



Hypnosis: A Mind-Body Solution for Hot Flushes and Sleep Post-Menopause and in Breast Cancer Survivors

Professor Gary Elkins

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Professor Gary Elkins at Baylor University, Texas, is a leading expert on complementary and integrative medicine and clinical hypnotherapy. Here, we review his extensive contribution to science in the field of innovative mind-body interventions for symptoms associated with breast cancer and menopause (including the symptoms of hot flushes, sleep, anxiety, quality of life), and women's health care in general.

Hypnosis: An Alternative to Pharmacological Treatment?

As Professor of Psychology and Neuroscience and Director of the Mind-Body Medicine Research Laboratory at Baylor University, Waco, Texas, Professor Gary Elkins has, from 2006, led a team of doctoral and post-doctoral researchers exploring the potential applications and benefits of clinical and experimental hypnosis.

One important aspect of Professor Elkins' research focuses on the use of hypnosis in the management of the symptoms of menopause, which can be a common symptom following breast cancer surgery as well as part of normal biological ageing for women. This mind-body approach has significant appeal due to providing an alternative to the traditional pharmaceutical treatment of menopausal symptoms, which is associated with adverse side-effects combined with unsuitability and unreliability for some patients.

Professor Elkins and the Mind-Body Medicine Research Laboratory are currently conducting a multi-site randomised clinical trial of a self-administered hypnosis intervention for hot flushes and sleep disturbances in post-menopausal women and breast cancer survivors. The intervention is delivered using tele-health technology and does not require in-person visits. Recruitment and accrual for this study is on-going at this time.

The Origins of Clinical Hypnosis

Professor Elkins is a leading practitioner and researcher of clinical hypnosis and has been instrumental in establishing its widespread adoption in clinical practice. The Society of Psychological Hypnosis of the American Psychological Association defines hypnotherapy as 'The use of hypnosis in the treatment of a medical or psychological disorder or concern.'



Credit Gary Elkins

Hypnosis is a psychological state with physiological attributes and involves focused attention. The use of hypnosis can be traced to ancient times, but its modern scientific history began in the late 18th century with Franz Mesmer, a German physician who used hypnosis to treat his patients in Vienna and Paris. Soon afterwards, James Braid, a Scottish physician adapted 'mesmerism' for his medical practice and initially thought the process was similar to sleep, thereby coining the term hypnosis from the Greek word hypnos for sleep. He later came to understand that hypnosis is not sleep, but involves focused attention and suggestions. Since that time, contemporary research has greatly advanced our understanding of hypnosis and its applications in health care.



A Hypnosis Session in Progress. Credit Gary Elkins.

The Problem of Hot Flushes and Sleep

Returning to the work of Professor Elkins, his laboratory has taken a particular interest in the application of hypnosis as an intervention to alleviate symptoms of menopause. The team has conducted two large randomised clinical trials for using hypnosis to manage hot-flushes (or 'hot flashes' in American terminology) and to reduce sleep disturbances in menopause.

The menopause transition is a natural part of ageing and generally happens between the ages of 45 and 55 years of age, as a woman's oestrogen levels and associated fertility decline. In addition, menopausal symptoms can also be induced prematurely by breast cancer surgery or ovarian failure.

The symptoms of menopause are varied and can be severe to the extent that they disable daily functioning for many women. Common symptoms include hot flushes, night sweats, vaginal dryness, difficulty sleeping, low mood, anxiety and difficulty concentrating. Menopausal symptoms may start months or even years before periods stop and can last up to ten years or more after the last period.

Hot flushes are often a spontaneous experience associated with vasodilation (the dilation of blood vessels and drop of blood pressure), accompanied by sweating, skin flushing, fatigue, palpitations and feelings of anxiety, irritability and sometimes panic. Hot flushes are linked to decreased concentrations of oestrogen or gonadotropins but they can also be triggered by external factors such as stress, hot weather, spicy foods, alcohol or caffeine.

Professor Elkins and his team have identified that clinical hypnosis may be a potential treatment for postmenopausal hot flushes and breast cancer survivors who are also affected by this symptom. For the latter group, it is particularly pertinent and offers specific clinical benefits. Women with a history of breast cancer often experience more severe hot flushes, as abrupt chemotherapy can induce premature menopause, and in addition, commonly used oestrogen reducing breast cancer drugs, such as tamoxifen, or discontinued hormone

replacement therapy, can also trigger the symptoms. As many as 78% of women receiving chemotherapy for breast cancer and 72% of those taking tamoxifen suffer from hot flushes.

Ovarian failure is usually treated with oestrogen replacement therapy, but oestrogens are associated with increased risk of breast cancer and therefore, must be avoided for breast cancer survivors. Non-hormonal options for treatment of hot flushes is therefore limited.

For these patients, antidepressants, such as paroxetine, venlafaxine and fluoxetine have been shown to have only a modest effect on reducing hot flushes and are not effective for some. In addition, antidepressants, also bring a wide range of potentially unpleasant side-effects, including anxiety, dry mouth, fatigue, sleepiness, and difficulties with concentration. As a result, studies have suggested that many patients discontinue or reduce their medication from the optimum dose. It is therefore apparent that an alternative to the approaches described is very desirable, and hypnosis appears to be a potential solution.

Can Hypnosis Reduce Menopausal Symptoms?

Hypnosis has been used to alleviate a wide range of medical conditions, including acute and chronic pain, irritable bowel syndrome, headaches, anxiety, depression and stress. The work of Professor Elkins' team also suggests that hypnosis may reduce the frequency and severity of hot flushes, principally through 'suggestions for coolness and relaxation, decreasing psychological stress and improving sleep.' There may be considerable similarities between the physical response to hot flushes and the body's stress response (the over-stimulation of the sympathetic nervous system, which regulates vital bodily functions such as heart rate, blood pressure, pupil dilation, body temperature, sweating and digestion). With this potential link in mind, the team started by developing a well-defined hypnosis intervention in the laboratory and then in a small exploratory study, tested the use of hypnosis as a stress management technique to reduce hot flushes in a group of breast cancer survivors.

All participants kept a weekly diary of their hot flushes, followed by a four-week post-treatment diary. Each patient was given a forty-five-minute hypnosis session, four times per week, by a doctoral clinical psychologist, which followed a standardised script. Patients underwent hypnotic induction 'with suggestions for relaxation and mental imagery for coolness,' and were given an audio recording of hypnotic induction to use to practice at home, including instructions for self-hypnosis. The results were very encouraging and achieved the aim of reducing the frequency and severity of hot flushes, with a 70% reduction from the baseline score to the end of the intervention, and comparable or superior to that achieved by the non-hormonal pharmacological treatment such as antidepressants.



This research was repeated two years later, using a larger and more rigorous randomised prospective study and achieved similarly impressive results. A randomised, controlled clinical trial involving 187 post-menopausal women with moderate to severe hot flashes was conducted by Professor Elkins' team. Participants received five weekly sessions of either clinical hypnosis or structured-attention counselling. Hot flashes were measured using both diaries and physiological data. Hot flush scores were determined by daily diaries at weeks 2-6 and week 12. Results demonstrated that flush frequency from baseline to week 12 showed the mean reduction was 80.32% on average for the clinical hypnosis intervention as compared to 15.38% for those that received the structured attention counselling. In addition, results showed significant improvement in the level of daily interference from hot flashes, levels of depression, anxiety and sleep disturbance. The study also showed that patients were positive about their hypnosis experience, with a high level of treatment satisfaction.

Women living with unrelieved hot flashes are known to suffer considerable damaging emotional and physical challenges, often hidden from or treated unsympathetically by others. These undoubtedly add to the consequences of hot flashes, namely, depression, anxiety, sleep disturbance, and decreased quality of life. With the close inter-relationship between the physical and emotional effects of menopause and hot flashes, it is reasonable to hypothesise that the interventions that effectively relieve hot flashes can also improve general mood levels and related factors, such as sleep. This was confirmed by the participants in this study, who reported significant improvement in each of these secondary outcomes.

There are indications that hot flashes may be related to a decrease in the parasympathetic tone. In general terms, the parasympathetic nervous system is part of the autonomous nervous system and acts to slow the heart rate. It is possible that regularly practising clinical hypnosis helps to regulate and increase parasympathetic tone and reduce the hot flashes and related cardiovascular symptoms. However, at the present time, the mechanism of action through which hypnosis reduces hot flashes is not yet fully known. Professor Elkins' research has shown that the effects are not likely to be due to expectancy or placebo effects, but may be related to stress and mind-body interactions. With the demonstrated benefits that hypnotherapy sessions provide, there is no doubt that this relaxing self-care intervention is likely to provide improvements to general well-being as well as stress reduction.

Establishing Hypnosis as a Clinical Alternative

In addition to his work on hot flashes in menopause and breast cancer survivors, Professor Elkins has a pioneering role in the recognition of hypnosis as a valuable treatment for medical and psychological problems.

In 2013, the American Psychological Association, Division of Psychological Hypnosis, appointed Professor Elkins as chair of a task force aiming to create modern and concise definitions of hypnosis, hypnotherapy and hypnotisability to replace previous unsatisfactory and out-dated definitions. He noted that 'The definition of hypnosis is fundamental to scientific inquiry, but the endeavour to define hypnosis from differing theoretical perspectives has given rise to controversy as to the "real" meaning of hypnosis....For example, some have defined hypnosis as a "procedure", and at the same time, others have defined it as a "product" of a procedure.'

New, clearer definitions were produced in 2015. The consensus definition of hypnosis is '*a state of consciousness involving focused attention and reduced peripheral awareness characterized by an enhanced capacity for response to suggestion.*' This clearly defines hypnosis as a state of consciousness and that hypnotic induction is a procedure to facilitate the experience of hypnosis. Subsequently, Professor Elkins has been working on improving the tools and training required for clinical hypnosis. Working with other key researchers, he has developed a core curriculum and textbook to raise training standards for health care professionals involved in hypnosis.

After observing the significant individual differences in hypnotisability amongst patients Professor Elkins and his laboratory devised a new, reliable tool to measure someone's hypnotisability. Hypnotisability can be understood as a talent or ability to experience hypnosis and effectively respond to hypnotic suggestions. A new scale was developed to measure individual differences in hypnotic abilities quantifiably, called the Elkins Hypnotizability Scale (EHS). Primarily designed to aid clinical research, the EHS provides an easily administered and relatively rapid tool that takes only about 15-20 minutes to administer.

It is without a doubt that the work of Professor Elkins is making important contributions to the expansion of clinical approaches using non-pharmaceutical, mind-body interventions and solutions for the problems of hot flashes and stress. This approach appears particularly useful for long-term chronic conditions such as pain management and anxiety-related symptoms, and Professor Elkins' work is particularly advancing our understanding and measurement of mind-body therapy (hypnosis) and clinical applications to improve the health care of women.



Meet the researcher

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Professor Gary Elkins completed a BA in Psychology in 1975 at Henderson State University (USA) and PhD at Texas A&M University (USA) in 1980. Following the completion of a range of clinical and academic appointments, Dr Elkins is now a Professor at the Department of Psychology and Neuroscience, and Director of the Mind-Body Medicine Research Laboratory at Baylor University. He is also a Medical Associate at Baylor Scott and White Health and Adjunct Professor at the Department of Psychiatry and Behavioral Sciences, Texas A&M Health Science Center College of Medicine. His specialist areas include hypnosis research, sleep, women's health, complementary and integrative medicine. He is the Editor-in-Chief of the *International Journal of Clinical and Experimental Hypnosis*. Dr Elkins is a licensed psychologist and is board certified in Clinical Health Psychology by the American Board of Professional Psychology. As an esteemed clinical researcher, Dr Elkins has published extensively in peer-reviewed journals as well as authoring the popular book *Handbook of Medical and Psychological Hypnosis: Foundations, Applications, and Professional Issues*.

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FURTHER READING

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