The following slides are a graphic representation of the material presented in Rep. Seaton's State of Reform 2014 booklet which can be found on-line at:

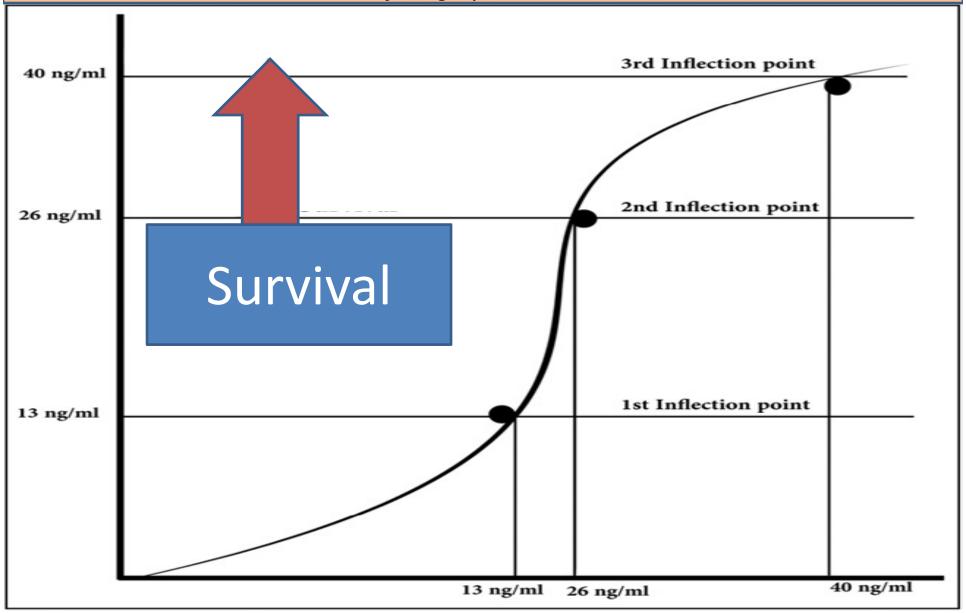
http://www.housemajority.org/wp-content/uploads/2014/10/State of Reform 2014.pdf

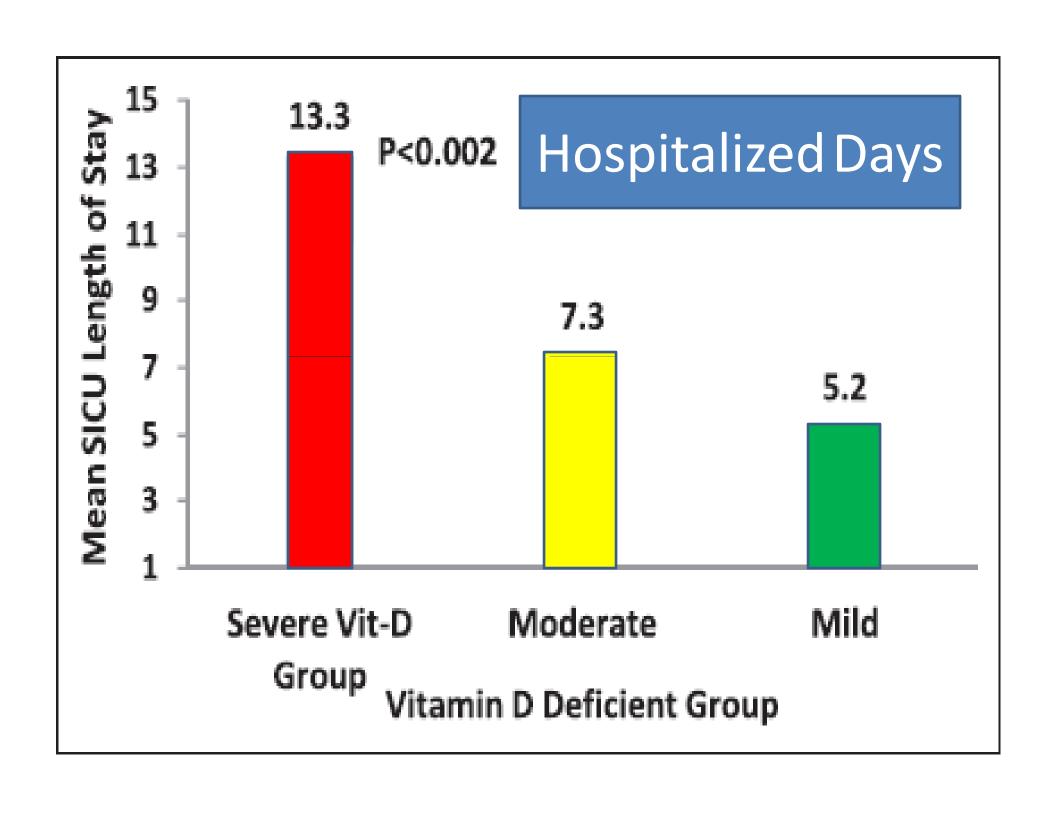
### State of Reform 2014

Representative Paul Seaton

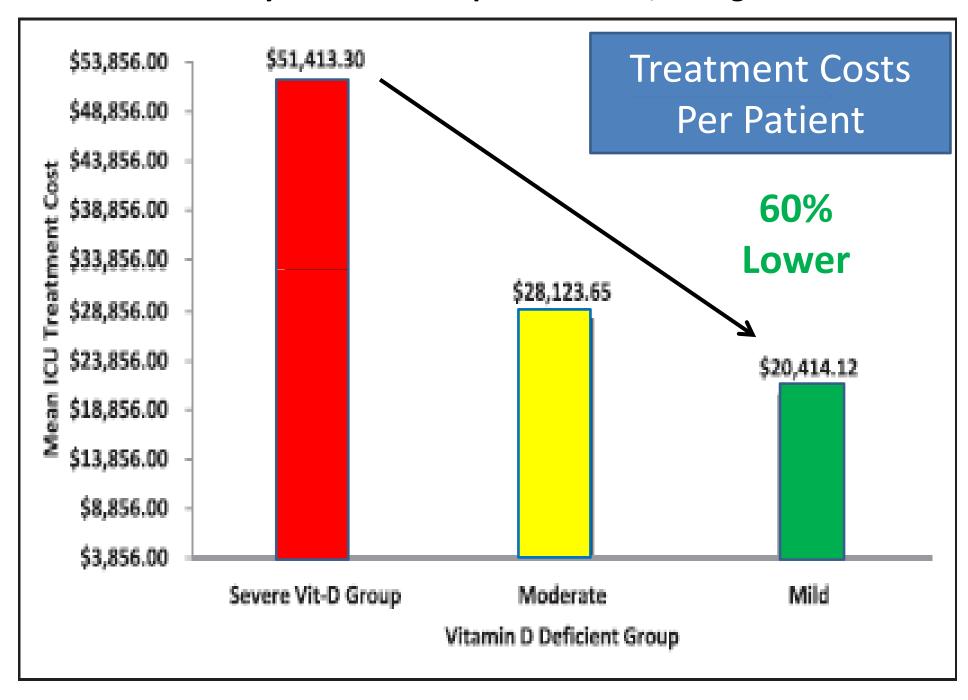
Evidence Based Medicine?

Worsening Severity of Vitamin D Deficiency is Associated with Increased Length of Stay, Surgical Intensive Care Unit Cost, and Mortality Rate in Surgical Intensive Care Unit Patients – American Journal of Surgery, Matthews, et. al. 2012

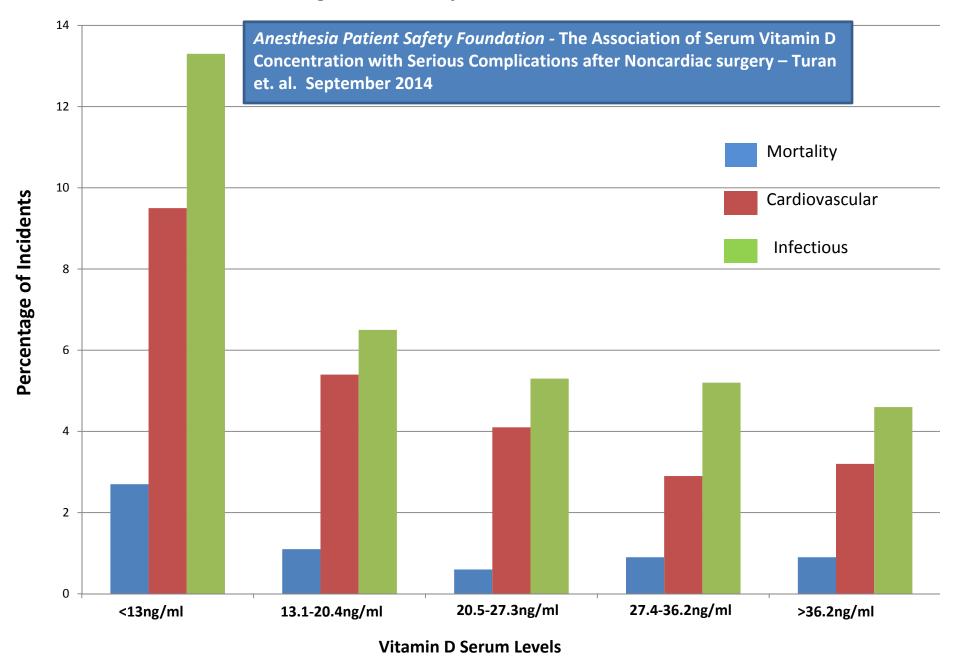




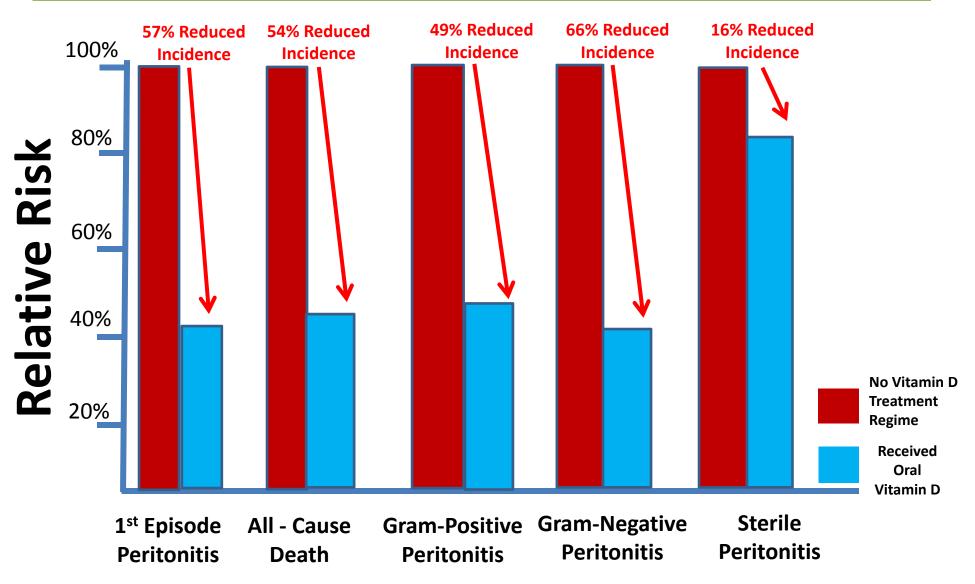
#### Grady Memorial Hospital Atlanta, Georgia



### Incidence of In-Hospital Mortality and Cardiovascular and Infectious Morbidities for 3409 Noncardiac Surgical Patients by Quintiles of Serum Vitamin D Concentrations



# Treatment with Oral Active Vitamin D is Associated with Decreased Risk of Peritonitis and Improved Survival in Patients on Peritoneal Dialysis - Kerschbaum et. al. *PLOS ONE*, July 2013



Treatment with Oral Active Vitamin D is Associated with Decreased Risk of Peritonitis and Improved Survival in Patients on Peritoneal Dialysis - Kerschbaum et. al. *PLOS ONE*, July 2013

#### **Other Outcomes**

Months to first episode of peritonitis with no oral active vitamin D: 5.5

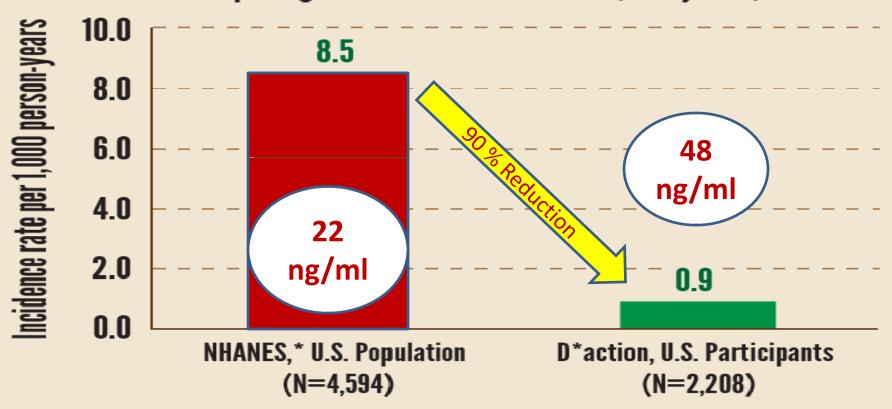
Months to first episode of peritonitis with oral active vitamin D: 16.3

Episodes of peritonitis per patient-year with no oral active vitamin D: 0.45

Episodes of peritonitis per patient-year with oral active vitamin D: 0.29

#### **TYPE 2 DIABETES**

### Diabetes Incidence: Comparing NHANES\* and D\*action (18+ years)





www.grassrootshealth.net

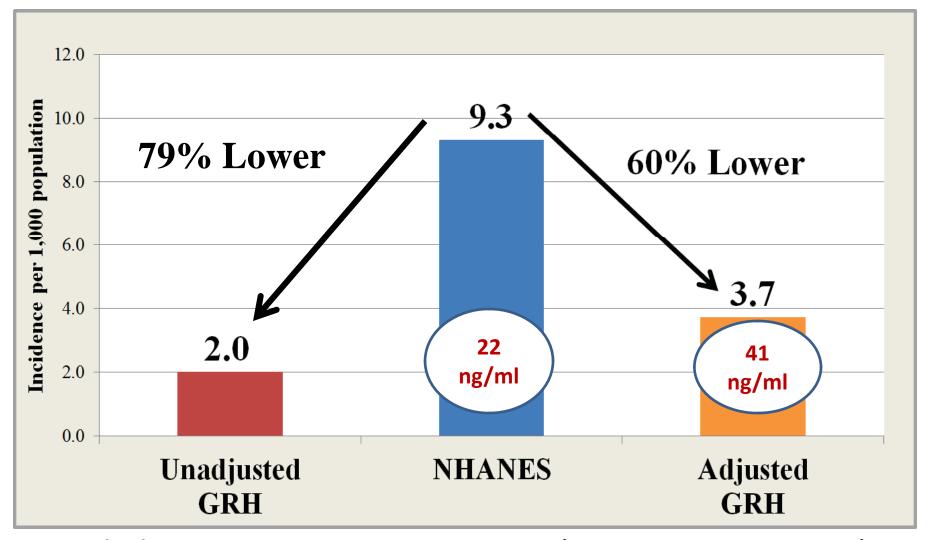
\*DATA SOURCE: NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (NHANES), 2005-2006

\*\*RATE RATIO = 9.7 (P=0.0002)

Chart Date 8/6/13

© 2013 GrassrootsHealth Preliminary data, not yet published.

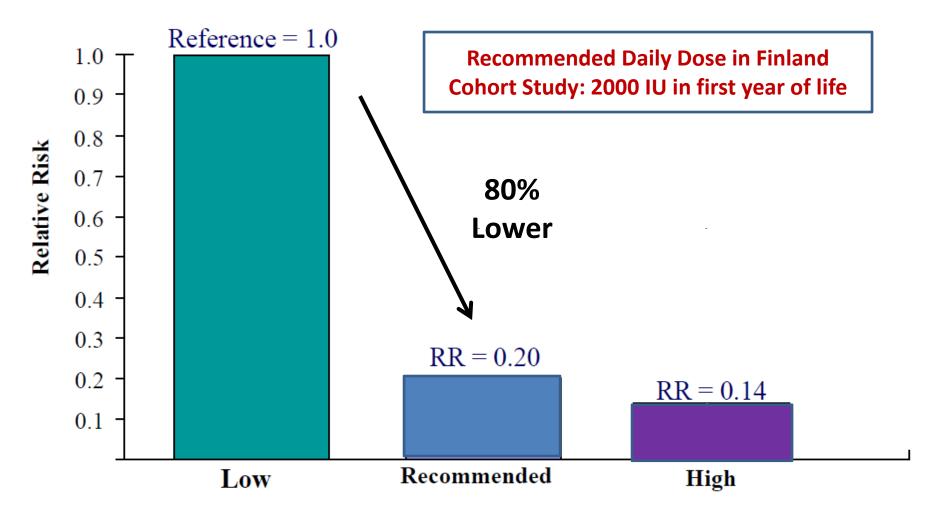
Type 2 Diabetes Incidence in GrassrootsHealth (N=4,933) and NHANES (N=4,078 Cohorts



Median 25 (OH)D concentration in GRH cohort was 41 ng/ml and in NHANES was 22 ng/ml

Data from GrassrootsHealth presentation at the June 2014 International Vitamin D Workshop

### Infants' Vitamin D Supplementation Dose and Incidence of Type I Diabetes in Children in Northern Finland

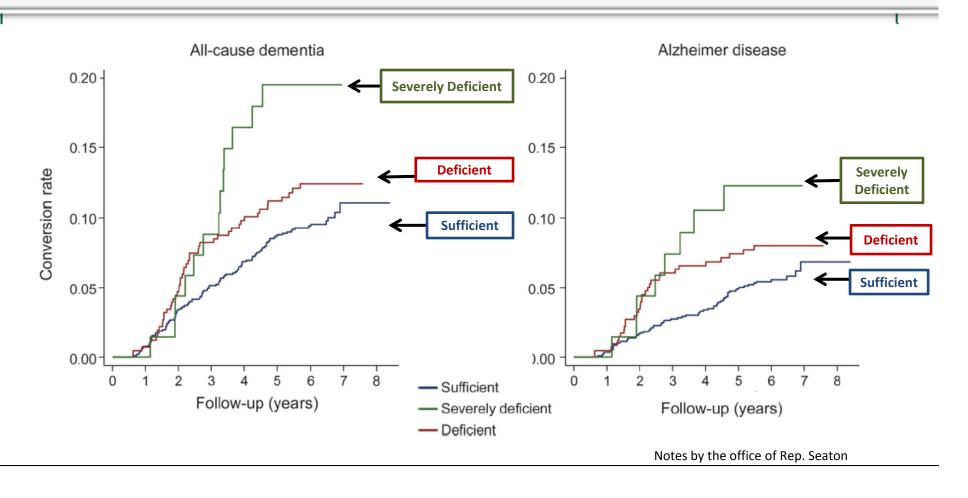


Relative Risk and 95% confidence intervals for diabetes by vitamin D supplementation dose, Birth Cohort study, N=12,055 pregnant women

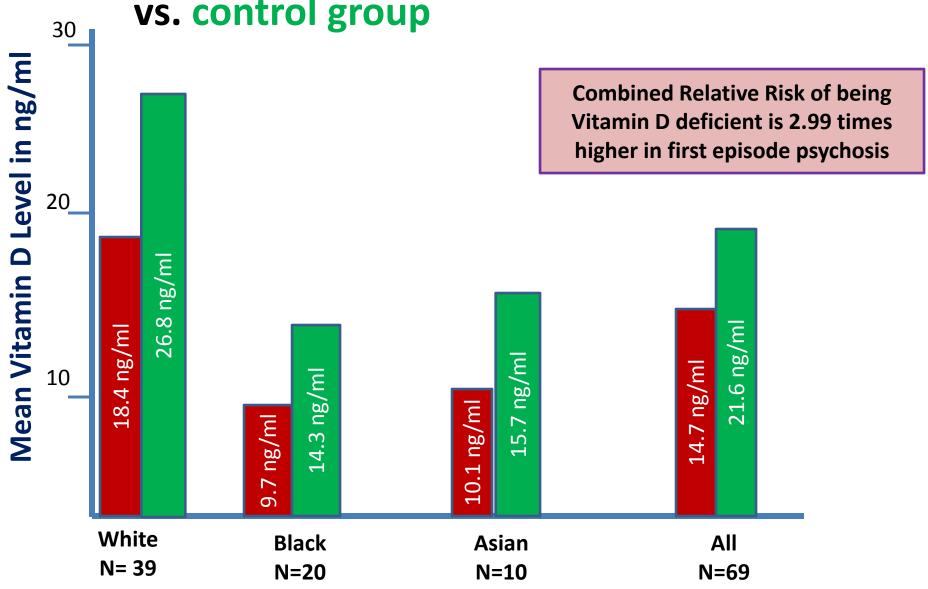
Source: Hyppönen E, Läärä E, Reunanen A, Järvelin MR, Virtanen SM.Intake of vitamin D and risk of type 1 diabetes: a birth-cohort study. Lancet. 2001;358:1500-3.

Vitamin D and the risk of dementia and Alzheimer disease *Neurology* published online August 6, 2014

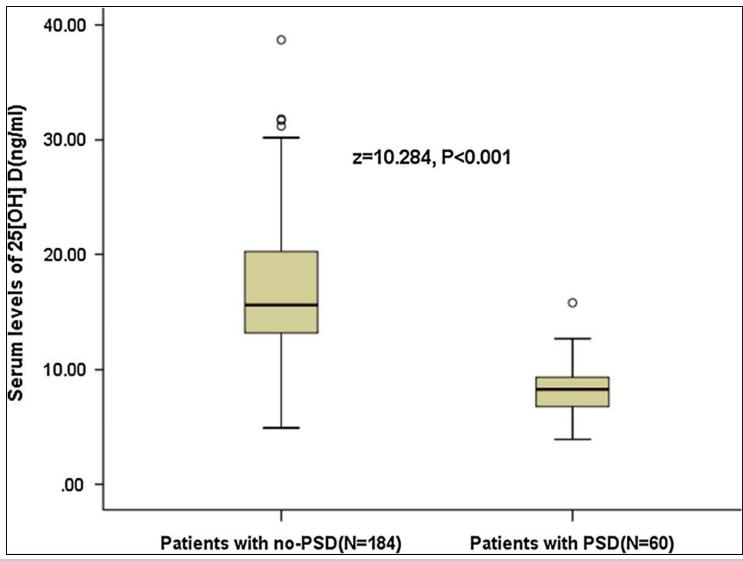
## Clear Link Found Between Vitamin D Deficiency and Alzheimer's Disease – **Yahoo Health**



# Vitamin D level at first episode psychosis vs. control group



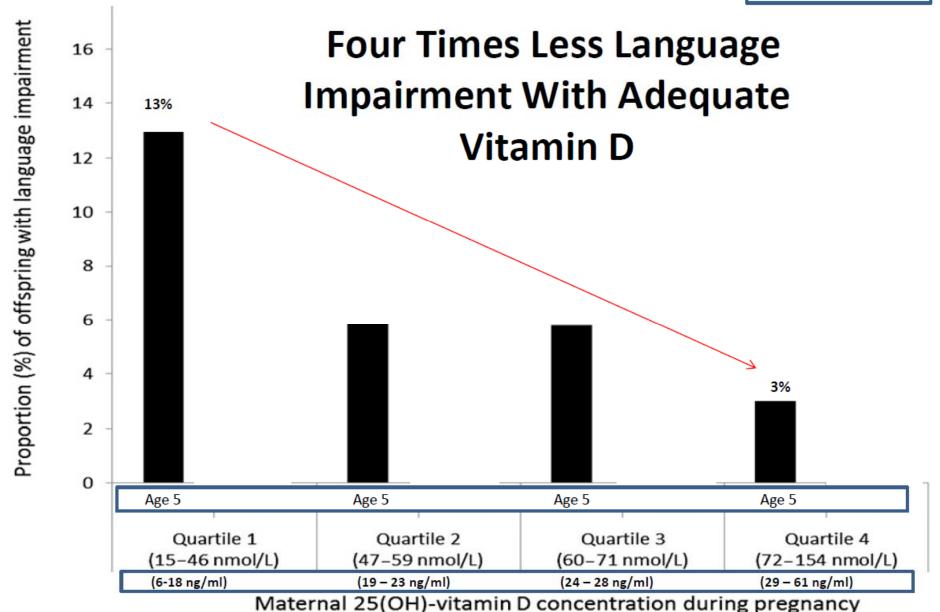
Association of Serum 25-Hydroxyvitamin D with Symptoms of Depression after 6 months in Stroke Patients – *Neurochemical Research*, August 2014, Wei Yue et. al.



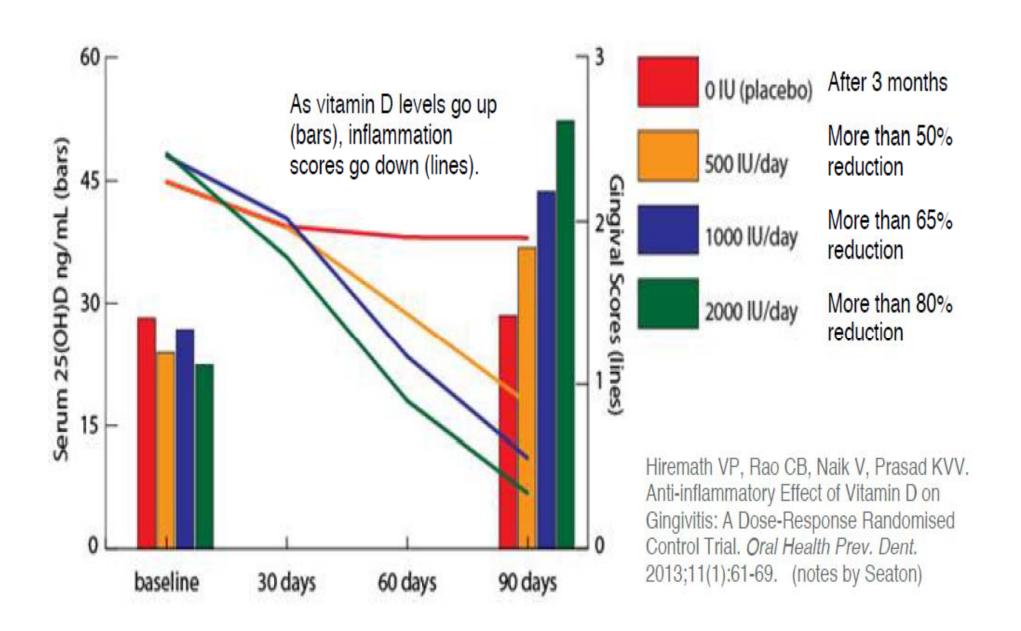
Odds Risk for Post Stroke Depression (PSD) increased by 21.12 times if vitamin D levels were below 11.2 ng/ml and still increased 10.32 times when fully adjusted for all confounders – notes by office of Representative Paul Seaton

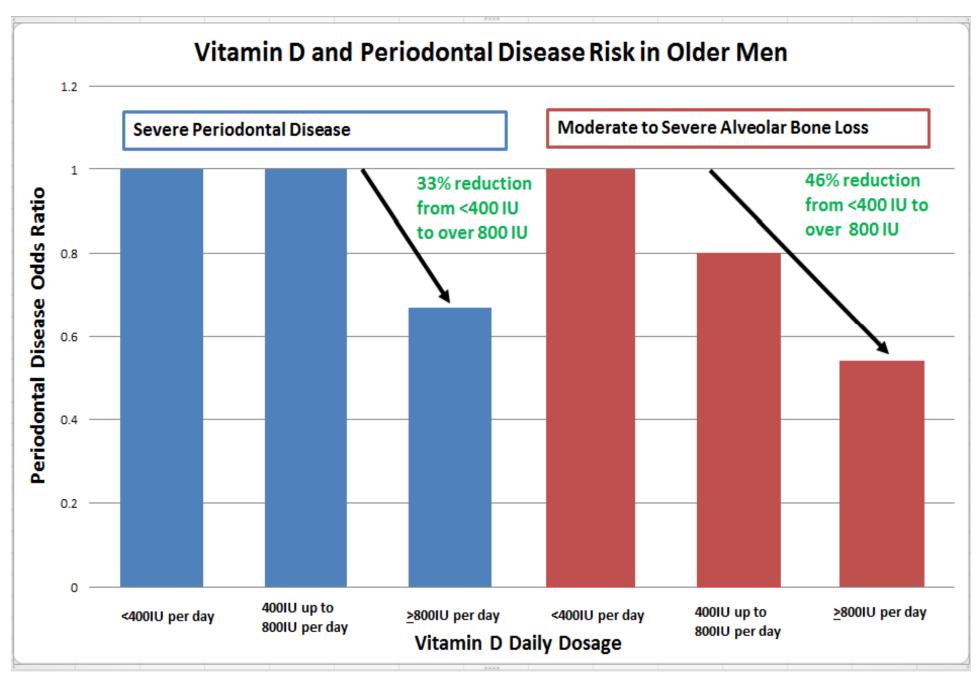
Figure 1 data format changed and notes added by Rep. Seaton From Whitehouse, A. (2012) "Maternal Serum Vitamin D Levels during pregnancy and offspring neurocognitive development." Pediatrics 485-493



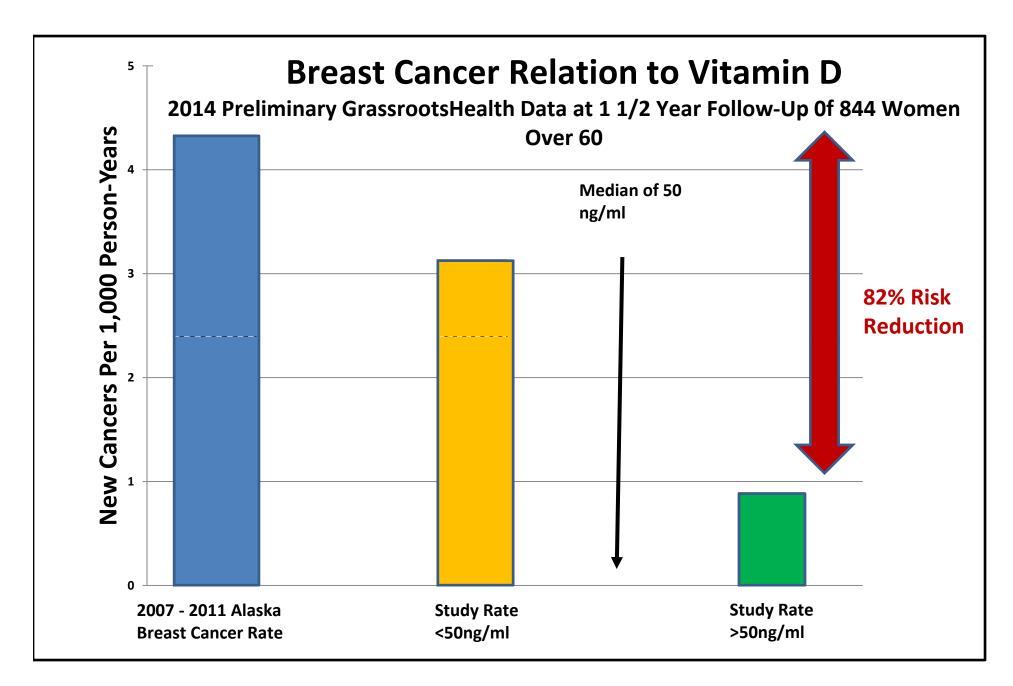


#### Inflammatory gum disease

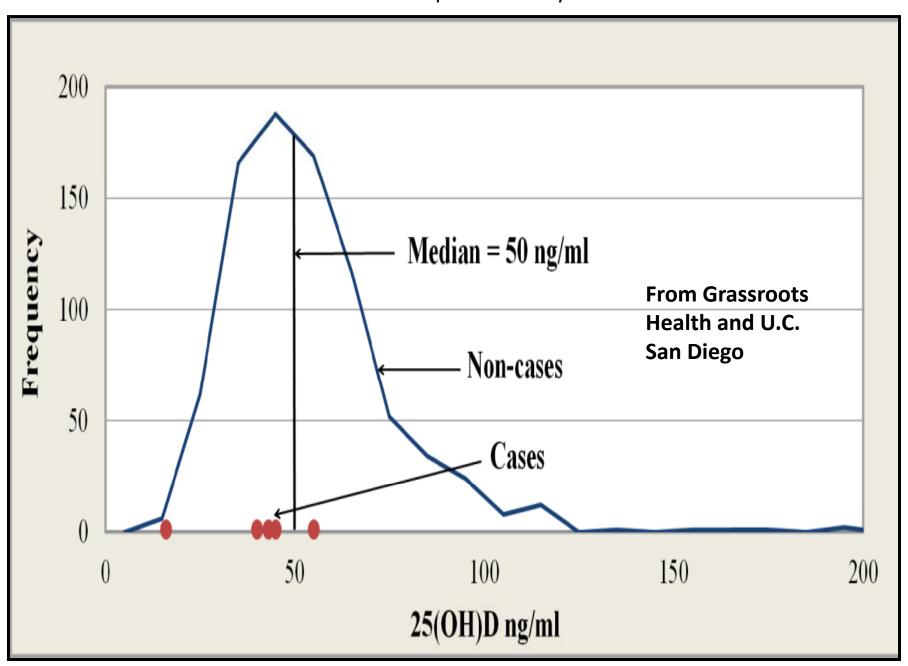




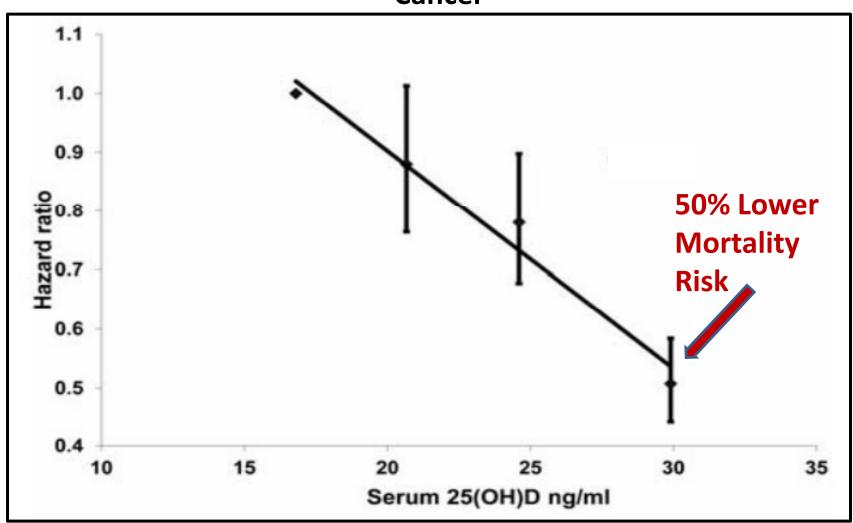
Vitamin D and Periodontal Disease Risk in Older Men, Journal of Dental Research, August 2013 Alshoubi et. al.



Hazard ratio of breast cancer for those with serum 25(OH)D <50ng/ml was 5.1 times more compared to those with > 50ng/ml, adjusting for age and BMI. Chart arranged by the office of Representative Seaton



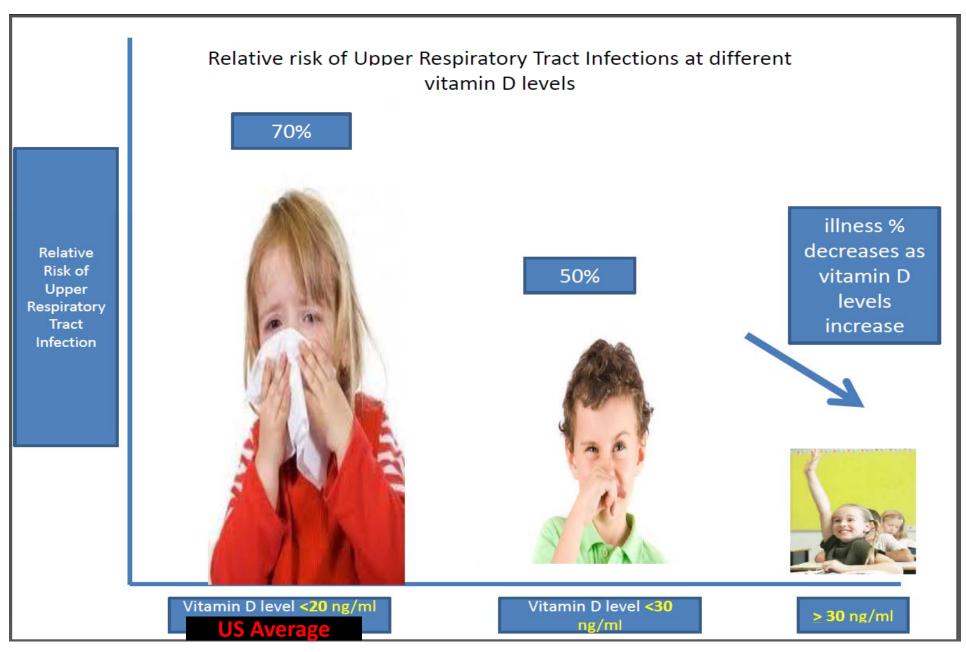
### 2014 Mohr et. al.: 25-Hydroxyvitamin D and Survival in Breast Cancer



Anticancer Research 2014 Mar;34(3):1163-6.

Meta-analysis of vitamin D sufficiency for improving survival of patients with breast cancer.

Mohr SB<sup>1</sup>, Gorham ED, Kim J, Hofflich H, Garland CF.



Low Serum 25 Hydroxyvitamin D level and Risk of Upper Respiratory tract infection in Children and Adolescents Science et. al. Journal of Clinical Infectious Diseases, August 2013 volume 57.

Slide prepared by the office of Representative Paul Seaton