

Biofeedback and Essential Hypertension

Scientific research suggests that biofeedback lowers blood pressure. It seems to work indirectly, by balancing the body's stress systems, in particular the Autonomic Nervous System (ANS). By measuring ANS balance and feeding the information back in real time, biofeedback allows you to become more aware of your body's stress responses, and learn to influence the ANS towards a healthier state.

Heart Rate Coherence Training

Perhaps the best measure of ANS balance is Heart Rate Coherence (HRC) HRC is a beneficial pattern of change in Heart Rate which is synchronised with breathing. Low HRC has been shown to correlate with risk of developing hypertension. Regular practice of meditative breathing exercises in conjunction with HRC biofeedback can lower blood pressure significantly.

HRC training has also been shown to beneficially affect hormone imbalances. Levels of cortisol (the "stress hormone") go down while levels of DHEA (the "youth hormone") rise.

what's the evidence?

Association of Applied Psychophysiology and Biofeedback Hypertension Page

AAPB rates the research evidence supporting biofeedback for hypertension at level 4 out of 5 - efficacious.

Heartmath Institute Hypertension Study

This study demonstrates the benefit of stress management techniques incorporating Heart Rate Coherence biofeedback developed by the Heartmath Institute.

Biofeedback Treatment of Hypertension - a Meta-analysis

A meta-analysis collates the results of a number of studies. This one reviewed 22 randomized controlled studies with 905 essential hypertensive patients, and concluded 'relaxation-assisted biofeedback significantly decreased both systolic and diastolic blood pressures'.

Heart Rate Variability and Hypertension

Research showing low Heart Rate Variability (or coherence) predicts hypertension.