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**Vitamin D Deficiency in Massachusetts**

Patrick Buckner  
*Worcester Polytechnic Institute*

Alex MacGrogan

Yifan Zhao

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**Project Goals**

Our project aims to decrease the prevalence of Vitamin D deficiency in Massachusetts and to educate residents about the dangers of deficiency and how they can prevent it.

**Background**

- The body’s main source of Vitamin D is sunlight. Our bodies are capable of producing Vitamin D in our skin when it is exposed to UV radiation.
- Massachusetts is roughly located at the 42° latitude. At this latitude, the UV radiation is weak enough, especially during the winter, that our skin cannot synthesize Vitamin D.

**Problem**

- More than 45-75% of Massachusetts residents are Vitamin D deficient
- Health issues related to Vitamin D deficiency
  - Osteomalacia (Rickets)
  - High Blood Pressure
  - Cancer (Colon, Breast, Prostate)
  - Type I Diabetes
  - Weakened Immune System

![Bone section through hip](image)

- Solid bone matrix
- Weakened bone matrix

**Solution**

- Change current medical practices:
  - Patients will be administered a nutrition panel when they visit their doctor
  - This test will inform people about all their body’s nutrient levels
- If a person is found to be deficient:
  - Dieticians can educate people about how they can increase Vitamin D naturally
  - People can also take vitamin supplements
- Non profit group that would educate people about the dangers of Vitamin D deficiency
  - Distributing pamphlets
  - Making commercials
  - Selling cookbooks which contain healthier, high Vitamin D recipes

**Assessment**

- Database
  - Contains the results of every patients’ nutrition panel
  - Gives an accurate and easy to understand picture of how people’s Vitamin D levels change over time
- Keep track of sales figures of Vitamin D supplements
- Keep track of the dissemination of information, such as the distribution of pamphlets or the number of cookbooks sold.

**Cost/Benefit**

**Cost**

- Nutrition Panel Expensive
- Time
- Personnel

**Benefits**

- Inexpensive Supplements
- Insurance covers cost
- Improved Health

**References**


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