

3-1-1983

Stress Management in Borderline Hypertension

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The usual recommendation for people with undiagnosed borderline hypertension is to have their blood pressure rechecked within a three-month period. But could these clients do something while waiting to lower their pressures and possibly avoid referral into the medical system? Twenty of the twenty-one college students with borderline hypertension readings who participated in a six-week stress management program lowered their blood pressures significantly and avoided medical referral. Although the sample was small, the findings do raise questions about managing borderline hypertension.

Ten students were randomly placed in a control group and 11 in a stress management program that included listening to selected relaxation tapes daily and receiving 20 minutes of GSR biofeedback once a week at the campus nurse health clinic. All received risk-factor counseling and had their blood pressures taken during a two-week baseline period. BPs were taken before and after they sat in recliners for 20 minutes. During this period, the experimental group received the biofeedback, and the control group was asked to relax. Mean baseline blood pressures were 139.5 mm Hg systolic and 91.4 diastolic for the stress management group and 138.1 mm Hg systolic and 91.2 diastolic, the control group.

After the six-week stress management program, both groups significantly lowered their average blood pressures (25.9 mm Hg lower systolic and 18.2 mm Hg diastolic for the stress management group and 19.9 mm Hg and 15.2 mm Hg for the control group). However, analysis of covariance (using baseline blood pressures as the covariant) showed that the stress management group had an average systolic blood pressure 6 mm Hg lower than the control students ($p < 0.03$) and an average diastolic blood pressure 3 mm Hg lower than the control group ($p < 0.005$).

The findings suggest that such a stress management program may be more effective in lowering blood pressure for college students with borderline hypertension than repeated weekly measurements and cardiovascular risk-factor counseling. These findings should be verified in a larger study, since the control group also lowered their BPs with little intervention.