

## **What are the sources of vitamin D? How do we get sufficient amounts?**

The answer is SUNLIGHT. In order to get the daily requirement of vitamin D from sunlight you would need to have direct summer month sun exposure on your arms and legs for a minimum of 10-15 minutes per day. This is why vitamin D deficiency is so common in non-tropical climates, especially in the winter months. Of course in the industrial nations neither the climate nor the season are accurate determinants of the amount of sun exposure because most people spend the majority of their time inside or covered up when outside.

So, if you are not getting a minimum of 15 minutes per day of direct summer sunlight on bare arms and legs (without sunscreen) then you need another source of vitamin D. What are the other available sources of vitamin D you ask? Great question!

The simple fact is that humans were never meant to get their vitamin D from food. Genetically humans are designed to get vitamin D from sunlight. As we have outlined above this is simply not a realistic option for most humans living and working indoors or who live in areas where sunlight levels change with the seasons. It should be noted here that humans with pigmented skin (non-caucasians) require significantly more sun exposure to achieve sufficient vitamin D levels. This means these people are at an even greater risk for illnesses caused by vitamin D deficiency.

As humans migrated away from the equator we had to devise ways of replacing the sun as a source of vitamin D. In other words, in order to survive non equatorial climates humans had to find a source of vitamin D other than sunlight. Over thousands of years of experimentation virtually every human culture learned that the best way to stay sufficient in vitamin D in environments with reduced sun exposure was to consume marine animal liver or liver oil. Cod liver oil is probably the best known and widely recognized as the best source of dietary vitamin D for humans. For centuries humans have used cod liver oil as a safe and effective way to achieve sufficient vitamin D levels in the absence of sun exposure.