

Research Notes

TM Effective In Reducing High Blood Pressure

People with high blood pressure may find relief from Transcendental Meditation (TM), according to a definitive new meta-analysis of 107 published studies on stress reduction programs and high blood pressure.

The TM technique produces a statistically significant reduction in high blood pressure that is not found with other forms of relaxation, meditation, biofeedback or stress management. Blood pressure changes for the TM technique included average reductions of 5.0 points on systolic blood pressure and 2.8 on diastolic blood pressure, which were statistically significant, according to the review.

The new meta-analysis was conducted by researchers at the NIH-funded Institute of Natural Medicine and Prevention at Maharishi University of Management and the University of Kentucky College of Medicine.

According to Dr. James Anderson, professor of medicine at UK and co-author of the new meta-analysis, "The magnitude of the

changes in blood pressure with the Transcendental Meditation technique are at least as great as the changes found with major changes in diet or exercise that doctors often recommend. Yet the Transcendental Meditation technique does not require changes in lifestyle. Thus many patients with mild hypertension or prehypertension may be able to avoid the need to take blood pressure medications — all of which have adverse side effects. Individuals with more severe forms of hypertension may be able to reduce the number or dosages of their BP medications under the guidance of their doctor."

Anderson added that long-term changes in blood pressure of this magnitude are associated with at least a 15 percent reduction in rates of heart attack and stroke. "This is important to everyone because cardiovascular disease is the number one cause of death in the U.S. and worldwide," Anderson said.

The new information appeared in the December 2007 issue of *Current Hypertension Reports*.

NIH Awards Professor \$3.96 Million Grant

A drug therapy to protect the U.S. population from the consequences of nuclear terrorism is being pioneered by scientists at the UK College of Pharmacy. The National Institutes of Health (NIH) awarded Michael Jay, professor of pharmaceutical sciences in the UK College of Pharmacy, \$3.96 million over the next two years to develop an orally administered treatment to be used in radiation emergencies such as after exposure to radiological dispersion devices (RDDs) or dirty bombs.

The U.S. Food and Drug Administration (FDA) has determined that a drug called diethylenetriaminepentaacetate (DTPA) is safe and effective for the treatment of internal contamination. Currently, DTPA is not absorbed very well when administered orally, thus, it must be administered intravenously. The ultimate goal of Jay's study is to develop a highly bioavailable form of DTPA that can be administered orally, can be stored in the Strategic National Stockpile, is stable and has a long shelf-life, can be distributed to the at-risk population in a short period of time, can be self-administered with little risk of toxicity, and can effectively remove radioactivity from a contaminated individual.

This grant comes in response to the encouraging results from Jay's initial study in 2005 for which the NIH awarded him \$1.2 million. Jay and his colleagues, Robert Yokel, professor and associate dean for research and graduate education, Patrick McNamara, professor and chairman of the Department of Pharmaceutical Sciences and Russ Mumper, professor and director of the Center for Nanotechnology in Drug Delivery at the University of North Carolina, began synthesizing a series of compounds and quickly focused in on one that they will continue to study in the current product development phase.

New Commonwealth Collaboratives Unveiled

UK President Lee T. Todd Jr. has announced 13 projects designed for directly impacting the quality of life in Kentucky. These new Commonwealth Collaboratives aim to improve health, education, economic development, the environment and exposure to cultural events. The projects will receive \$10,000 from Todd's discretionary funds in addition to other funding they already may have from other sources.

- The projects cover many disciplines and include, for example, the:
- Clean Indoor Air Initiative (Nursing) to reduce exposure to secondhand tobacco smoke and radon by encouraging more communities to adopt smoke-free policies.
 - Johnson Elementary School Project (Medicine), to encouraging physical activity, healthy snacks, behavioral changes and also increase diagnosis and treatment of asthma.
 - Kentucky Marketmaker (Agriculture), with state partners and using a Web-based tool, to link Kentucky food producers with processors and/or marketers to increase sales and markets.
 - Kentucky Repertory Theatre Horse Cave Concert Series (Fine Arts), to bring live performances by UK students and faculty musicians to a fairly low-income area.
 - Land Use Planning (Agriculture), to help local communities by assigning landscape architecture students to help develop land-use plans to manage future growth.



Compiled from news reports about research at UK.

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