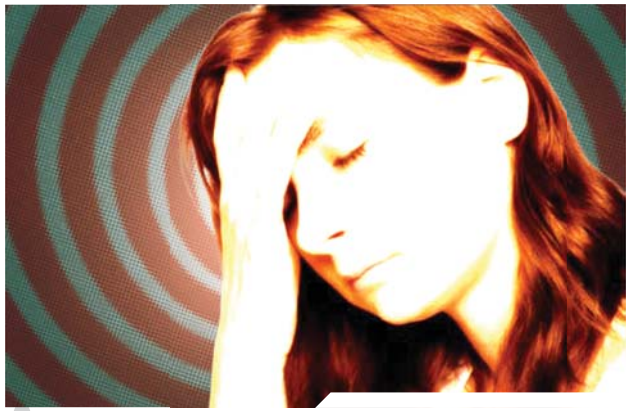
Hypnotic Relaxation Therapy Minimizes Hot Flashes



A Baylor University study shows hypnotic relaxation therapy can decrease the frequency and severity of hot flashes in menopausal women, including breast cancer survivors. Interference from hot flashes, like loss of sleep and social interaction difficulties, also decreased in the majority of women who received hypnosis.

With an estimated 85 percent of women experiencing hot flashes as they approach menopause, finding effective non-medication treatment is vitally important.

"This study validates that this type of treatment is effective in decreasing hot flashes," said Dr. Gary Elkins, professor of psychology and neuroscience at Baylor. "There is a real need to study emerging mind-body interactions to treating these ailments because many times medications are not an option."

The research was published online in September in *The Journal of Clinical Oncology*.

In the study, 26 women who are breast cancer survivors received hypnotic relaxation therapy and were compared to 25 other breast cancer survivors who did not receive treatment. The women who received hypnosis reported a 68 percent decrease in hot flashes. Anxiety, depression and insomnia also decreased.

Breast cancer survivors were chosen because the medications that are given to these women to help prevent the reoccurrence of breast cancer often cause them to go into menopause in a matter of days. Furthermore, hormone replacement therapy is not an option because of an increased risk of breast cancer recurrence associated with hormone therapy, thus creating a need for alternative mind-body treatments.

Based on the results of the study, Elkins received a $2.6 million grant from the National Institutes of Health for a much broader study that will significantly increase the scope and number of patients participating. The grant is the largest ever awarded by NIH for this type of research.

The new study enlists 180 post-menopausal women who entered menopause naturally and are experiencing hot flashes. Half of the patients will receive hypnotic treatment while the other half will receive another mind-body intervention. Those who receive hypnotic relaxation therapy will get five 45-minute therapy sessions and also will learn self-hypnosis techniques. The study will measure whether the frequency and severity of hot flashes decrease and whether there is an actual physiological response to the therapy. Researchers also will look at other physiologic markers, like stress hormone levels, to see if they decrease.

News outlets including *U.S.News & World Report, Washington Post,* and Reuters have carried stories about the research.

Faster Than Light

Two Baylor University scientists have come up with a new method to cause a spaceship to effectively travel faster than the speed of light, without breaking the laws of physics.

Dr. Gerald Cleaver, associate professor of physics, and Richard Obousy, a Baylor graduate student, theorize that by manipulating the extra spatial dimensions of string theory around a spaceship with an extremely large amount of energy, it would create a "bubble" that could cause the ship to travel faster than the speed of light. To create this bubble, the Baylor physicists believe manipulating the 10th spatial dimension would alter the dark energy in three large spatial dimensions: height, width and length. Cleaver said positive dark energy is responsible for speeding up the expansion rate of our universe as time moves on, just like it did after the Big Bang, when the universe expanded much faster than the speed of light for a very brief time.

"Think of it like a surfer riding a wave," said Cleaver, who co-authored the paper with Obousy about the new method. "The ship would be pushed by the spatial bubble and the bubble would be traveling faster than the speed of light."

The Baylor physicists estimate that the amount of energy needed to influence the extra dimension is equivalent to the entire mass of Jupiter being converted into pure energy for a ship measuring roughly 10 meters by 10 meters by 10 meters.

"That is an enormous amount of energy," Cleaver said. "We are still a very long ways off before we could create something to harness that type of energy."

The paper was published in the *Journal of the British Interplanetary Society* and has has garnered the attention of a variety of outlets, including *USA Today,* MSNBC, Fox News, The Discovery Channel, United Press International and *Wired* magazine.

Solving Crime Faster

Baylor Researchers Use Chemometric Method to Determine Age of Skeletal Remains

Baylor University researchers have found a promising new method to determine the date of skeletal remains. The relatively simple technique of applying statistics to chemical measurements could provide a quicker way for crime scene investigators and others to determine the time that has lapsed since a person has died.

It is believed to be the first time that chemometric modeling of spectral data has been used to determine the time lapse after death of skeletal remains. In laboratory tests using this method, Baylor researchers found an error rate of only four to nine days for bones that were up to 90 days old.

"In perfect conditions in the laboratory, the method looks very encouraging," said Dr. Kenneth Busch, professor of chemistry and co-director of the Center for Analytical Spectroscopy at Baylor and a lead investigator on the project. "Once a regression model is built from spectral data, you could find out the age of the bones in a matter of minutes, rather than taking hours or days."

The research paper outlining the technique and results was presented at the annual meeting of the Federation of Analytical Chemistry and Spectroscopy Societies.

Baylor's ROTC Detachment 810 Named Top Program in the Nation

Adding another achievement to its long history as one of the nation's oldest Air Force ROTC units, Baylor University's Air Force Reserve Office Training Corps (ROTC) Detachment 810 was named the No. 1 large detachment in the nation, beating out 144 detachments nationwide for the top spot.

"I am very proud of our detachment and we could not have achieved this without the close partnership and support we enjoy from Baylor," said Col. Danny L. Leonard, commander of Baylor's AFROTC and chair of the Department of Aerospace Studies. "These cadets do not belong to AFROTC Detachment 810. They are Baylor's progeny who will serve in the world's best Air Force."

A panel of judges looked at seven different criteria during the competition, including production, education, recruiting and retention, university and public relations, cadet activities, Arnold Air Society activities and other notable achievements.

Col. Leonard noted that a viable detachment produces at least 15 officers on average each year; however, Baylor's detachment 810 currently produces 22 new officers a year.

Detachment 810 was formed in 1948, only 10 months after the creation of the Air Force as a separate military branch, making it one of the first ROTC programs in the nation. This year, the detachment is enjoying increased success after being named the No. 1 large detachment in the Southwest Region, among detachments with more than 100 cadets.

Student Receives Competitive $111,000 EPA Fellowship

Jason Taylor, a Baylor University biology doctoral student, has received a highly competitive Science to Achieve Results (STAR) fellowship from the U.S. Environmental Protection Agency.

The fellowship, which is limited to the most outstanding graduate students in ecological and environmental science in the country, provides $111,000 over a three-year period to cover tuition, stipend and research expenses. It is the first STAR doctoral fellowship ever awarded to a Baylor student.

Taylor was selected based on several academic criteria, including the merit of his dissertation proposal, which involves two related studies that will contribute to the refinement and development of ecological indicators of nutrient pollution in freshwater streams. The first study will evaluate how two common fish change the response of algae to nutrient pollution.

The second study will assess how nutrient pollution affects who eats what in streams. Changes in food webs may serve as indicators of nutrient pollution. Results from both of these studies will help water quality managers set ecological criteria for nutrients and prevent degradation of water supplies for both freshwater animals and human uses.

The STAR fellowship program aims to encourage students to obtain advanced degrees and pursue careers in an environmental field. This year, 32 fellowships were awarded out of more than 1,400 proposals, and only four of those were in the aquatic sciences field.