



HMT Newsletter

The Science behind Sunshine

During this time of uncertainty- working from home while parenting, social distancing and sheltering-in-place, few things have the effect on our psyche like sunlight. April showers dampened the soil and our mood, but brighter times are ahead. Sunlight, and more importantly Vitamin D, plays a huge role in physical and mental health. While technically not a vitamin, Vitamin D is produced in our bodies in response to sunlight. 7-dehydrocholesterol is converted to Vitamin D (cholecalciferol) in the skin, in response to UV irradiation. It then travels to both the liver and kidney where it's hydroxylated. These hydroxylated forms are the major circulating forms of Vitamin D. Read more [HERE](#)



Let's take a look at some of Vitamin D's essential roles

Vitamin D and Depression

Key Points:

- Vitamin D exposure during gestation may affect brain development of the fetus
- Vitamin D receptors have been found in the hypothalamus
- Vitamin D supplementation has been shown to be associated with significant improvements in well being and mood
- Read more [HERE](#)

Vitamin D and Cancer

Key Points:

- A large number of epidemiological and meta analyses have correlated low Vitamin D levels with an increased cancer risk
- Vitamin D has also been linked to certain anti-cancer properties to include reduced inflammatory markers
- Polymorphisms in the Vitamin D receptor may effect chemo and immunotherapy efficacy
- Read more [HERE](#)

Vitamin D and Bone Health

Key Points:

- Vitamin D is essential for the absorption of calcium, which would otherwise be excreted by the kidneys
- Vitamin D deficiencies result in soft and weak bones, and is responsible for rickets in children and osteomalacia in adults
- In a meta-analysis of supplementation with Vitamin D on various health outcomes such as bone density, cardiovascular disease, and cancer, results are largely inconsistent
- Read more [HERE](#)

HMT is a leading company providing metabolomic profiling based on unique and high performance CE-MS technology. We complete over 400 projects a year and our technology has contributed to the advancement of research in a variety of scientific areas.

Edited by Drs.
Laura Shelton and Mark Zbinden

© Copyright Human Metabolome Technologies America Inc. All Rights Reserved.



Human Metabolome Technologies America

24 Denby Road, Suite 217, Boston, MA 02134, USA | p. 617-987-0554 | f. 617-902-2434
hmtamerica@humanmetabolome.com | humanmetabolome.com/en