

# **A Short Essay: High Dose Vitamin D Supplementation Reduces Medical Malpractice Lawsuits in Critically ILL Trauma Patients**

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The cost of medical malpractice lawsuits in the United States is running approximately \$55.6 billion a year in direct cost, says a Harvard School of Health study. Add another \$50 billion in lost work productivity. As a result, the total direct and indirect costs of medical malpractice lawsuits in the United States exceed \$100 billion annually which is almost 5% of the country's total health care budget.

The cost of healthcare after malpractice lawsuits has never been factored into the equation such as hospital readmissions, long term nursing home care, additional medications, and additional surgical procedures.

Since starting high dose vitamin D supplementation in all our critically ill patients, we have noticed and published the following: decreased length of intensive

care unit stay (ICU beds cost \$4,000 per day); decreased length of hospital floor stay (floor bed costs \$1,250 per day); decreased mortality rate (reduced overall trauma mortality rate to 3% in 2015); decreased myocardial infarctions; decreased strokes; decreased incidence of infections and sepsis; decreased incidence of ventilated associated pneumonia; decreased hospital readmissions; decreased re-operations; decreased narcotic use; decreased adverse medication events; decreased medical errors; and decreased hospital falls by patients.

By reducing our complication rates and the total hospital length of stay, we have reduced our number of medical malpractice lawsuits to zero over the last 9.5 years. High dose vitamin D supplementation would be of great benefit to patients, the healthcare industry, health and malpractice insurance companies, and pharmaceutical companies. Fewer medical

malpractice lawsuits would translate into lower healthcare costs for all parties.

Vitamin D is a steroid hormone that controls 3,000 out of 30,000 human genes including the immune response system and the inflammatory response system. Vitamin D works by strengthening the immune system which allows the human body the ability to fight off infections that could be potentially acquired in the hospital. Elevated CD4 counts are seen after patients are given high dose vitamin D. Vitamin D also down regulates the chronic inflammatory response system which is associated with almost every disease of aging. CRP, TNF, and other cytokines decrease after given high dose vitamin D supplementation.

Below, we have included a brief abstract to illustrate the profound effect that high dose vitamin D supplementation has had on our critically ill patients over the last decade (a  $P < 0.0001$ ).

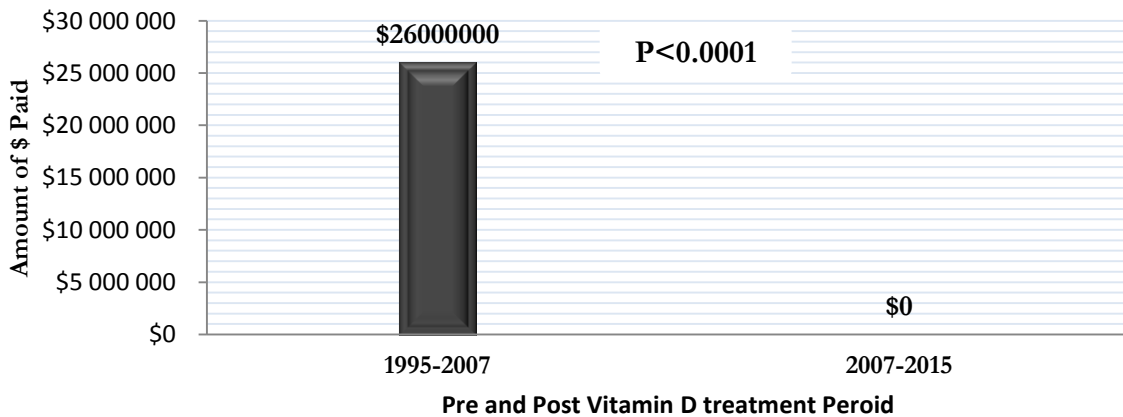
**Background:** Vitamin D supplementation has been shown to decrease hospital and ICU length of stays, hospital costs, mortality rates, and complications such as myocardial infarctions, infections, and narcotic use. Vitamin D supplementation's direct and indirect effects upon medical malpractice lawsuits have been previously unknown.

**Hypothesis:** We hypothesize that aggressive vitamin D supplementation would reduce medical malpractice lawsuits both directly and indirectly saving hospitals and insurance companies millions of dollars.

**Methods:** We did a retrospective study reviewing the trauma registry of Morehouse

6, 200 trauma patients from 1995-2016 at an urban Level I trauma center. Vitamin D supplementation was started in 2008. We identified 3 malpractice lawsuits from 1995-February 2007. The following total amount was paid out from 1995- February 2007 (\$26,000,000.00). We compared the pre- and post-vitamin D treatment and lawsuits paid. There have been zero lawsuits since 2007.

**Results:** The total paid out from 1995-February 2007 was \$26,000,000.00 for trauma lawsuits and zero dollars from after February 2007-2015 for a p-value of  $P < 0.0001$



**Conclusion:** We conclude since vitamin D decreases mortality rates, hospital and ICU length of stays, and complications rates from chronic diseases that the direct and indirect

effects of aggressive vitamin D supplementation would be decreased medical malpractice lawsuits. Further studies are needed.

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