VITAMIN D-3 AND DEPRESSION

"People's moods change with seasons. They are more often depressed and anxious during winter months and less so during the summer. Extreme degrees of this are called seasonal affective disorder (SAD). SAD is associated with the following conditions:

- Carbohydrate cravings
- Daytime sleepiness
- Lack of energy
- Severe depression

"Researchers have linked the variations in mood to seasonal exposure to sunlight, which links a lack of vitamin D-3, to this disorder. Newer research has disclosed several possible explanations for this association. We know that high stress levels can cause blood levels of corticosteroid, the stress hormone, to increase.

"Over time, corticosteroid can damage brain cells in the limbic system associated with memory and mood. Corticosteroids increase excitotoxic damage to these neurons, but one study found that vitamin D-3 can reduce the damage, especially in the hippocampus.

"The limbic system, which regulates mood as well as memory, also contains a high density of vitamin D-3 receptors, which are especially dense in the hippocampus. Another nuclei within this limbic system called the amygdale, also contains a dense concentration of vitamin D-3 receptors. . .