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Abstract

Background: Despite a remarkable reduction in the occurrence of many micronutrient deficiencies in most countries, vitamin D deficiency has remained a global problem. Age-adjusted disability-adjusted life years lost due to cardiovascular disease in the Eastern Mediterranean Region, including in the Islamic Republic of Iran, are higher than the global average.

Aims: To assess the effects of latitude and season on vitamin D status in the Iranian population and the association between vitamin D status and certain cardiometabolic risk factors.

Methods: A sample of 1111 participants aged 19–65 years was randomly selected from 6 regions with latitudes ranging from 29º.0 N to 37.5º N. All anthropometric and biochemical assessments were performed twice a year, summer and winter during 2013 to 2014.

Results: Overall mean 25(OH)D concentration was 26.9 [standard deviation (SD) 17.8] nmol/L in winter and 43.4 (SD 32.9 nmol/L in summer (P