.
- Of the 44 men who came in for physicals in June, 9 had levels below 20 and another 28 had levels between 20 and 30.

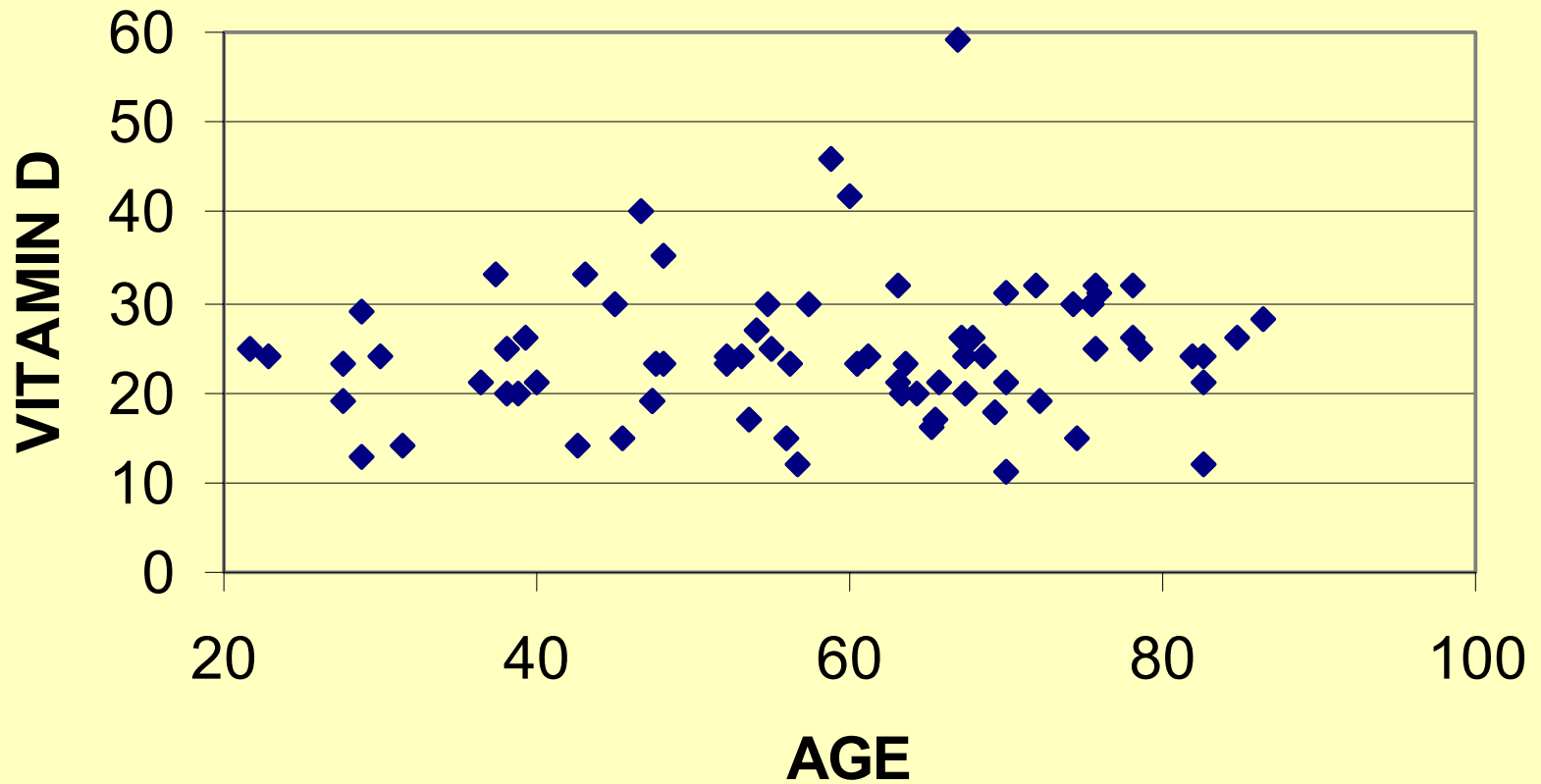
VITAMIN D LEVELS IN MEN JUNE 2005



Starting to test “all comers” of patients who came for physicals: May – August 2005

- In May, of the 15 women who came in for physicals, 8 had Vitamin D levels below 20 and 6 had levels between 20 and 30.
- In June, of the 11 women who came in for physicals, 2 had levels below 20 and all the other 9 had levels between 20 and 30.

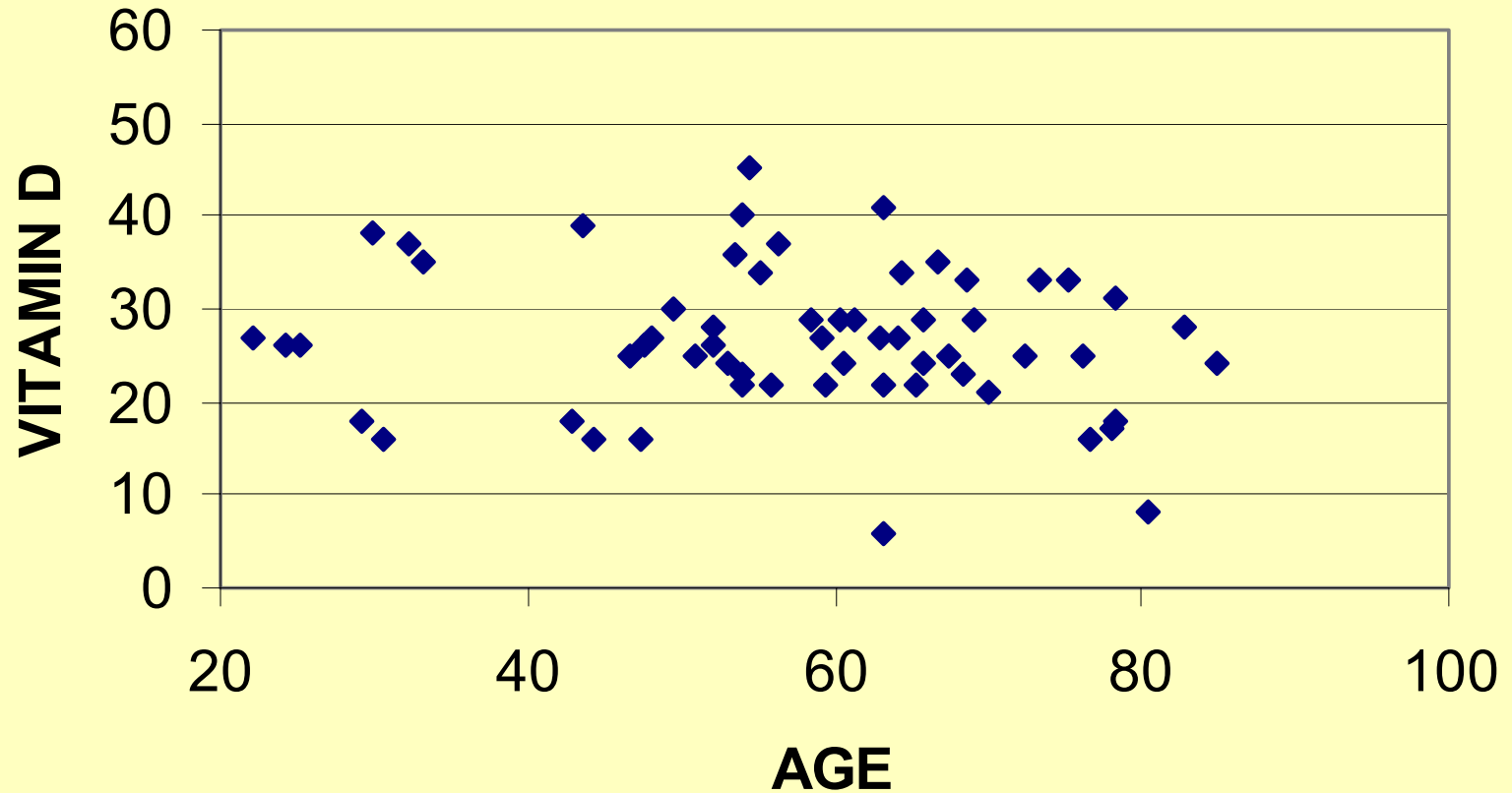
VITAMIN D LEVELS IN MEN JULY 2005



Starting to test “all comers” of patients who came for physicals: May – August 2005

- In July 2005, of 77 men who had physicals, 17 had Vitamin D levels below 20 and 40 had levels between 20 and 30.
- In August 2005, of 60 men who had physicals, 10 had Vitamin D levels below 20 and 32 had levels between 20 and 30.

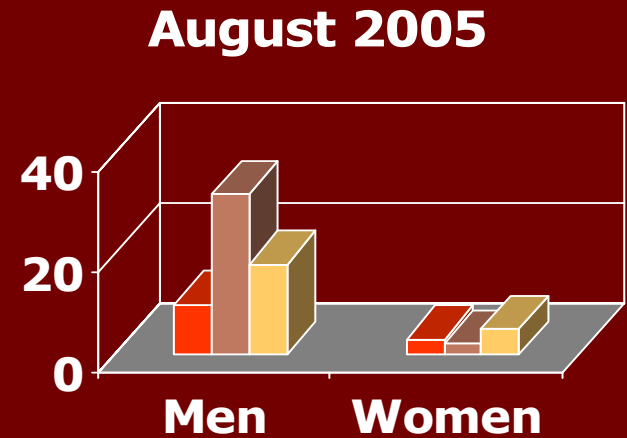
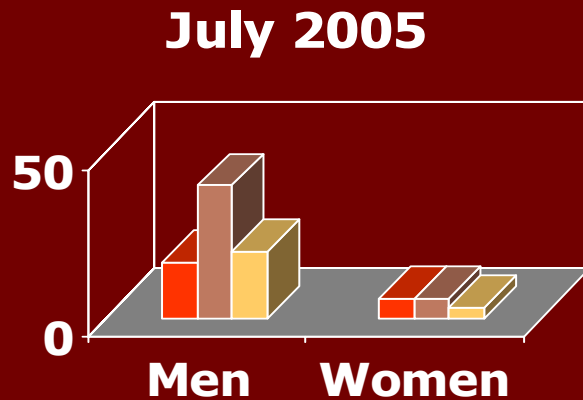
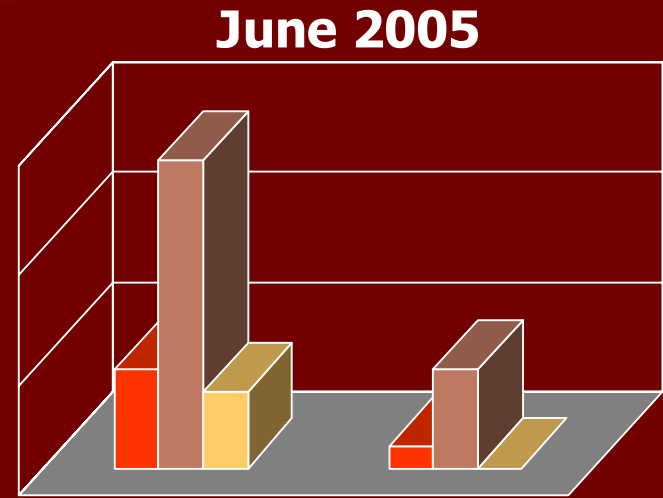
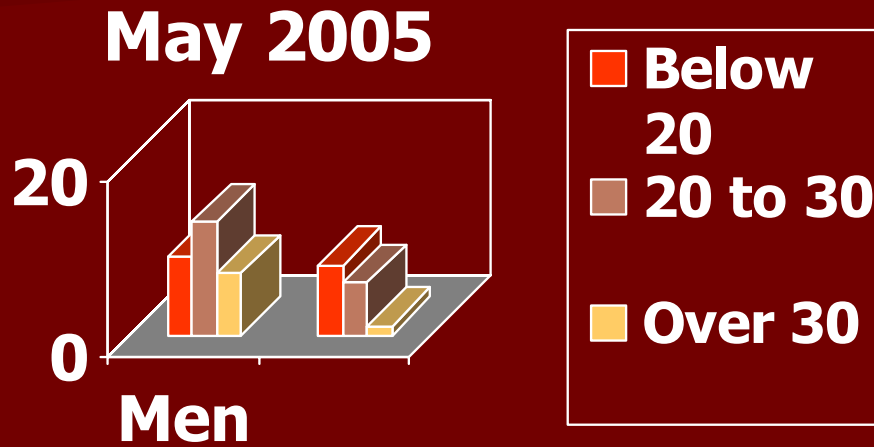
VITAMIN D LEVELS IN MEN AUGUST 2005



Starting to test “all comers” of patients who came for physicals: May – August 2005

- In July, of 15 women who had physicals, 6 had levels below 20 and 6 had levels between 20 and 30.
- In August, of 10 women who had physicals, 3 had levels below 20 and 2 more had levels between 20 and 30.

Of the "all comers" in May - August



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In summary, then, the gross numbers of men with low levels of Vitamin D (ng/ml) are:

- In February, 4 were below 20, 8 were 20-30
- In March, 3 were below 20, 10 were 20-30
- In April, 12 were below 20, 5 were 20-30
- In May, 9 were below 20, 13 were 20-30
- In June, 9 were below 20, 28 were 20-30
- In July, 17 were below 20, 41 were 20-30
- In August, 10 were below 20, 33 were 20-30
- In total, 64 were below 20, 138 were 20-30

Take home messages

1. In any PCP practice in northern states, there are probably many men who have Vitamin D deficiency but aren't being tested for this; there are no guidelines.
2. In any PCP practice in northern states, the presence of Vitamin D deficiency puts male patients at risk for Osteoporosis.
3. The risk of Osteoporosis in men in northern states needs more consideration.

Take home messages

- It is not uncommon for men who have low levels of Vitamin D to report that they HAVE been taking multivitamins regularly; the mere fact that someone has been taking supplements does not indicate that they do not need to be tested. Presumably absorption is an issue for some patients, both men and women.

Take home messages

- The issue of which men should have Bone Density Scans remains to be addressed:
- All men who have HAD a fracture of any type should be tested, but whether all men should be tested at, say, age 70 is still up in the air. Whether they should be tested earlier remains to be evaluated.

Take home messages

- Because men often have arthritic changes seen in their spine, routine Bone Density scanning of the lumbar spine and of the hip may give falsely negative results for the spine. Scanning the wrist may be a more accurate assessment of the risk of fracture in a man than the usual lumbar spine and hip scans.