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Research Article

**INCIDENCE OF VITAMIN D DEFICIENCY IN PATIENTS  
ATTENDING THE MEDICINE OPD OF LAHORE GENERAL  
HOSPITAL, LAHORE, PAKISTAN**<sup>1</sup>Dr Maryam Raza, <sup>2</sup>Dr Rana Azhar Nawaz<sup>1</sup>Ph.D Student University of Lahore<sup>2</sup>FCPS Medicine Resident Lahore General Hospital Lahore**Article Received:** February 2020**Accepted:** March 2020**Published:** April 2020**Abstract:*****Aim:** To determine the frequency of vitamin D deficiency in patients with aches and pain in the body.****Study /Design:** A prospective study.****Methods:** A total of 120 patients were included in the study. A random non-probable sampling technique was used and the approval from the ethical committee was taken.****Place and /Duration:** In the Lahore General Hospital for six months' duration from July 2019 to December 2019.****Results:** 80 of 120 patients (66.7%) were women and 40 (33.3%) were men. Of the 80 patients, 56 (70%) had a vitamin D deficiency (30 ng / ml).****Conclusion:** The incidence of vitamin D deficiency is higher in patients with fatigue and compared to other parts of the world there is more deficiency.****Key words:** body aches, vitamin D deficiency, patients with OPD***Corresponding author:****Dr. Maryam Raza,**

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## INTRODUCTION:

Complaints about easy fatigue are more common today than ever. He can talk to any seemingly healthy patient or person and has complaints about drowsiness and little resistance. This phenomenon is intensifying. Important diseases that can cause fatigue are thyroid disorders, endocrine diseases such as diabetes and chronic obstructive airway disease, chronic infections (e.g. chronic hepatitis, infective endocarditis), congestive heart failure, anemia, autoimmune disorders and cancer. Some drugs, such as alcoholism, sedatives and beta-blockers, can cause a similar clinical picture<sup>1,2,3</sup>. Finally, fibromyalgia, depression and sleep disorders etc. Mental situations such as. They can also cause drowsiness and body aches. This exceeds secondary to fatigue, physical illness and drugs whose cause is unknown or associated with mental illness<sup>4,5</sup>.

Recently, clinical trials have reported a risk of vitamin D deficiency. Vitamin D deficiency is not only associated with metabolic bone disease such as osteomalacia and rickets, it can also occur with mild fatigue without signs of osteopenia<sup>6,7</sup>. It works at the level of mitochondria in muscle inflammation, affects cellular respiration and causes fatigue. In many cases labeled fibromyalgia, they actually lacked vitamin D and were still diagnosed as out of the question. Vitamin D, also called "solar vitamin", is a hormone produced on our skin in its original form, provitamin D (7 deoxy cholesterol), which is

first hydroxylated in the liver and then in the liver after exposure to sunlight<sup>8,9</sup>. Kidneys (1.25 dihydroxycholesterol) to produce vitamin D activity. This is the most important source of vitamin D for humans.<sup>9</sup> Other sources of vitamin D include fungi and fatty fish. Overcooking disrupts the vitamin D content of these sources. It has been reported that over 85% of people in our region suffer from vitamin D deficiency / deficiency (<30 mg / ml).

## PATIENTS AND METHODS:

This Prospective study was held in Lahore General Hospital for six months duration from July 2019 to December 2019. A total of 120 patients were included in the study. A random non-probable sampling technique was used and the approval from the ethical committee was taken.

## RESULTS:

Eighty (66.7%) of 120 patients are women and 40 (33.3%) are men. Of the 80 patients, 56 (70%) had vitamin D deficiency (<20 ng / ml) and 14 of 80 patients (17.5%) had vitamin D insufficiency (21-29 ng / ml). 25 of 40 men (62.5%) had vitamin D deficiency (<20ng / ml) and 8 of 40 men (20%) had vitamin D deficiency (21-29ng / ml). Therefore, 81 (67.5%) of 120 patients had vitamin D deficiency (<20ng / ml) and 22 (18.3%) vitamin D deficiency (21-29ng / ml). A total of 103 (85.8%) of 120 patients suffered from vitamin D deficiency / deficiency (<30ng / ml). 17 out of 120 patients (14.3%) had adequate vitamin D levels ( $\geq 30$  ng / dl).

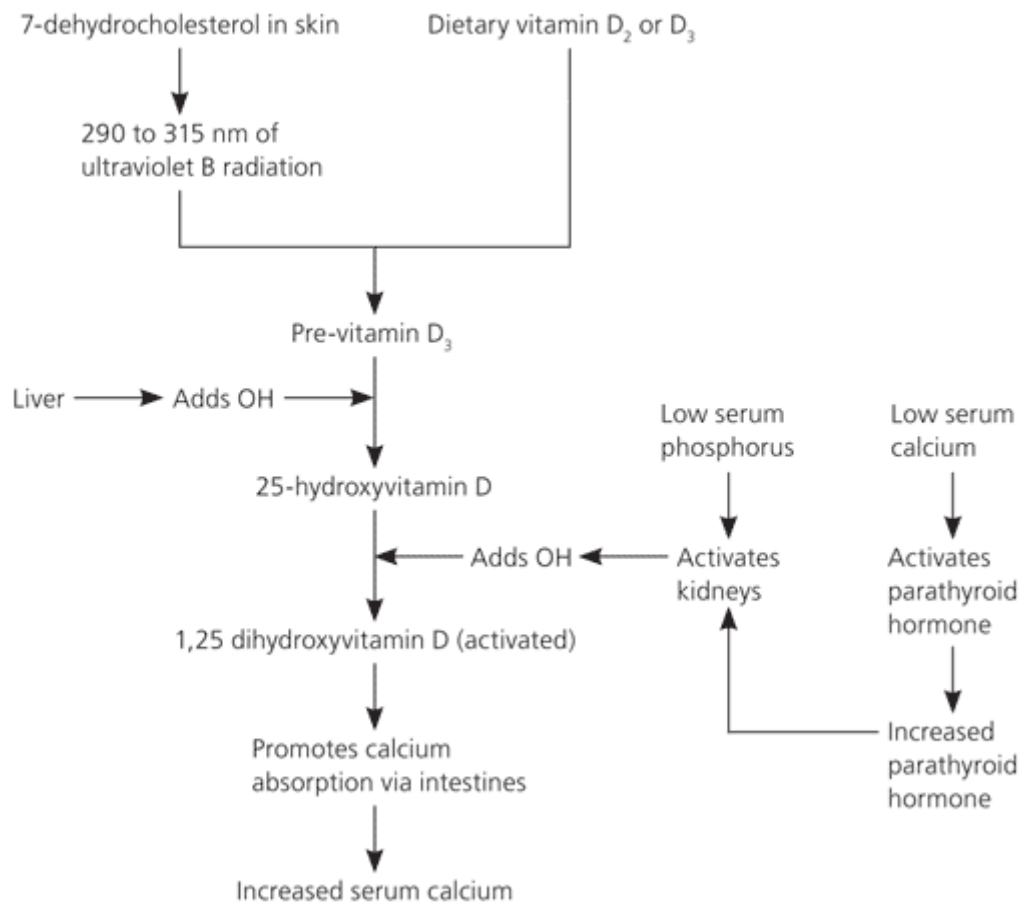
**Table 1: Vitamin D Deficiency & Insufficiency**

| Gender | Total | Vitamin D Deficiency | Vitamin D Insufficiency | Total Vitamin D Deficiency & Insufficiency |
|--------|-------|----------------------|-------------------------|--|
| Male   | 80    | 56(70%)              | 14(18%)                 | 70(58.33%)                                 |
| Female | 40    | 25(63%)              | 8(20)                   | 33(27.5%)                                  |

## DISCUSSION

The study showed that most patients with fatigue had low levels of vitamin D. This is confirmed by international and national literature on the subject. One study found that the incidence of vitamin D deficiency in primary care clinics is 45%. Another multiethnic general practice study found vitamin D deficiency in 58% of patients<sup>10,11</sup>. These included low vitamin D levels in 1/3 of Norwegian Norwegians in the Middle East, Africa and South Asia, and 83% of patients visiting the Abbasi Shaheed Karachi Hospital. The frequency of vitamin D deficiency was 92%. This is the same number as in the survey. Aslam et al<sup>12</sup>. Noticed a similar percentage (92.85%) in Faisalabad studies at a

prenatal clinic. In another study in adult patients in an outpatient clinic, vitamin D levels were low in 89.3% and 16.1% of patients with vitamin D deficiency in 73.2%. About vitamin D deficiency<sup>13</sup>. The habit of chewing betel nuts has been accused by modulating the activity of enzymes that regulate blood circulation levels in Asians with a density of 1.25 OH D.21, with pigmented skin, despite too much sun exposure<sup>14</sup>. Much lower vitamin D content than in European and American populations. This can be explained by the fact that a high degree of contamination prevents the penetration of ultraviolet rays into human skin<sup>15</sup>. The cycle of vitamin-D absorption is shown in the figure.



Eighty-one (67.5%) of the 120 patients in our study had vitamin D deficiency (<20ng / ml). One study found that 69% of patients suffered from vitamin D deficiency, which was slightly higher but closer to our study<sup>16</sup>. This difference may be due to different dietary factors and vitamin D content in the diet in different regions.

### Dental health support

Oral supplements of vitamin D3 may help to keep your teeth healthy.

### Cardio support

Recent studies indicate that Vitamin D3 can help restore cardiovascular endothelial cells which are already damaged [1].

### Bone health support

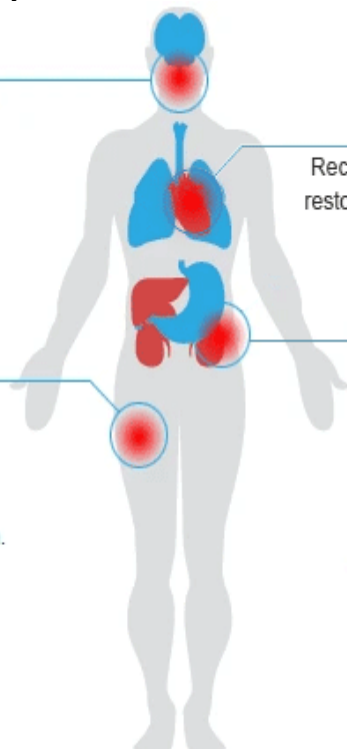
Oral vitamin D3 supplements may help support the natural ability of bones to maintain their normal hardness. This is especially beneficial in the presence of liver conditions that cause bones to soften.

### Calcium support

Vitamin D3 may help to support healthy levels of calcium in the blood. Low calcium levels can result from some types of poor kidney function.

### Phosphate support

Vitamin D3 may help to maintain phosphate levels, which can result from some genetic disorders.



In our study, 56 (70%) of 80 women had vitamin D deficiency (<20 ng / ml), and 14 (17.5%) of women had vitamin D deficiency. OPD was diagnosed with physical discomfort and fibromyalgia<sup>17</sup>. To a small extent, these

results are slightly less comparable than in the study in 40 women, who constitute 80% and 20% of patients suffering from OPD deficiency and failure with fibromyalgia. Vitamin D<sup>18</sup>. This small difference may be due to the smaller working size. In our study, the results of vitamin D deficiency in women can be compared with the study in which 56 (70%) of 80 patients and 53 (74%) Mufti et al. He was deficient in vitamin D. 75 women with premenopausal tibial pain and general pain and discomfort reported to a third-level care center in Lahore, Pakistan.

### CONCLUSION:

The incidence of vitamin D deficiency is higher in patients with fatigue than in other parts of the world.

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