

# Vitamin D Deficiency (VDD) is a Global Pandemic!

VDD is estimated to affect one billion people worldwide and 70-80% of people in the U.S.

VDD affects 5% to 99% of people dependent upon age, race, gender, group, location, etc.

VDD is very associated with major diseases that cause health disparities.

VDD causes massive global pain, suffering & pre-mature death.

VDD is ***THE KING OF ALL SILENT KILLERS***

To Fact Check: Go to [www.Pubmed.gov](http://www.Pubmed.gov) and put listed PMID numbers in the Top Search Bar

[PMID#s 18400738, 20590017, 21702395, 21896873, 23075936, 23306192, 23364265, 24219374, 25071593 25856222, 28513755, 28516265, 28768407]

**"Actions are urgently needed to protect the global population from the threats posed by Vitamin D Deficiency."**

[2017 PMID: 28768407]<sup>1</sup>

The purpose of this [www.VDDKills.com](http://www.VDDKills.com) web-site  
([www.VitaminDDeficiencyDiseases.com](http://www.VitaminDDeficiencyDiseases.com))

is to sound an alarm along with the coming book:

***The Global Pandemic of VDD (Vitamin D Deficiency)***

**The front page of this site was recently changed in order to address the current headlines of exploding healthcare costs, chronic disease increases, life-span decreases, hospitals closing and MENTAL ILLNESS. It will address the top 12 LEADING CAUSES of DEATH that result in 50-75% of all healthcare costs. It will address the top MENTAL ILLNESS CONDITIONS that so often are more common with VDD.**

**The aim of this site and the coming book** is to teach the public, healthcare providers, public authorities and some researchers about The Global Pandemic of VDD. Sadly, many people in research and medicine still believe that Vitamin D, the "Sunshine" Vitamin, is only needed for teeth and bones. For over a decade, medical articles have reported that Vitamin D does so much more. It is **critical to the immune system**. It has been shown to have **anti-bacterial, anti-viral, anti-inflammation, anti-anxiety, anti-depressive, anti-pain & anti-cancer actions**. To change "Managed Care" into "Preventive & Cure Care" we need immediate action against the pandemic. **Over-the-counter Vitamin D3 is safe & simple, with positive effects. One year of D3 costs only \$20 to \$40.**

**Vitamin D Deficiency is similar to Vitamin C Deficiency scurvy, which reportedly killed 1-2 million sailors between 1500 and 1800, yet they are very different.** Both involve just one nutrient vitamin. Both are best at preventing disease. Both can lead to grave sickness and death. But VDD is different than scurvy in many ways. **VDD can SILENTLY** impact a person for life with a myriad of diseases beginning at conception. **Scurvy shows clear outward signs** of tissue and blood vessel breakdown resulting in inflamed, bleeding and swollen gums, tooth loss, and purplish bleeding skin for months before death. VDD can affect a person for years before deadly secondary diseases occur that cannot always be reversed. When discovered, scurvy can be reversed in weeks if caught soon enough, while VDD takes months. VDD is a silent killer until the myriad of secondary often chronic and deadly diseases appear. So, it is paramount that regular Vitamin D blood tests are done to check for VDD. Sadly, many people have NEVER been tested for VDD. And most people have NEVER routinely been re-tested for VDD, although patients assume it is done with a routine blood test. Even sadder, is that most hospitals do NOT test for VDD pre-admission, or after admission. Researchers found Vitamin D levels can help determine total length of stay in the hospital, and whether a patient survives or not. ***It is time to globally TREAT VDD!***

**The Global Pandemic of VDD exists for a number of reasons.** Lack of public education is one. The main reason worldwide VDD has been missed, dismissed, and/or ignored, is likely because two groups of researchers have been debating Vitamin D Testing and Recommended Dietary Allowance (RDA), for over a decade. **VDD is so common & related to so many diseases, it seems logical the D3 RDA indeed is set too low. You decide!**

**It is very possible that Dental Doctors, and their Staff, can help** lead the way in eradicating VDD. In 1900, oral infection was a leading cause of death. Since then, Dental Doctors & Staff made it extremely rare. VDD increases tooth decay, gum disease, bone loss and tooth loss. Dental Doctors can help diagnose rampant VDD by prescribing Vitamin D blood tests & immediately telling adult patients to take **4,000 IU per day of OTC D3**. Patients should ask their medical doctor if they can take even more OTC D3, per Endocrine Society recommendations. After 2-3 months of a higher D3 intake, patients can be tested again to see if they need to take more. The current “normal” lab test D range is 30-100 ng/ml. **A minimum of 50-80 ng/ml may be much better.**

**“Men occasionally stumble over the truth,  
but most of them pick themselves up  
and hurry along as if nothing happened.”**

*Sir Winston Churchill (1874-1965)*

**Quality of Life:** Research says that Vitamin D Deficiency (VDD) increases global pain, suffering and death. Research also found that simple, safe and cost-effective vitamin D supplementation can improve health-related quality of life and save time, money and pain. [2016 PMID: 26282006]<sup>2</sup> ***It is time to globally TREAT VDD!***

**All-Cause Mortality (leading to death):** VDD has been shown to be inversely and therefore very strongly related to all-cause mortality and cause-specific mortality from cardiovascular diseases, cancer, and respiratory diseases. [2013 PMID: 23446902]<sup>3</sup> ***It is time to globally TREAT VDD!***

**VDD Skeptics Harm People:** It is now generally accepted that VDD is a global problem involved in many acute and chronic diseases.”There is a potentially great upside to increasing the Vitamin D status of children and adults worldwide.” Skeptics and cynics cannot defend ignoring VDD treatment any longer. [2013 PMID: 23790560]<sup>4</sup> ***It is time to globally TREAT VDD!***

**Public Health Action and Strategies for Prevention of VDD:** “There is substantial evidence that the prevalence of VDD is unacceptably high in the population, and this requires action from a public health perspective.” [2017 PMID: 29141976]<sup>5</sup> ***It is time to globally TREAT VDD!***

## 12 LEADING CAUSES OF DEATH

The CDC lists “a Top 10” leading causes of death in the U.S. (Source: [www.CDC.org](http://www.CDC.org) “Top 10”) The “Top 10” result in 75% of all U.S. deaths, and the top 3 result in 50%. (2017 Medical News Today) There are actually 2 more. #11 + #12 were appropriately added to the CDC list.

1. Heart Disease (cardiovascular disease) ..... 633,842
2. Cancer..... 595,930
3. Chronic Lower Respiratory Diseases..... 155,041
4. Accidents (unintentional injuries)..... 146,571
5. Stroke..... 140,323
6. Alzheimer’s Disease..... 110,561
7. Diabetes..... 79,535
8. Influenza and Pneumonia..... 57,062
9. Nephritis, Nephrotic Syndrome and Nephrosis.. 49,959
10. Suicide (intentional self-harm)..... 44,193
- 11. Medical Error Death..... 400,000 (\*the real #3 cause of death)**
12. Vitamin & Mineral Deficiencies..... Unknown

\* NOTE: **Medical Error Death**, is reported to be the REAL #3 leading cause of U.S. deaths. Sadly, as of 3/1/18 the CDC site does not list it as such. Therefore, research funding, reportedly, is not prioritized to address it.

**1. Heart Disease:** A decade ago, VDD was shown to be independently related to all-cause mortality and cardiovascular mortality. [2008 PMID: 18574092]<sup>6</sup> *It is time to globally TREAT VDD!*

**2. Cancer:** VDD is highly prevalent in cancer patients and it is a strong independent poor prognosis predictor. [2017 PMID: 28884317]<sup>7</sup> For Example: **Breast Cancer (BC)** research found VDD to be more common in women with breast cancer. [2011 PMID: 21384167]<sup>8</sup> ...and found VDD in 95.6% of BC patients. [2012 PMID: 22629509]<sup>9</sup> ...and found VDD in 99% of breast cancer females. [2014 PMID: 25603674]<sup>10</sup> ...and found a 47 ng/ml serum D level reduced risk of breast cancer by 50%. [2011 PMID: 21868542]<sup>11</sup> *It is time to TREAT VDD!*

**3. Medical Error Death:** A study using 2008 to 2011 data estimated that premature deaths associated with preventable harm to patients to be over 400,0000 per year. The article stated that “serious harm seems to be 10-to-20-fold times more common than lethal harm.” [2013 PMID: 23860193]<sup>12</sup> *It is time to globally TREAT VDD!*

**4. Chronic Lower Respiratory Diseases (CLRD):** Chronic Obstructive Pulmonary Disorders (COPD) are a large component of portion of CLRD. Research found that VDD is related to an “increased risk of COPD and severe COPD.” [2016 PMID: 27799758]<sup>13</sup> *It is time to globally TREAT VDD!*

**5. Accidents (unintentional injuries):** A decade ago, VDD was known as a risk factor for falls, which have been a leading cause of death. [2007 PMID: 17410828]<sup>14</sup> Falling and bone fractures are major components that can lead to accidental death. VDD increases the risk of both. [2017 PMID: 29074835]<sup>15</sup> *It is time to TREAT VDD!*

**6. Stroke:** VDD is common in stroke patients and is associated with a worse functional outcome. [2016: PMID: 26830443]<sup>16</sup> VDD can predict repeat stroke risk. [2016 PMID: 27461862]<sup>17</sup> *It is time to globally TREAT VDD!*

**7. Alzheimer’s & Dementia:** Research found that VDD may increase the risks of developing both Alzheimer’s disease (AD) and Dementia [2015 PMID: 26231781]<sup>18</sup> *It is time to globally TREAT VDD!*

**8. Diabetes:** About a decade ago, researchers found that early life VDD was linked to later Type 1 diabetes onset. [2009 PMID: 18846317]<sup>19</sup> Researchers suspected vitamin D supplements may reduce the onset of Type 2 diabetes. [2013 PMID: 22924597]<sup>20</sup> *It is time to globally TREAT VDD!*

**9a. Influenza:** Over a decade ago, VDD was found to make children more vulnerable to respiratory infections. [2006 PMID: 16959053]<sup>21</sup> A decade ago, VDD was suspected of increasing the risk for getting sick from influenza. [2008 PMID: 18298852]<sup>22</sup> After the 2009 outbreak of the swine flu in Mexico one article noted “it has been well documented that VDD can precipitate the influenza virus.” It “strongly recommended” VDD testing and treatment to prevent respiratory infection. [2009 PMID: 20102323]<sup>23</sup> *It is time to TREAT VDD!*

**9b. Pneumonia:** A study of men and women aged 53-73 found a very strong relation between VDD and the risk of getting pneumonia. [2013 PMID: 23596250]<sup>24</sup> VDD was found in about 80% of patients hospitalized with community-acquired pneumonia & VDD predicted higher 28-day all-cause mortality. [2105 PMID: 25946368]<sup>25</sup> *It is time to globally TREAT VDD!*

**10. Nephritis, Nephrotic Syndrome and Nephrosis:** VDD is “common in chronic kidney disease associated with increased morbidity and mortality.” [2011 PMID: 21426882]<sup>26</sup> *It is time to globally TREAT VDD!*

**11. Suicide (intentional self-harm):** Suicide attempters were found to have more VDD than depressed non-suicidal patients and controls. Numerous studies show VDD to be associated with depression, schizophrenia and psychotic-skeletal symptoms. So, routine VDD testing may benefit patients with suicidal symptoms, if Vitamin D supplements are prescribed when and as needed. [2014 PMID: 25240206]<sup>27</sup> *It is time to TREAT VDD!*

**12. Vitamin & Mineral Deficiencies:** The number of U.S. deaths from vitamin & mineral deficiency is currently unknown, but it may rise near the top of the list soon. [2018 Dr. D. Page] *It is time to globally TREAT VDD!*



# MENTAL ILLNESS

**Research shows VDD is often more common & worse in those with MENTAL ILLNESS.**  
There are over 450 Mental Disorder Definitions.<sup>28</sup> VDD is more common or more severe in many of them.

Alcohol Use Disorders • Alzheimer's  
Anhedonia • Anti-Social Behaviors • Anxiety Disorder  
Anxiety Post-Stroke • Attention Deficit Hyperactivity Disorder (ADHD)  
Autism Spectrum Disorder (ASD) • Bipolar Disorder • Cognitive Disorders  
Depression • Eating Disorders • Drug Use Disorders  
Epilepsy • Erectile Dysfunction • Major Depressive Episode (MDE)  
Mood Disorders • Obsessive-Compulsive Disorder (OCD) • Parkinson's  
Postpartum Depression (PPD) • Post Traumatic Stress Disorder (PTSD)  
Psychosis • Psychotic Child Experiences • Psychotic Geriatric Inpatients  
Seasonal Affective Disorder (SAD) • Schizoaffective Disorder • Schizophrenia • Suicide

VDD was found to be “4.7 times more common among outpatients with bipolar disorder, schizophrenia, or schizoaffective disorder.” [2016 PMID: 27662458]<sup>29</sup> *It is time to globally TREAT VDD!*

Severe Mental Illness: “Children and adolescents with severe mental illness need vitamin D supplements regardless of disease or treatment.” [2011 PMID: 21486172]<sup>30</sup> *It is time to globally TREAT VDD!*

## A Few More of the 300+ Ways VDD Hurts or Kills!

Acne • ADHD • Allergies • Aneurysm • Arthritis • Asthma  
Atherosclerosis • Autism • Bone Disease • Carpal Tunnel Syndrome • Celiac Disease  
Chronic Low Back Pain (LBP) • Chronic Pain • Chronic Widespread Musculo-Skeletal Pain  
COPD • Crohn's • Dry Mouth • Eczema • Endometriosis • Epilepsy • Fertility  
Flu • Hair Loss • Headaches • Herpes • HIV • IBS • Ichthyosis (“Scaly Skin”) • Infertility  
Hospital & Intensive Care Unit (ICU) Survival—or Not • Joint Pain • Life & Death  
Kidney, Liver & Lung Disease • Maternal VDD May Affect Child Health For Life  
Menstrual Pain • Obesity • Opioids • Osteoporosis • Orthopedics • Oral & Overall Health  
Polycystic Ovary Syndrome • Rickets • Sepsis • Septicemia • Shingles  
Sleep Disorders • Smoking • Tuberculosis • Uterine Fibroids • Vertigo

**Pain & Infections:** A controlled study found safe and simple vitamin D supplement treatment (4,000 IU/day) significantly helped with cancer patient pain management & also decreased infections. [2017 PMID: 28859173]<sup>31</sup>

**Veteran Health Care Costs & Related Sickness & RDA:** VDD is present in many veterans and directly associated with much higher health care costs and service use. [2011 PMID: 21527166]<sup>32</sup> VDD was found to increase overall veteran costs by 39%. [2008 PMID: 19149342]<sup>33</sup>

**Bottom Line: Ignoring VDD in 2018 May Be Reprehensible! Why? Because we will never know how many people can be helped for a day or a lifetime, until we globally treat VDD!**

***It is time to globally TREAT VDD!***

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# END NOTE REFERENCES

- 1) Papadimitriou DT. The Big Vitamin D Mistake. *J Prev Med Public Health*. 2017 Jul;50(4):278-281. doi: 10.3961/jpmp.16.111. Epub 2017 May 10. PubMed PMID: 28768407
- 2) Ekwaru JP, Ohinmaa A, Veugelers PJ. The effectiveness of a preventive health program and vitamin D status in improving health-related quality of life of older Canadians. *Qual Life Res*. 2016 Mar;25(3):661-8. doi: 10.1007/s11136-015-1103-7. Epub 2015 Aug 18. PubMed PMID: 26282006
- 3) Schöttker B, Haug U, Schomburg L, Köhrle J, Perna L, Müller H, Holleczer B, Brenner H. Strong associations of 25-hydroxyvitamin D concentrations with all-cause, cardiovascular, cancer, and respiratory disease mortality in a large cohort study. *Am J Clin Nutr*. 2013 Apr;97(4):782-93. doi: 10.3945/ajcn.112.047712. Epub 2013 Feb 27. PubMed PMID: 23446902.
- 4) Hossein-nezhad A, Holick MF. Vitamin D for health: a global perspective. *Mayo Clin Proc*. 2013 Jul;88(7):720-55. doi: 10.1016/j.mayocp.2013.05.011. Epub 2013 Jun 18. PubMed PMID: 23790560
- 5) Cashman KD, van den Heuvel EG, Schoemaker RJ, Prévéraud DP, Macdonald HM, Arcot J. 25-Hydroxyvitamin D as a Biomarker of Vitamin D Status and Its Modeling to Inform Strategies for Prevention of Vitamin D Deficiency within the Population. *Adv Nutr*. 2017 Nov 15;8(6):947-957. doi: 10.3945/an.117.015578. Print 2017 Nov. Review. PubMed PMID: 29141976
- 6) Dobnig H, Pilz S, Scharnagl H, Renner W, Seelhorst U, Wellnitz B, Kinkeldei J, Boehm BO, Weihrauch G, Maerz W. Independent association of low serum 25-hydroxyvitamin d and 1,25-dihydroxyvitamin d levels with all-cause and cardiovascular mortality. *Arch Intern Med*. 2008 Jun 23;168(12):1340-9. doi: 10.1001/archinte.168.12.1340. PubMed PMID: 18574092.
- 7) Maalmi H, Walter V, Jansen L, Chang-Claude J, Owen RW, Ulrich A, Schöttker B, Hoffmeister M, Brenner H. Relationship of very low serum 25-hydroxyvitamin D(3) levels with long-term survival in a large cohort of colorectal cancer patients from Germany. *Eur J Epidemiol*. 2017 Nov;32(11):961-971. doi: 10.1007/s10654-017-0298-z. Epub 2017 Sep 7. PubMed PMID: 28884317.
- 8) Peppone LJ, Huston AJ, Reid ME, Rosier RN, Zakharia Y, Trump DL, Mustian KM, Janelins MC, Purnell JQ, Morrow GR. The effect of various vitamin D supplementation regimens in breast cancer patients. *Breast Cancer Res Treat*. 2011 May;127(1):171-7. doi: 10.1007/s10549-011-1415-4. Epub 2011 Mar 8. PubMed PMID: 21384167
- 9) Imtiaz S, Siddiqui N, Raza SA, Loya A, Muhammad A. Vitamin D deficiency in newly diagnosed breast cancer patients. *Indian J Endocrinol Metab*. 2012 May;16(3):409-13. doi: 10.4103/2230-8210.95684. PubMed PMID: 22629509
- 10) Imtiaz S, Siddiqui N. Vitamin-D status at breast cancer diagnosis: correlation with social and environmental factors and dietary intake. *J Ayub Med Coll Abbottabad*. 2014 Apr-Jun;26(2):186-90. PubMed PMID: 25603674.
- 11) Mohr SB, Gorham ED, Alcaraz JE, Kane CJ, Macera CA, Parsons JK, Wingard DL, Garland CF. Serum 25-hydroxyvitamin D and prevention of breast cancer: pooled analysis. *Anticancer Res*. 2011 Sep;31(9):2939-48. Erratum in: *Anticancer Res*. 2011 Oct;31(10):3637. PubMed PMID: 21868542
- 12) James JT. A new, evidence-based estimate of patient harms associated with hospital care. *J Patient Saf*. 2013 Sep;9(3):122-8. doi: 10.1097/PTS.0b013e3182948a69. Review. PubMed PMID: 23860193.
- 13) Zhu M, Wang T, Wang C, Ji Y. The association between vitamin D and COPD risk, severity, and exacerbation: an updated systematic review and meta-analysis. *Int J Chron Obstruct Pulmon Dis*. 2016 Oct 19;11:2597-2607. eCollection 2016. Review. PubMed PMID: 27799758
- 14) Morley JE. Falls--where do we stand? *Mo Med*. 2007 Jan-Feb;104(1):63-7. Review. PubMed PMID: 17410828.
- 15) Watanabe R, Inoue D. [Update on recent progress in vitamin D research. Treatment of metabolic bone disorders by vitamin D.]. *Clin Calcium*. 2017;27(11):1615-1622. doi: CliCa171116151622. Japanese. PubMed PMID: 29074835.
- 16) Dumas A, Daubail B, Legris N, Jacquin-Piques A, Sensenbrenner B, Denimal D, Lemaire-Ewing S, Duvillard L, Giroud M, Béjot Y. Association between Admission Serum 25-Hydroxyvitamin D Levels and Functional Outcome of Thrombolysed Stroke Patients. *J Stroke Cerebrovasc Dis*. 2016 Apr;25(4):907-13. Epub 2016 Jan 28. PubMed PMID: 26830443.
- 17) Huang H, Zheng T, Wang S, Wei L, Wang Q, Sun Z. Serum 25-hydroxyvitamin D predicts early recurrent stroke in ischemic stroke patients. *Nutr Metab Cardiovasc Dis*. 2016 Oct;26(10):908-14. Epub 2016 Jun 24. PubMed PMID: 27461862.

- 18) Shen L, Ji HF. Vitamin D deficiency is associated with increased risk of Alzheimer's disease and dementia: evidence from meta-analysis. *Nutr J*. 2015 Aug 1;14:76. doi: 10.1186/s12937-015-0063-7. PubMed PMID: 26231781
- 19) Bener A, Alsaied A, Al-Ali M, Al-Kubaisi A, Basha B, Abraham A, Guiter G, Mian M. High prevalence of vitamin D deficiency in type 1 diabetes mellitus and healthy children. *Acta Diabetol*. 2009 Sep;46(3):183-9. Epub 2008 Oct 10. PubMed PMID: 18846317
- 20) O'Hartaigh B, Neil Thomas G, Silbernagel G, Bosch JA, Pilz S, Loerbroks A, Kleber ME, Grammer TB, Böhm BO, März W. Association of 25-hydroxyvitamin D with type 2 diabetes among patients undergoing coronary angiography: cross-sectional findings from the Ludwigshafen Risk and Cardiovascular Health (LURIC) Study. *Clin Endocrinol (Oxf)*. 2013 Aug;79(2):192-8. doi: 10.1111/cen.12024. Epub 2013 Apr 1. PubMed PMID: 22924597.
- 21) Cannell JJ, Vieth R, Umhau JC, Holick MF, Grant WB, Madronich S, Garland CF, Giovannucci E. Epidemic influenza and vitamin D. *Epidemiol Infect*. 2006 Dec;134(6):1129-40. Epub 2006 Sep 7. Review. PubMed PMID: 16959053
- 22) Cannell JJ, Zasloff M, Garland CF, Scragg R, Giovannucci E. On the epidemiology of influenza. *Virology*. 2008 Feb 25;5:29. doi: 10.1186/1743-422X-5-29. Review. PubMed PMID: 18298852;
- 23) Edlich RF, Mason SS, Dahlstrom JJ, Swainston E, Long WB 3rd, Gubler K. Pandemic preparedness for swine flu influenza in the United States. *J Environ Pathol Toxicol Oncol*. 2009;28(4):261-4. PubMed PMID: 20102323
- 24) Aregbesola A, Voutilainen S, Nurmi T, Virtanen JK, Ronkainen K, Tuomainen TP Serum 25-hydroxyvitamin D3 and the risk of pneumonia in an ageing general population. *J Epidemiol Community Health*. 2013 Jun;67(6):533-6. doi: 10.1136/jech-2012-202027. Epub 2013 Apr 17. PubMed PMID: 23596250.
- 25) Kim HJ, Jang JG, Hong KS, Park JK, Choi EY. Relationship between serum vitamin D concentrations and clinical outcome of community-acquired pneumonia. *Int J Tuberc Lung Dis*. 2015 Jun;19(6):729-34. doi: 10.5588/ijtld.14.0696. PubMed PMID: 25946368.
- 26) Martin KJ, González EA. Vitamin D supplementation in CKD. *Clin Nephrol*. 2011 Apr;75(4):286-93. Review. PubMed PMID: 21426882.
- 27) Grudet C, Malm J, Westrin A, Brundin L. Suicidal patients are deficient in vitamin D, associated with a pro-inflammatory status in the blood. *Psychoneuroendocrinology*. 2014 Dec;50:210-9. Epub 2014 Sep 2. PubMed PMID: 25240206.
- 28) *The Diagnostic & Statistical Manual of Mental Disorders*. The standard reference for psychiatry used by the American Psychiatric Association: [en.m.wikipedia.org](http://en.m.wikipedia.org).
- 29) Boerman R, Cohen D, Schulte PF, Nugter A. Prevalence of Vitamin D Deficiency in Adult Outpatients With Bipolar Disorder or Schizophrenia. *J Clin Psychopharmacol*. 2016 Dec;36(6):588-592. PubMed PMID: 27662458.
- 30) Bonnot O, Inaoui R, Raffin-Viard M, Bodeau N, Coussieu C, Cohen D. Children and adolescents with severe mental illness need vitamin D supplementation regardless of disease or treatment. *J Child Adolesc Psychopharmacol*. 2011 Apr;21(2):157-61. doi: 10.1089/cap.2010.0079. Epub 2011 Apr 12. PubMed PMID: 21486172.
- 31) Helde-Frankling M, Höjjer J, Bergqvist J, Björkhem-Bergman L. Vitamin D supplementation to palliative cancer patients shows positive effects on pain and infections-Results from a matched case-control study. *PLoS One*. 2017 Aug 31;12(8):e0184208. doi: 10.1371/journal.pone.0184208. eCollection 2017. PubMed PMID: 28859173
- 32) Islam T, Peiris P, Copeland RJ, El Zoghby M, Peiris AN. Vitamin D: Lessons from the veterans population. *J Am Med Dir Assoc*. 2011 May;12(4):257-62. doi: 10.1016/j.jamda.2010.08.004. Epub 2010 Oct 20. Review. PubMed PMID: 21527166.
- 33) Peiris AN, Bailey BA, Manning T. The relationship of vitamin D deficiency to health care costs in veterans. *Mil Med*. 2008 Dec;173(12):1214-8. PubMed PMID: 19149342.

***It is time to globally TREAT VDD!***

The new book, *The Global Pandemic of VDD (Vitamin D Deficiency)* should be available mid-2018 as an eBook and in paperback. It should have over 500 End Note References that define and support the over 300 ways VDD can affect your health and your life.