



**HospiceLove** is designed to deliver psychological and physical relief for patients and their families during the end stages of life. We assist the mission of hospice by helping people make their life transition comfortable and peaceful, with fewer mind-altering drugs.

The app is divided into four categories of therapeutic audio programs:

1. Calm, for stress and anxiety
2. Pain Relief
3. Sleep, for insomnia
4. My Life, with programs to help integrate difficult emotions that may arise during this time

**HospiceLove** delivers tremendous relief from suffering. Here is one comment from an individual who listened to one of our pain relief programs currently available on YouTube:

*"Omg. ...This helped me so much!!!!!!!!!!!! I suffer with horrible pain from having Multiple Sclerosis. I am in a horrible flare this weekend and can't even sit still due to my pain level at a 10, I had tried listening to ASMR videos and they would kinda help, but not like this. Thank you, Thank you so much. I will definitely subscribe and listen to this again. I hope you continue to make videos, they truly help us who suffer. Thanks for sharing your wonderful talents."*

This kind of relief is possible because **HospiceLove** uses a synergistic combination of multiple techniques, all of which are scientifically explained, well-known concepts backed by studies. These concepts include:

- **the Harvard University "relaxation response" theory**
- **the science of "priming"**
- **the scientifically proven use of hypnosis to reduce pain, deepen sleep, and speed healing**
- **binaural beats**

## **Harvard University Relaxation Response**

The term "relaxation response" was coined by Dr. Herbert Benson of Harvard Medical School in the 1970s. It describes the condition best described as the *opposite* of stress.

During this response, the body moves away from stress and the sympathetic response by activating the parasympathetic nervous system.

Harvard has done subsequent studies on this phenomenon, most recently in 2008. The findings are astonishing:

1. Heart rate, blood pressure, oxygen consumption, and brain activity are all affected positively.
2. Positive implication for insulin secretion.
3. Substantial pain relief.
4. Anxiety and stress are relieved, while gray matter associated with memory is increased.
5. Inflammatory processes are reduced, which is associated with reduced instances of heart disease and cancer.

[www.ncbi.nlm.nih.gov/pubmed/18596974](http://www.ncbi.nlm.nih.gov/pubmed/18596974)  
[healthland.time.com/2013/05/03/relax-its-good-for-your-genes/](http://healthland.time.com/2013/05/03/relax-its-good-for-your-genes/)

The relaxation response is achieved by altering the brain waves of the participant. This is a *natural process* and can be accomplished with guided imagery, meditation, deep prayer, binaural technology and hypnosis. For the Harvard research, a simple 20-minute relaxation CD was employed.

HospiceLove utilizes additional techniques and technology to improve, enhance and create an even more powerful and healing experience for the users. These include: conscious and subliminal priming, binaural beats to enhance depth of relaxation, and music and nature sounds.

## The Science of Priming

“Psychological priming” is a term of behavioral scientific research, popularized by the author Malcolm Gladwell in his bestselling book, *Blink*. When individuals are “primed” with specific ideas, thoughts and concepts, they behave in measurably different ways than their peers who have not been so conditioned.

What is priming? It is the process of exposing a person to specific words or images that alone create a particular psychological or even physiological state within the subject. The priming is done outside the conscious awareness of those in question. This type of priming has been shown to affect behavior.

[www.ncbi.nlm.nih.gov/pubmed/19594263](http://www.ncbi.nlm.nih.gov/pubmed/19594263)

Priming has also been shown to **help people fall asleep and stay asleep longer** than those in the control group. This was achieved by exposing the test group to something as simple as words associated with sleep.

<http://onlinelibrary.wiley.com/doi/10.1111/jasp.12123/abstract>

Priming closely resembles the placebo effect. This, of course, is the well-known and often-studied phenomenon of medically inert substances producing remarkable clinical results. It is known, for example, that multi-colored pills are more “effective” than single colored pills. Sham knee surgery is often just as effective as the real thing.

Hypnotherapists view priming simply as hypnotic *suggestions*. Ideas presented to the subconscious mind as suggestions will often be carried out.

Combining the relaxation response and the science of priming harnesses the extensive benefits observed with both phenomena. The relaxation response essentially functions as a technique to narrow one’s focus, shutting out or reducing other stimuli – including pain. Adding priming, which functions like the placebo effect, maximizes the benefits thus derived.

We are unwittingly priming our workers, clinicians, clients, and patients on a daily basis. All communication is to an extent a “prime.” Whether a clinician chooses to use the word “*pain*” or “*discomfort*” to describe a feeling will, to a degree, affect the experience of the patient.

## Hypnosis

***“Hypnosis is an altered state of consciousness during which an individual is able to exert heightened control over sensory modalities through suggestion and imagination.”***

***– Joseph Delitto, MD***

## Hypnosis Reduces Pain

A study done at the Mt. Sinai School of Medicine in NY was reported in the *Journal of the National Cancer Institute*: “Hypnosis Reduces Pain and Costs in Breast Cancer Surgery.”

Participants who employed hypnosis experienced:

- Less anesthesia than patients in the control group
- Less pain
- Less nausea
- Less fatigue
- Less discomfort and emotional upset

[jnci.oxfordjournals.org/content/99/17/1304.short?rss=1&ssource=mfr](http://jnci.oxfordjournals.org/content/99/17/1304.short?rss=1&ssource=mfr)  
[www.sciencedaily.com/releases/2007/08/070828175450.htm](http://www.sciencedaily.com/releases/2007/08/070828175450.htm)

Specifically, patients needed 22% less analgesia and 34% less sedation, and after the procedure, patients reported *53% less pain intensity*, 74% less nausea, and 46% less fatigue.

## **Hypnosis Reduces Opioid Use**

Two studies were done by Professor Fabienne Roelants and Dr. Christine Watremez, from the Department of Anaesthesiology at the Cliniques Universitaires St. Luc, UCL, Brussels, Belgium. In a study of 78 women with breast cancer, and 36 women with thyroidectomies, the following benefits were measured:

- *Significant reduction in pain as measured by opioid drug use*
- Reduction in recovery room and hospital stays

<https://www.sciencedaily.com/releases/2011/06/110613012819.htm>

## **Hypnosis Deepens Sleep**

In a 2014 study in Switzerland, subjects monitored by electrodes spent 80% more time in deep sleep than the control group, after listening to a sleep audiotape with hypnotic suggestions for sleep embedded within the program.

<http://www.webmd.com/sleep-disorders/news/20140619/hypnosis-may-help-improve-deep-sleep#1>

Since anxiety and hyper-vigilance disrupt sleep, anything that reduces anxiety creates favorable conditions for sleeping better. Each track produced by **HospiceLove** has, at its core, content that naturally and gently leads the listener into a relaxed, meditative state where the brain waves begin to slow. This shift into the parasympathetic nervous response makes drifting off into sleep much easier for the listener.

A study published in 2007 shows impressive results for people with sleep disorders:

*“Of the 36 patients, 45.4% were symptom-free or at least much improved at the 1-month follow-up, 42.2% at the 18-month follow-up, and 40.5% at the 5-year follow-up.”*

[www.ncbi.nlm.nih.gov/pmc/articles/PMC1978312/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1978312/)

## **Hypnosis Speeds Healing**

Although it may seem counterintuitive to think in terms of “healing” in a hospice setting, this research speaks to the power of the mind over the body.

The *Harvard Gazette* reported that researcher Carol Ginandes of the Harvard Medical School conducted a study of 12 women with broken ankles. Six of the women underwent hypnosis while the other six were the control group.

All twelve women were treated by the same doctor and analyzed by the same radiologists. The radiologists were not told which women were in the hypnosis or control groups.

Analysis at six weeks showed the hypnosis group was recovering at a much faster rate; they presented healing that would normally take eight and a half weeks.

<http://news.harvard.edu/gazette/2003/05.08/01-hypnosis.html>  
<http://www.ncbi.nlm.nih.gov/pubmed/1937991>

## **Binaural Beats**

Binaural beats are designed to change brain wave patterns, thus achieving an altered state of consciousness similar to those achieved with a deep state of meditation – without the use of drugs. The user listens to delivering slightly different tones, measured in Hz, into each ear through the use of headphones.

Depending upon what state of mind is desired, the binaural tones are adjusted accordingly and played in the background of our audio programs to enhance the user experience:

- Delta 0.5Hz – 4Hz, to enhance deep sleep
- Theta 4Hz – 8Hz, for drowsiness
- Alpha 8Hz – 14Hz, to be relaxed but alert
- Beta 14Hz – 30Hz, to be highly alert and focused

[www.ncbi.nlm.nih.gov/pmc/articles/PMC4428073/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4428073/)

In a study of 272 participants under the auspices of the NIH, Vibratory Acoustic Music was analyzed and showed the participants reduced their pain by 53%. *Note: vibrating recliners were utilized in addition to the music delivered to the participants.*

[vibroacoustic.org/FrequencyInfo/Research%20Articles/Effects\\_of\\_Vibroacoustic\\_Music\\_on\\_Symptom\\_Reduction.pdf](http://vibroacoustic.org/FrequencyInfo/Research%20Articles/Effects_of_Vibroacoustic_Music_on_Symptom_Reduction.pdf)

## **Conclusion**

In our opinion, hospice patients as well as their caregivers will benefit from the audio programs offered by **HospiceLove**. That belief is based on the overwhelming evidence presented here as well as first-hand anecdotal evidence gleaned from one-on-one practice since 2006. Our mission dovetails with that of hospice itself: to assist hospice patients in achieving a more comfortable, lucid, and dignified end-of-life experience.

## **Additional Citations:**

Scientific resources related to the effectiveness of the HospiceLove approach:

- Hypnosis Reduces Pain Intensity: Dahlgren LA, Kurtz RM, Strube MJ, Malone MD, Differential effects of hypnotic suggestion on multiple dimensions of pain. Journal of Pain & Symptom Management. 1995; 10(6): 464- 70.
- Hypnosis has a Reliable and Significant Impact on Acute and Chronic Pain: Hypnosis and clinical pain. Patterson DR, Jensen MP, Department of Rehabilitation Medicine, University of Washington School of Medicine, Seattle, WA USA 98104 Psychol Bull. 2003 Jul; 129(4):495-521.
- Hypnosis in the Treatment of Acute Pain in the Emergency Dept\_Setting: Delitto, Joseph A. MD Harvard Medical School. Postgraduate Medical Journal. April 1984. 60, 263-266.
- Pain of Men Wounded in Battle: Beecher, Henry K. Annals of Surgery 1946 January; 123 (1): 96-101.
- The Placebo Effect: Friedman, Joseph H. MD, Dubinsky, Richard MD doi: 10.1212/01.wnl.0000326599.25633.bb Neurology August 26, 2008 vol. 71 no. 9 e25-e26
- Hypnosis May Help Improve Deep Sleep:
  - <http://www.webmd.com/sleep-disorders/news/20140619/hypnosis-may-help-improve-deep-sleep#1>
  - <https://www.sciencedaily.com/releases/2014/06/140602101207.htm>
- Use of Adjunct Hypnosis Reduces Cost in Radiologic Procedures. <http://www.ncbi.nlm.nih.gov/pubmed/11818602> Radiology 2002 Feb; 222(2):375-82 Lang and Rosen