Vitamin D Controversy:
Frank J. Domino, M.D.
Professor
Dept. of Family Medicine & Community Health
Un. Of Massachusetts Medical School
Worcester, MA
Frank.domino@umassmemorial.org

Physiology of Vitamin D
NOT a Vitamin; but rather a hormone; Fat Soluble
Vitamin D “job”: to maintain Serum Calcium
Obtained from Diet or Sun Exposure; UV B converts 7 dehydrocholesterol to D3
Dietary Vitamin D3 & D2 thru. Intestine

Glossary
Vitamin D —Calciferol; group of chemicals related to Vitamin D
Cholecalciferol (D3) In animal foods and supplements
Ergocalciferol (D2) from Plant sources
Calcidiol (25 Hydroxy D3) *** Serum Level
Calcitriol (1, 25 Hydroxy D3) Active Form

Who is at RISK for Vitamin D Deficiency
Women at 50
Dark Skinned Individuals
Veiled
Seniors/Nursing Home
Chronics Aches
Multiple Fractures
Pregnant/PMS
Malabsorption

How to Test
25 Hydroxy (OH) Vitamin D level
Interpretation:

IOM
WNL: 20-100 ng/ml (50-250 nmol/L)
Deficient < 20 ng/ml (< 50 nmol/L)

Treatment
25 Vitamin D*  Status  Treatment
--20 – 100 ng/mL (50-250 nmol/L) Sufficient 800-4,000 IU D3/Day
--< 20 ng/mL (<50 nmol/L) Deficient 50,000 IU D2/week
(Ergocalciferol) x 12 Wk; Then 2,000 D3/Day

Outcomes Improved By Vitamin D
Lowers Risk of Hip Fractures and Falls
Lowers Risk for Some Cancers (Breast, Colo-rectal), Depression, ? MS
Lowers ALL CAUSE Mortality