Relaxation training may improve control of hard-to-treat systolic hypertension

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Adding the relaxation response, a stress-management approach, to other lifestyle interventions may significantly improve treatment of the type of hypertension most common in the elderly. Among participants in a study conducted at the Massachusetts General Hospital (MGH) Hypertension Program and the Benson-Henry Institute for Mind-Body Medicine at MGH, those who received relaxation response training in addition to advice on reducing lifestyle risk factors were more than twice as likely to successfully eliminate at least one blood pressure medication than were those receiving lifestyle counseling only. The study appears in the *Journal of Alternative and Complementary Medicine*.

“Nearly 80 million Americans are classified as having hypertension, and although we have many medications to lower blood pressure, only about a third of patients achieve adequate control of their pressures,” says Randall Zusman, MD, co-senior author of the report who leads the Hypertension Program at the MGH Heart Center. “If a practice that takes only 15 to 20 minutes a day can help decrease patients’ dependence on antihypertensive medications – reducing often-unpleasant side effects and the considerable costs of these drugs – we could not only improve their quality of life but lower direct and indirect health costs by billions of dollars.”

Among the elderly patients in whom it is most common, isolated systolic hypertension – an increase in only the peak arterial pressure – is more closely correlated with adverse events like heart attack, stroke or renal failure than is elevated diastolic pressure. Treating systolic hypertension

is particularly challenging since older patients who take many medications are at greater risk for drug interactions and may be more vulnerable to other side effects.

The relaxation response is a physiologic state of deep rest – involving both physical and emotional responses to stress – that can be elicited by practices such as meditation, deep breathing and prayer. Herbert Benson, MD, director emeritus of the Benson-Henry Institute and co-senior author of the current report, first described the relaxation response almost 35 years ago, and he and his colleagues have pioneered its use in mind/body medicine. While several studies have shown that the relaxation response can help alleviate hypertension involving elevated systolic and diastolic pressures, its usefulness in treating isolated systolic hypertension has not been investigated.

The present study enrolled more than 100 patients, aged 55 and older, whose systolic pressure remained elevated despite their taking two or more antihypertensive drugs. Participants were randomly assigned to two groups. The control group received weekly counseling sessions on cardiac risk factors, the impact of stress on hypertension, and recommendations on dietary and fitness goals. The treatment group attended sessions that also included instruction and practice eliciting the relaxation response. Both groups also received audiotapes to listen to daily – the control group with general lifestyle recommendations and the treatment group a guided relaxation response session.

Participants' blood pressure was checked after eight weeks, and those whose pressures had dropped into the normal range – less than 140 systolic and 90 diastolic – were eligible to start reducing the dose of one of their medications. If blood pressures remained normal during subsequent weeks, dosage could be further reduced or eliminated; but participants whose hypertension returned resumed their previous dosage level. The physician conducting weekly evaluations did not know to

which group participants belonged, and participants were told only that the study was evaluating different “stress management” programs.

By the end of the 20-week study period, participants in both groups had experienced a significant drop in systolic blood pressure, allowing two thirds of all participants to attempt medication reduction. Among relaxation response group participants, 32 percent maintained reduced systolic pressure after eliminating one or more medications, an accomplishment achieved by only 14 percent of those in the lifestyle-counseling group.

“The other nonpharmacological interventions that we know can reduce systolic blood pressure – reducing dietary sodium, weight loss, smoking cessation and increasing physical activity – can be very difficult for patients to achieve,” says Jeffrey Dusek, PhD, the study’s lead author. “Our control group received an intensive amount of good-health information and reported making fairly dramatic lifestyle changes, but only the relaxation response group was able to significantly reduce their use of antihypertensive medications.” Formerly with the Benson-Henry Institute, Dusek is now with the Institute for Health and Healing at Abbott Northwestern Hospital in Minneapolis.

Zusman adds, “We are now going to look at the very large patient population currently termed pre-hypertensives – those whose blood pressure is elevated but does not yet meet the criteria for drug therapy. If we can train those patients to elicit the relaxation response, we may be able to delay or even avoid the onset of hypertension, improving their cardiovascular health, reducing dependence on medications and potentially reducing overall health care costs.” Zusman is an associate professor of Medicine, and Benson is the Mind/Body Medical Institute Associate Professor of Medicine at Harvard Medical School.

Source: Massachusetts General Hospital