

4. TEAM: Iodine in the Diet and Prevalence of Goiter

The class will be divided into four groups and will search for statistics regarding the prevalence of goiter worldwide. The students will post it on the map and will be asked to come up with generalisation about the relationship between prevalence of goiter and the geographic location. Each group will be asked to

findings from scientific literature.

5. SIDEBARS

STEM CHECK:

Is Vitamin D really a vitamin or a hormone?

A vitamin is any organic molecule that acts as a cofactor in the metabolic processes of the body. These molecules are regarded as micronutrients because the body requires them in very small quantities, and most of them are obtained from the diet due to the fact that the body cannot synthesise them. This definition of a vitamin could be not necessarily true for Vitamin D, as it is not obtained from the human body. First of all, Vitamin D does not come from the sun, rather the UV radiation stimulates conversion of cholesterol in the skin into 7-dehydrocholesterol and further, into cholecalciferol. Cholecalciferol is transported into the

liver through the blood and is converted into calcitriol (25-hydroxyvitamin D₃) by the kidney to produce calcitriol (1, 25-dihydroxyvitamin D₃). This product is further processed by the kidney to produce the biologically active form. 1, 25-dihydroxyvitamin D has been shown to increase deposition of calcium in bones, decrease calcium excretion through the urine and enhance absorption of calcium by the gut. In this way, Vitamin D has prohormone, hormone, and functions as a hormone rather than a vitamin.