Abstract

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Dietary deprivation of B-vitamins reflected in murine splenocyte proliferation in vitro.

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OBJECTIVE: The effect of murine dietary deprivation of specific B-vitamins on in vitro splenocyte proliferative response in short-term tissue culture was examined in serum-free, protein-free, minimal medium.

METHODS: Using different media formulations, incorporation of [3H]thymidine was used to monitor the relative growth capacity of phytohemagglutinin-stimulated splenocytes from mice exposed to different diets.

RESULTS: The results demonstrate that the growth deficit observed in vitro in the absence of specific vitamin(s) in the medium correlates only to those specific vitamin(s) eliminated from the diet. Dietary repletion is followed by restoration of a normalized response in vitro.

CONCLUSION: The finding that murine dietary experience is reflected in vitro in splenocyte proliferative response monitored by [3H]thymidine incorporation suggests that human dietary experience might be monitored by similar analysis of human peripheral blood lymphocyte response.

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