

# More Letters

- treatment regimen has been published in Advances in Therapy, [July/August 1990;7(4): 206-28].
- 5. Recently, the CDC (Center for Disease Control) has identified peak 97, (or peak E) as Di-L-tryptophan aminal of acetaldehyde (see below). Although peak E was associated with EMS, research continues to determine if this substance (represented by peak E) is the actual contaminant. [MMWR, August 1990;39(34):589-91]
- Tyson or Integrated Health Ltryptophan product.
- HPLC (High Performance Liquid Chromatography) analysis of the Showa Denko finished product (tablets) and raw material are on file at Tyson and Associates, Inc. This analysis showed the same type of data that was published in the New England Journal of Medicine, [August 9, 1990;323, (6)], which demonstrated many unidentified peaks in addition to L-tryptophan.
- Again, we want to affirm that pure Ltryptophanis safe at the normal dosage of 500 mg to 3000 mg taken daily with the proper co-factors.

### Some Final Notes

- L-tryptophan has been used in research without serious side-effects for over 30 years.
- It is an established fact that there is no association between Tyson and Integrated Health products and the disorder EMS. Tyson and Associates has had its L-tryptophan analyzed by numerous laboratories and no contamination has been found in any

Thank you for your support in the past and we will continue to inform you of any new developments.

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## Glycyrrhizin Supplementation Benefited by Methionine Administration

#### Editor.

I read with interest Paul Bergner's article on Japanese research on glycyrrhizin and the potential usefulness of licorice root (Glycyrrhiza glabra) for those with AIDS or ARC or who are HIV positive. As with its other applications, the utilization of licorice here is limited by glycyrrhizin's mineral corticoid activity which causes excretion of potassium and retention of sodium, thereby increasing fluid volume and blood pressure with long term use. I would like to bring to your readers' attention a Japanese study by T. Mori et al. published in Oyo Yakure 34:293-301 (1987) (English abstract found in Chem. Abs. 108:49307t) which tested both methionine and amino acetic acid alone and in combination in rats as a means of blocking these side effects of glycyrrhizin.

They found that both substances individually or together, when given with glycyrrhizin, helped prevent the fluid retention by increasing sodium excretion and urine volume. Since DL-methionine has been used in a number of lipotropic formulations at approximately 1 gram/day for some time, this supplemental use is apparently safe. If its use with Glycyrrhiza is successful in preventing the development of hypokalemia and hypertension in humans, then the benefits from this plant can be extended beyond their current limits.

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# Bowel Toxins Accelerate Aging Process

Editor:

The gerontologist, V.V. Frolkis, recently found that mice lived 43% longer than animals on the standard diet when they periodically had activated charcoal added to their food. This is the clearest evidence I have seen that "bowel toxins" make a major contribution to the aging process. Although I think carrot fiber would have a similar effect, there might be important differences in the substances bound by wet cellulose and by microporous carbon. Analysis of the substances bound to the charcoal after it has been excreted should give us important new knowledge about aging. Besides endotoxin, I think the charcoal might protect against microbial estrogen and glucocorticoids, carbon monoxide, cyanide, and unsaturated oils. Absorption of heavy metals is probably decreased by all types of "fiber."

While Bogomoletz and Metchnikof saw the bowel toxins as the factor which drove the aging process. I see bowel toxins rather as a relatively late-acting factor that accelerates a process which develops for other reasons. Once our detoxifying mechanisms begin to fail, bowel toxins pass the bowel with relative ease, and rapidly destroy the remaining systems of defense and detoxification. The altered hormonal environment and weakened digestion of an aging organism create a new balance between the animal and the bowel flora, sometimes allowing the proliferation of more toxic flora. The accumulation of iron and other heavy metals, and of unsaturated fats, and the progressive loss of copper under the influence of the stress of darkness, are probably the central events in the process of aging.

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