SUNLIGHT AND VITAMIN D FOR IMMUNITY AND HEALTH

There are all kinds of lights for sight,
But for Health, there is only one light, and that is Sunlight

Humans have an intimate connection to the bioenergy of the Sun for healthy foods, a balanced lifestyle, and other health benefits, as shown in the picture below:

An excellent example of a tremendous human partnership with the Sun is the production of natural vitamin D. The medical research in the past decade has shown that Vitamin D does much more for the body than bone health. Vitamin D is present in every cell of the body and plays a vital role in the preservation of health and prevention of disease. Individuals who have low levels of vitamin D are at a higher risk of respiratory infections and conditions such as Type1 diabetes, Hashimoto Thyroiditis, and Rheumatoid arthritis. Experience with COVID-19 infections has shown that patients who have low vitamin D levels carry a higher risk for severe disease and death.

Healthy Vitamin D levels --The international Osteoporotic Foundation estimates that 80% of the urban Indian population suffers from Vitamin D deficiency because of a lack of sunlight exposure. The usual range of Vitamin D levels in the blood is 20- 40 ng/ ml, and less than 12 ng/ml are considered low levels.

There are two sources of Vitamin D:

- **Dietary sources**—Most foods except for Cod liver oil and A2 Gir cow ghee carry negligible amounts of vitamin D.

- ***Sunlight exposure***—The ideal source of Vitamin D for the body is to get it from the Sunlight. Vitamin D gets synthesized in the skin on exposure to ultraviolet B spectrum of light from the morning Sun. There are two significant advantages of natural vitamin D from the Sunlight:

a) ***Vitamin D synthesis in the skin*** is a naturally controlled process and does not cause any overdosage. In contrast, Vitamin D given by tablets and injections can cause overdosage with nausea, dizziness, and abnormal calcium deposits in the body.

b) ***Naturally synthesized vitamin D*** in the skin is stored in the liver and can provide a backup reserve for up to six months. In contrast, Vitamin D from the pills and injection cannot store in the body long term.

Medical Supplementation For Vitamin D

The daily requirement of vitamin D is 400-600 International Units. For low vitamin D levels, a dose of 4-10,000 units daily gets prescribed. Such high doses should be prescribed for short periods only. It is safer to take vitamin D supplements orally than by injections. Close monitoring of the blood levels is required to prevent vitamin D overdosage.

How to Get Safe Dose of Sunlight For Vitamin D and Other Health Benefits?

Sunlight is safe when sun exposure occurs at a specific time of the day. Even in light skin white populations, the incidence of skin cancer due to sun exposure is only 1 in 1000 individuals. In dark skin individuals, skin cancer from sun exposure is rare. The other health risk of sun exposure is early cataracts, preventable by sunglasses or good headcover that shades the eyes. Sensible rules on getting safe sunlight exposure are as follows:

a) ***Sungazing early morning***—Look at the red glow of the rising Sun early morning for 10-15 minutes. The morning sun stimulates the natural brain clock. It boosts the production of hormones such as Melatonin (Sleep), Serotonin (mood), and hormones that enhance the secretion of Thyroid, Cortisol, and Insulin hormones.

b) The ultraviolet rays of the Sunlight are in a safe B spectrum (UV-B) only for 1-2 hours of the morning after the red glow of the Sun disappears. Vitamin D gets synthesized in the skin on exposure to the UV- B spectrum of the Sunlight. Typically this time falls between 6–9 AM and 5–7 PM in the summers. In the winter, sunrise is an hour late and sunset an hour early.

c) A safe rule about sunbathing is to look at your standing shadow in Sunlight. If the standing shadow is longer than your height, it is safe to sunbath. The shortest shadow is during the mid-day sun.

d) If the skin gets heated and red under the Sunlight, it is a sign that Sunlight is too strong, and you should go into the shade.

e) The safe duration of sun exposure depends on the color of the skin; a simple rule:

Fair and light skin color	**10-15 minutes**
Brown or wheatish complexion	**30-60 minutes**
Dark Color Skin	**60-90 minutes**

f) For maximum benefit, expose 40% of the skin to the Sunlight. The best sunlight absorption occurs through lighter skin areas such as the lighter area of arms, hands, and feet.

g) Finally, multiple short exposures of 15-20 minutes are better than one long exposure. So during a morning walk, get under the shade between these time durations.

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