B-vitamins and exercise: does exercise alter requirements?

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BACKGROUND: The B-vitamins (thiamin, riboflavin, vitamin B-6) are necessary in the energy-producing pathways of the body, while folate and vitamin B-12 are required for the synthesis of new cells, such as the red blood cells, and for the repair of damaged cells. Active individuals with poor or marginal nutritional status for a B-vitamin may have decreased ability to perform exercise at high intensities.

METHODS: This review focuses on the B-vitamins and their role in energy metabolism and cell regeneration. For each vitamin, function related to physical activity, requirement, and status measures are given. Research examining dietary intakes and nutritional status in active individuals is also presented.

CONCLUSIONS: Current research suggests that exercise may increase the requirements for riboflavin and vitamin B-6, while data for folate and vitamin B-12 are limited. Athletes who have poor diets, especially those restricting energy intakes or eliminating food groups from the diet, should consider supplementing with a multivitamin/mineral supplement.

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