

THE MOST POWERFUL NUTRIENTS

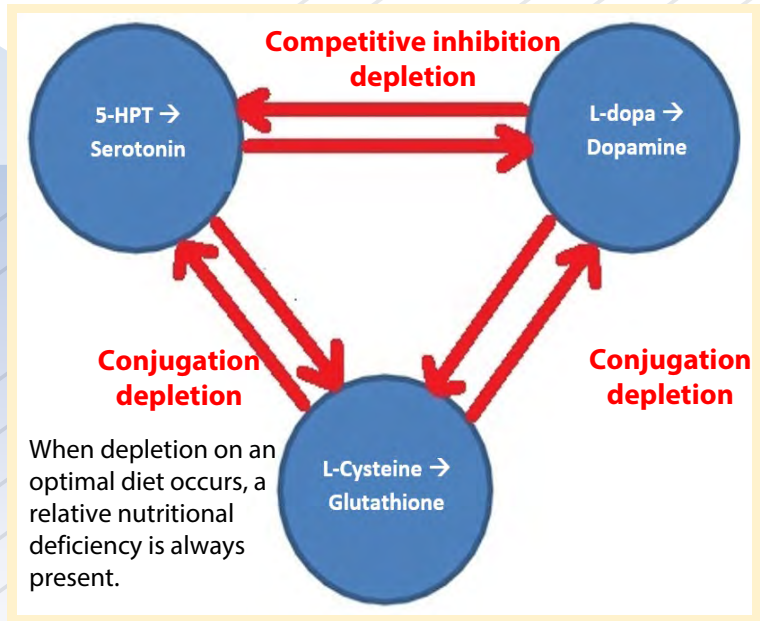
PERSPECTIVE:

- The nutrients 5-HTP, L-dopa, and L-cysteine are the “rate limiting step” in the synthesis of serotonin, dopamine, and glutathione, respectively. They are required when an optimal diet does not meet the needs of normal function.
- Metabolism of 5-HTP, L-dopa, and L-cysteine to serotonin, dopamine, and glutathione, respectively, are unregulated (without biochemical feedback regulation).

Theoretically, if adequate enzymes are available, administering unlimited amounts of 5-HTP, L-dopa, and L-cysteine will produce unlimited serotonin, dopamine, and glutathione in the system.

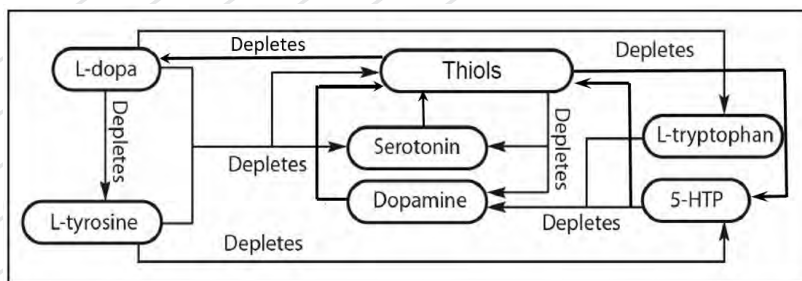
A relative nutritional deficiency occurs when an optimal diet does not meet the needs of the system.™ Whenever there is not enough (low, inadequate, depleted, deficient, or suboptimal) serotonin, dopamine, or glutathione on an optimal diet, a relative nutritional deficiency of 5-HTP, L-dopa, or L-cysteine always exists.

Administering only one precursor from the list 5-HTP, L-dopa, and L-cysteine will induce depletion of the other two systems. Caregiver-induced depletion on an optimal diet represents a relative nutritional deficiency involving the depleted system.



The super amino acids, 5-HTP, L-dopa, and L-cysteine can produce as much serotonin, dopamine, and glutathione as needed for normal function when a related relative nutritional deficiency interferes with function.

Administering nutrient precursors of serotonin or dopamine on an optimal diet can cause depletion of dopamine or serotonin respectively through competitive inhibition. Administering glutathione (or any of the other thiols) on an optimal diet can deplete serotonin and dopamine through conjugation, inducing a relative nutritional deficiency of their precursors. Administering serotonin or dopamine precursors (or any of the other thiols) on an optimal diet can deplete glutathione (and the other thiols) through conjugation, including a relative nutritional deficiency of glutathione.



5-HTP, L-dopa, and L-cysteine can establish unlimited concentrations of serotonin, dopamine, and glutathione. Optimal results do not depend on systemic concentrations, it depends on nutrient balance.

The Food and Drug Administration (FDA) has not evaluated these statements. These nutrients are not intended to diagnose, treat, cure, or prevent any disease.

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5-HTP, L-dopa, and L-cysteine are unregulated in their metabolism to serotonin, dopamine, and glutathione, respectively. Administrations of improperly balanced nutrients can induce side effects and lead to suboptimal resolution of relative nutritional deficiency symptoms.

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