**Harmful Vitamin D Deficiency Common Around World**

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While scientists have known for decades that vitamin D deficiency leads to bone diseases like rickets, more recently they have found connections between low vitamin D levels and a wide range of other illnesses, including cancer, autoimmune disorders and caradiovascular disorders.

The human body creates vitamin D through exposure to sunlight, and yet some of the sunniest parts of the world have the highest rates of vitamin D deficiency. Several factors have contributed to dangerously low vitamin D blood levels among people in the Middle East, Africa and Asia.

**Vitamin D necessary for bone strength**

Healthy bones depend on vitamin D, says Ambrish Mithal of the Indian Society for Bone and Mineral Research.

"Vitamin D is what absorbs calcium into our body and helps it reach the bone. Vitamin D deficiency, therefore, results in weak bones and bones that are soft, that will bend and break."

Getting enough vitamin D should be relatively simple.

"The major source of vitamin D is sunshine," Mithal says. "We make vitamin D under the influence of UV rays that we get in the sunlight. We make it in our skin."

**Vitamin D deficiency common, even in sunny places**

But some of the world's sunniest regions have the highest rates of vitamin D deficiency. That's the finding of a recent report from the International Osteoporosis Foundation, which reviewed research done over the past three decades. Mithal is a coauthor of that report.
"Vitamin D deficiency is a global phenomenon. But certain parts of the world, they're prone to severe vitamin D deficiency - for example, South Asia, like India, or Middle East, like Lebanon. There have been studies from these areas which have shown that almost 80 percent, or maybe even more, of the urban population is significantly vitamin D deficient."

He points to several factors to explain why people who live in sunny areas still may not get sufficient vitamin D.

"Those who live closer to the equator are actually less prone to vitamin D deficiency, but at times this, can be overshadowed by other factors like skin pigmentation, less outdoor activity and more skin cover with clothes," Mithal says.

Vitamin D expert Michael Holick, of the Boston University Medical Center, explains why people with darker skin generally have lower levels of the nutrient than lighter-skinned people, even in the same country.

"The major reason is that their melanin, which protects their skin from excessive exposure to sunlight, also prevents them from making vitamin D," he says. "We showed that African-Americans need to be exposed three to five times longer to sunlight to be able to make the same amount as a white person."

Another coauthor of the vitamin D review, Ghada El-Hajj Fuleihan, describes how people in the Middle East can spend time outdoors without absorbing enough vitamin D.
"In these, the Middle Eastern countries, people tend to follow a very much more conservative clothing style, in a large proportion of subjects. And the other thing is that with modernization, women who do not follow the conservative clothing style use sunblock. Sunblock with sun protection factor as low as six and eight can completely block the ability of the skin to make vitamin D."

El-Hajj Fuleihan, of the American University of Beirut Medical Center, says this may explain why women in general have lower vitamin D levels.

**Deficiency could be dangerous**

There is new concern about vitamin D deficiency because, as Michael Holick explains, recent medical discoveries show it may be much more dangerous than previously thought.

"What we haven't appreciated until about the past decade is that vitamin D seems to be important for reducing risk of many chronic illnesses that span anywhere from autoimmune diseases like type 1 diabetes, multiple sclerosis, rheumatoid arthritis, to infectious diseases like tuberculosis and influenza, reduces risk of heart attack, stroke and most importantly, reduces risk of deadly cancers."

**Ways to get more vitamin D**

People can get more of the nutrient in their diet. In the United States and other countries, some foods are fortified with vitamin D. But Holick says that's generally not enough.
"Children probably need a thousand units of vitamin D a day. Teenagers and adults need two thousand units of vitamin D a day to satisfy their requirement… You cannot get an adequate amount of vitamin D to satisfy your body's requirement from your diet."

So, he and other experts like Ghada El-Hajj Fuleihan, now recommend spending a little more time in the sun.

"We are fully aware of the risk of skin cancer with sun exposure but suggest that there may be a happy compromise and that maybe the first 10 minutes or so three times a week… let the skin get some ability to make vitamin D, and then put the sunblock on."

In addition, she says, those who spend their days indoors should take a vitamin D supplement.

Although the World Health Organization has said that most people get enough vitamin D through sun exposure and diet, in light of the new research, it has commissioned its own report and may issue new recommendations.

1. Vitamin D deficiency can be caused by
	1. ?    the amount of time spent outdoors
	2. ?    wearing clothes that cover more of your body
	3. ?    the color of your skin
	4. ?    all of the above
	5. ?    none of the above
2. Vitamin D is made by the action of \_\_\_\_\_ light on the skin.
	1. ? infrared
	2. ? ultraviolet
3. Experts on vitamin D recommend spending about 10 minutes in the sun every day.
	1. ? True
	2. ? False
4. People in the Middle East have extremely high blood levels of vitamin D.
	1. ? True
	2. ? False
5. Teenagers and adults probably need \_\_\_\_\_ units of vitamin D a day.
	1. ? 1,000 units
	2. ? 2,000 units
	3. ? 3,000 unitS
6. Teenagers and adults probably need \_\_\_\_\_ units of vitamin D a day.
	1. ? 1,000 units
	2. ? 2,000 units
	3. ? 3,000 units
7. We need vitamin D in order to absorb \_\_\_\_\_.
	1. ? magnesium
	2. ? calcium
	3. ? potassium
8. You \_\_\_\_\_ get an adequate amount of vitamin D to satisfy your body's requirement from your diet.
	1. ? can
	2. ? cannot
9. Scientists have known for a long time that vitamin D deficiency is connected to cancer and cardiovascular disorders.
	1. ? True
	2. ? False
10. People who spend their days indoors do not need a vitamin D suppLement.
	1. ?    True
	2. ?    False
11. The human body creates vitamin D from \_\_\_\_\_.
	1. ? food
	2. ? sunlight
	3. ? wáter
12. Vitamin D seems to \_\_\_\_\_ the risk of deadly cancers.
	1. ? decrease
	2. ? increase

QUESTIONS.

* What’s the general idea?
* What’s the author’s intention?
* What type of text is this?
* What do these terms mean in English? (Give synonyms and write the definition):

diseases

rickets,

wide range

illnesses,

**strength**

therefore

weak

bend

rays

skin."

prone

maybe

points to

overshadowed

outdoor

major

sunblock.

span

stroke

issue

amount

fully aware

In addition

Although

enough.

* Write an essay about it (one page of block sheet with normal letter and normal spaces).