

Abstract

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Folic acid supplementation improves vascular function in amenorrheic runners.

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OBJECTIVE: The purpose of this study was to determine if folic acid supplementation improves endothelial vascular function (brachial artery flow-mediated dilation; FMD) in amenorrheic runners.

DESIGN: Prospective cross-sectional study.

SETTING: Academic medical center in the Midwest.

PARTICIPANTS: Ten amenorrheic and 10 eumenorrheic women runners from the community volunteered for this study.

INTERVENTIONS: Each participant was treated with folic acid (10 mg/d) for 4 weeks.

MAIN OUTCOME MEASURES: Brachial artery FMD was measured before and after folic acid supplementation with standard techniques.

RESULTS: The brachial artery FMD response to reactive hyperemia improved after folic acid supplementation in amenorrheic women (3.0% +/- 2.3% vs. 7.7% +/- 4.5%; P = 0.02). In the eumenorrheic control group, there was no change in brachial artery FMD (6.7% +/- 2.0% vs. 5.9% +/- 2.6%; P = 0.52).

CONCLUSIONS: This study demonstrates that brachial artery FMD, an indicator of vascular endothelial function, improves in amenorrheic female runners after short-term supplementation with folic acid.

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