SUMMARY

1. The rats were divided into five groups. Four groups of 13 rats each were maintained on purified diet deficient in the following factors: 1) methionine and vitamin E, 2) methionine, 3) vitamin E, and 4) none. For groups 2, 3, and 4, methionine and vitamin E supplemented the basal diets. The last group of 8 rats as the control group was fed the stock diet.

2. Rats raised diet deficient in methionine grew slower than those which received methioine. Vitamin E supplementation alone did not improve growth, but vitamin E plus methionine lead to an increased rate of growth.

3. In both livers and spleens of rats fed methionine and vitamin E deficient diets, beta - glucuronidase activities were elevated. Supplementing the diet with either vitamin E or methionine decreased beta - glucuronidase titers, but methionine was more effective than vitamin E. In rats supplemented with vitamin E and methionine, beta - glucuronidase activities remained at the relatively low level found in rats on the stock diet.

4. Apparently both methionine and vitamin E supplementation significantly influenced rat liver and spleen beta - glucuronidase activities, and both were necessary to lower the values to that observed in rats fed a stock diet.

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