

News

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March 24, 1979

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HOLD FOR RELEASE MARCH 24

*****Price presents findings on "hypertensive" adolescents' reaction to stress at psychosomatic medicine meeting.

DALLAS--Adolescents with above-normal blood pressure experience a greater increase in pressure and heart rate in anticipation of stress than do youngsters with normal pressure levels, a study here indicates.

This finding, based on comparisons of 92 Dallas adolescents, was to be reported today (Editors: at 9 a.m.) by Dr. Kenneth P. Price, assistant professor of psychology at The University of Texas Health Science Center at Dallas. Price presented his paper "Cardiovascular Responses to Stress in Adolescents with Elevated Blood Pressures" at the Psychosomatic Aspects of Medicine conference at the Fairmont Hotel.

A research team headed by Price studied adolescents who had participated in a blood-pressure screening of 10,000 eighth graders in the Dallas school system. While none of the teenagers in the study had clinical hypertension, the group with "elevated blood pressure" was picked from the five percent at the high end of the blood pressure range. The average blood pressure for this group was 130/69. Each subject was matched with another with pressure at or below the average of the 10,000 screened. Pairs were matched for sex, race, age and size. Preliminary analysis shows no blood pressure differences due to sex and race. Data is still being analyzed regarding age and size.

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first add adolescent hypertension

Forty-six pairs of subjects were exposed to a classic technique for raising blood pressure, the cold pressor test. A subject's hand or foot is dunked in a bucket of ice water, and blood pressure, heart rate and amount of sweating are measured. The physical stress of the ice water increases all three measurements. In adults with clinical hypertension the changes are greater than in adults with normal blood pressure. In this study of adolescents the increases in heart rate and sweating were the same for both groups. Blood pressure changes were variable.

During the two minutes before the dunking, however, the "high blood pressure" group showed a greater increase in blood pressure and heart rate in anticipation of the physical stress. At all times this group had a higher pressure than the "normal" group.

In psychological testing no measurable difference was found between groups. "So these kids (with hypertension) don't have more stress than the others, but they react with greater physiological arousal to stress," Price said.

The psychologist had nothing but praise for the teenage volunteers and their parents. "They have cooperated tremendously," he said. "As a result, we may eventually learn whether the different response to stress in adults with chronic essential hypertension (high blood pressure with no apparent medical cause) results from the disease, develops with it or precedes it."

Price's research associates on this study include Gary Lott, psychological assistant, Dr. David E. Fixler, associate professor of pediatrics; and Dr. Richard H. Browne, director of the Graduate Program in Mathematical Sciences.

The Dallas conference is presented by the American Psychosomatic Society, the Association for Academic Psychiatry, and the Continuing Education Division of UTHSCD.

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Editor: Please note the following correction to our release dated March 24
"Price presents findings on 'hypertensive' adolescents' reaction to stress
at psychosomatic medicine meeting."

In paragraph three beginning "A research team headed by Price..." delete the
last two sentences of the paragraph.

In paragraph five beginning "During the two minutes before the dunking..." add
the sentence "Preliminary analysis shows no difference related to sex or race
in blood pressure changes under stress."

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