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Research Article

**RELATIONSHIP BETWEEN DEPRESSION AND VITAMIN C  
STATUS: A STUDY ON RURAL PATIENTS FROM DISTRICT  
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**Abstract:**

**Point and Objective:** To ponder Vit. C status of country depressed populace of district Bahawalpur opposite age and sex-coordinated sound controls.

**Materials and Methods:** From patients visiting the Psychiatric outpatient department of Victoria Hospital Bahawalpur, thirty depressed patients, analyzed by Structured Clinical Interview DSM-IV-TR plan, were chosen arbitrarily and their serum nutrient C levels were estimated by dinitrophenyl hydrazine strategy. These dimensions were contrasted and 30 age-and sex-coordinated solid controls. **Results:** Mean ( $\pm$  SD) serum vit. C dimensions of depressed patients and controls were  $0.18 \pm 0.09$  mg/dl and  $0.41 \pm 0.07$  mg/dl separately. The contrast between these two gatherings of subjects was factually critical ( $p$  esteem  $< 0.001$ ).

**Conclusion:** This examination indicates low vitamin C status in depressed patients when contrasted with typical people, and proposes that vitamin C supplementation can have a beneficial outcome in the treatment of these patients.

**Keywords:** Depression, Vitamin C.

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## INTRODUCTION:

Depression is a state of extreme compassion that reaches a point where it affects the daily routine and, moreover, irritates working with social words. The melancholy may be related to the lack of nutrients C. At the time when a patient's vitamin C was denied, side effects such as miserable disposition, decreased fixation, decreased vitality, weakness and hypochondria occurred. They were essentially increasingly peripheral, and people with a lack of C nutrients were increasingly depressed depending on Symptomdeskriptor checklist ratings, but the Freiburg identity tribe scale did not show significant harmful results on how co-factor for dopamine Catalyst beta-hydroxylase, the dopamine in the norepinephrine converts (Figure 1), which play an important role in driving a einnimmt.<sup>3</sup> evidence of the involvement of norepinephrine in misery awareness is inexhaustible, and the most recent

studies on nerve pathways and tools the special task of norepinephrine in this Störung.<sup>4</sup> noradrenaline plays an important and decisive role in the control of discrimination, recruitment, intrigue and knowledge, the social relations .

Nutrients C is also a cofactor for tryptophan 5-hydroxylase, which is required for the conversion of tryptophan to 5-hydroxytryptophan in the formation of serotonin. Nutrient-C can sein.<sup>6</sup> for patients with discomfort due to low serotonin use The lack of serotonin leads to a depressive effect in this sense, and an overabundance of serotonin in the brain tissue leads to an excitation of the Hirnaktivität.<sup>7</sup> Vitamin C has extensive cell-enhancing properties of the essential for digestion of mitochondrial Fetten.<sup>8</sup> Vitamin C is also used for the movement of Peptidilglycine monoxygenase alpha-aminated benötigt.<sup>9</sup> This compound catalyzes the limiting factor ahead in the biosynthesis of Neuropeptiden.<sup>10</sup>

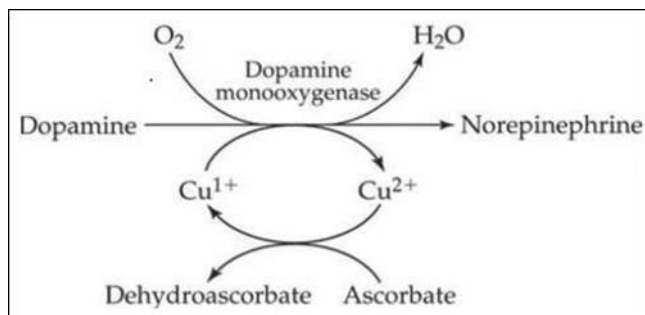


Figure 1: Role of vitamin C in norepinephrine synthesis

In a recent report, experts used a targeted assessment of physical performance and a series of social statistics, dietary and health measures to identify potential factors that could clarify the relationship between despondency and mortality in network members over 65 years. Pain was examined using the 15-point geriatric scale (GDS) and physical work. Subjects were followed until their death for a period of 9.2 years. By default, 20.9% of members showed depression (GDS score  $15 \geq 5$ ). The depressed members had a higher relative risk of mortality from all causes during development (balanced risk / age ratio by sex = 1.24, 95% safety meanwhile: 1.04-1.49). All in all, these elements have clarified the expected 54% of the relationship between poverty and misdeed. Even second-degree burn changes and low vitamin content in plasma C were freely associated with depression and mortality, but did not clarify the relationship between misery and mortality. The physical features can clarify the context, although revisions are needed to fully illustrate the

mechanisms.<sup>11</sup>

Preparations were made to check whether patients had with Nervositätsproblemen (GAD) and the dark differences in blood serum nutrient sizes A ( $\beta$ -carotene), C and E, in contrast to ordinary audio controls, and if a supplement with sufficient doses of nutrients A, E and C cause a noticeable decrease in tension and distressing results of the subjects. It was found that patients with GAD and sadness, in contrast to sound control, showed smaller nutrient sizes A, C and E. After improving these missing nutrients in the subjects' weight control plans, it was observed a tremendous decrease in nervousness and distressing results.<sup>12</sup>

Among the various elements of vit. C, one is its role in bringing together certain synapses. Nutrient C is a cofactor of dopamine beta-hydroxylase<sup>2</sup>, which is associated with the transition from dopamine to norepinephrine.

**AIM OF THE STUDY:**

In light of the above reports, the present study was based on an irregular example of 30 patients from the District Bahawalpur. According to the DSM - IV13 Structured Clinical Interview, it was discouraged to find out the size of the nutrient C in its serum and counter these and 30 age and sex controls

**MATERIAL AND METHODS:**

The investigation was directed over a time of a half year in the psychiatric department of Bahawal Victoria Hospital , Bahawalpur. Thirty depressed patients, analyzed by SCID schedule,<sup>13</sup> were chosen haphazardly. A careful physical examination and important examinations were done to discount any physical illness. Thirty age-and sex-coordinated

controls from solid populace having a place with a similar zone were likewise incorporated into the investigation. Serum nutrient C levels were estimated in every one of the subjects by dinitrophenyl hydrazine method.<sup>14</sup> The mean ( $\pm$ SD) serum nutrient C dimensions of patients with gloom were contrasted and those of controls by Student's t-test.

**RESULTS:**

Serum nutrient C levels extended from 0.3 to 0.6 mg/dl in controls with a mean  $\pm$  SD of  $0.41 \pm 0.07$  mg/dl. In patients with depression, the dimensions extended from 0.1 to 0.4 mg/dl with a mean  $\pm$  SD of  $0.18 \pm 0.09$  mg/dl. The contrast between the two gatherings was profoundly critical with a p estimation of  $<0.001$  (Table 1) (Figure 2).

**Table 1: Mean $\pm$ SD serum vitamin C levels in controls and depressed patients**

Analyte	Control Group (n=30)	Depressed Patients (n=30)	p value
Vitamin C (mg/dl)	$0.41 \pm 0.07$	$0.18 \pm 0.09$	$<0.001$

**DISCUSSION:**

Nutrient C is an enemy of oxidant, normally used to support resistance in the instances of cold and influenza. In the treatment of Vitamin C is additionally significant, in light of the fact that it is required for the change of tyrosine into dopamine, norepinephrine and epinephrine. These are the synapses giving both physical and inspirational vitality and sentiments of remuneration and fulfillment.

Nutrient C is expected to change over tryptophan, amino corrosive present in the creature proteins in the eating regimen, into serotonin, significant synapse of the mind.

Without Vitamin C these biochemical responses can't be appropriately done and that will result in lesser measures of synapse in the mind and body, and thusly, in lower state of mind and inspirational vitality.

Serum nutrient C in patients with sorrow was observed to be essentially lower when contrasted with solid controls demonstrating poor nutrient C status in depressed patients. As portrayed above, nutrient C is a cofactor for dopamine beta-hydroxylase, which changes over dopamine to nor-epinephrine, and a

cofactor for tryptophan-5-hydroxylase required for the transformation of tryptophan to 5-hydroxytryptophan in serotonin generation.

Since combination of serotonin, dopamine and norepinephrine requires nutrient C, it is not out of the ordinary that their amalgamation would be weakened if nutrient C is lacking. Serotonin, dopamine and norepinephrine assume significant jobs in looking after state of mind. Lack of nor-epinephrine can cause clinical dejection and poor memory, and insufficiency of serotonin can create a depressant impact.

Results introduced here exhibit poor nutrient C nourishment in gloom in the example of populace considered. Regardless of whether this under-nourishment is predominant in different areas of populace should be explored.

Nutrient C under - nourishment might be a causative or contributory factor in the beginning of dejection. Henceforth adjustment of this insufficiency nearby the customary treatment of melancholy is required to yield better outcomes in patient administration.

**CONCLUSION:**

This investigation indicates low nutrient C status in discouraged patients when contrasted with ordinary people, and recommends that nutrient C

supplementation can have a beneficial outcome in the treatment of these patients. Nutrient C has a significant job in the arrangement of synapses required for typical neuronal working and the absence of this significant factor can be a reason for treatment disappointment and obstruction in the discouraged populace.

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