

The Use of Light and Sound Technology with Hypnosis

Presented By

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Millions of people around the world are using light and sound instrumentation technology to reduce stress and expand their mental powers. The technology is now evolving rapidly. The newer versions of light and sound machines are sophisticated, using tones never before employed. Lights are differing in color as we learn just what the brain and its connections need, in order to function more effectively. Many scientists are acknowledging and approving the results of light and sound.

Hypnotists utilize considerable time with a client using suggestibility, deepening techniques, preparing a client for relaxing and breathing; and then facilitating hypnosis. Hypnotists today have a variety of techniques at their disposal in order to hasten the process so that we can move to the therapeutic aspect of the session. Light and Sound is a tool being utilized successfully in practices with reduced time to therapeutic facilitation, as a means of deepening without the time, energy and verbiage required from the therapist to proceed. In other words, Light and Sound does the work for deep relaxation bringing the client to Delta in a fraction of time of traditional methods. So what does this mean?

The most interesting aspect of light and sound instrumentation for the use of hypnotists is that scientists are learning more about the brain and discoveries are occurring at rapid speed. In the past the ongoing research being conducted by psychiatrists, psychologists, therapists, sports trainers, educators and other researchers and clinicians have shown that light and sound technology instruments can help:

- Reduce Stress
- Produce Deep Relaxation
- Boost IQ
- Accelerate Learning
- Increase Memory
- Produce Peak Performance
- Help Overcome Addiction
- Overcome Depression and Anxiety
- Help Alleviate Pain
- Boost Immune Power
- Change Habitual Attitudes
- Increased Development in "At Risk" Children
- Help Athletes Increase Focus and Performance

A Basic Introduction to How Light and Sound Affects the Brain

Light and sound technology is successful because the two greatest needs of our brain are nutrition and light. Sound is also necessary but is secondary to light. Daily amounts of light are mandatory for peak performance, rehabilitation, mental training and accelerated learning.

Light is in charge of the energy coming from the outside world and our brains are in charge of the energies inside of us. For this reason the brain must rely on its ability to transform the energy from light for survival. When this source of energy is not readily available from the sun, a substitute must be found to allow our brain to provide us with necessary energy. A reliable substitute is audio visual stimulation technology. The brain uses any light energy force to expand cognitive ability for motor learning, creativity insight and redirection of psychological scripts. We all rely on this source for continuous mental alertness and winning performance.

The brain is electric and operates on frequency. Light and sound technology operates on electric frequencies called Hertz (Hz) or cycles per second. Research reports that the normal brain contains 10amps of electricity. The brain operates on frequency with each brain wave having a specified Hz or cycles per second. With light and sound, we can provide a friendly, useable energy input for our brains.

The brain is divided into two equal parts. The left side of the brain controls the right side of the body and the right side of the brain controls the left side of the body. Each side of the brain has specific tasks to accomplish. Among the 10 billion brain cells we possess there is a "thinking cap" of 1/8" thick area. We share this area with whales and dolphins. It works with the ANS or Autonomic Nervous System to control the body. This "upper brain" sends messages to the lower brain, better known as the subconscious. New research suggests that when both sides of the brain work together more learning takes place. Repeated use of these programs will result in rapid learning of mental skills.

Light and sound work by using specific frequencies of audio and visual input, in carefully pre-arranged patterns. Not all Light and Sound tools are made of the exact science and quality. So generally when using light and sound, communication between light and sound impulse is provided as the lights send a coded message across all areas of the brain. Since brain cells are highly sensitive to light, they, act as light transducers and can translate the flickering light stimulus for use by the brain. Therefore, the lights and sounds teach the brain to seek out the desired brain wave frequency creating the optimal, desired state for relaxing, visualizing, sleeping, high performance, synchrony, etc.

Brain waves have been categorized into four basic groups:

Beta (>13Hz) more than 13 Hz.
Beta identifies a purposeful action and task completion.
This is where most routine thinking and physical functioning occurs.

Alpha (8 – 13Hz)
Alpha is a wakeful state of relaxed and effortless alertness. Alpha waves are used for mental relaxation, accelerated learning, the creative process and peak performance. We enter into alpha during light mediation.

Theta (4 – 8Hz)

We enter the state of Theta for a few minutes just before falling asleep and just before waking, when imagery is produced without conscious effort. It is also the deep meditation state and the originator of the creative process.

Delta (0.5 – 4Hz)

Sleep is necessary for good health, optimum physical function and peak performance in any endeavor.

To fall asleep the brain must enter the Delta stages of 4 cycles per second or below. This will produce R.E.M. or Rapid Eye Movement allowing the brain to release quantities of healing growth hormones and other restorative secretions.

Positive results of light and sound on the body and mind on both hemispheres of the brain have been recorded in the past 15 years. Bilateral synchrony has been proven to be useful when learning and skill building are the goals. The light and sound tool (depending on the product, check for specifications) utilize both sides of the brain. One to remember and the other to make sense out of what we remember. Encouraging both sides of the brain insures that learning will take place more rapidly.

C. Maxwell Cade, in his research concerning the mind and its states of awareness, conclude that peak mental functioning is associated with bilateral hemispheric synchrony. This study implies that to reach a peak state of performance, a client must in some way harmonize both sides of the brain one with the other. However, accomplishing this task is difficult and time consuming unless a “secret ingredient” is utilized.

Light and sound technology can provide the stimulus for the mind to integrate and therefore synchronize. Cades’ research has reported that light and sound can assist in altering asymmetry and quickly produce balanced, symmetrical brain wave patterns. His evidence suggests that this symmetry can assist in producing peak performance states associated with whole-brain integration.

Synchrony is that state of balanced brain that opens the door to the “zone” or best thinking ability in the brain. This state is without distraction and totally focused.

Binaural Beats

Binaural beats involve two separate tones which in turn provide a third tone. In other words, the frequency of the beat produced by two separate tones equals the frequency of the difference between the two tones. Therefore a beat frequency of 100Hz and one of 104Hz produces an overtone of 4Hz.

Robert Monroe found that when precisely controlled tones are combined in the brain, the olivary nucleus resonates sympathetically like a crystal goblet vibrating a pure tone. As the olivary nucleus becomes entrained, it sends signals into the cerebral cortex which produce noticeable changes. Monroe found he could produce a state he called hemispheric synchronization.

Integrating Light and Sound into a Hypnosis Practice

The hypnotists may be interested in how light and sound can be an influential value to their practice. This is how light and sound can be beneficial:

1. Provides long term performance that triggers a hypnotic state, therefore, preparing your client for hypnosis therapy.
2. It will hypnotize clients who have failed with other hypnotists.

3. Light and sound is a value added feature to your business practice; you can sell L&S units from your practice; you can speak about L & S in your community to bring in additional clients; you can charge extra for the use of this product at your practice, to name some examples.
4. The benefits of light and sound provide greater learning, focusing, concentration and anxiety release in combination with hypnosis.
5. Reduces time in the hypnotic process by putting a client in a dissociated state, between consciousness and unconsciousness where by the client is in a heightened state of suggestibility; the client is in a deep state of relaxation. Time, work and energy reduction plays an important role for every hypnotist.
6. Light and sound establishes trust, because the unit puts the client into a relaxed state; the client finds that fact undeniable for some reason. The fact remains, that the client cannot follow suggestions until trust is established completely; trust is a positive benefit from L & S. Light and sound removes the mystery behind what you are doing to the client, which they sometimes need to deny.

Hypnotists will need a partial understanding of brain waves and the effects of behavior being produced. In fact, we may not have considered that when a client has a particular issue, that their brain is not synchronized. Light and sound will synchronize the brain and do the work for the hypnotist as demonstrated in this introductory session. It will produce relaxation and deepening stages. Hypnotists are now looking at specific light and sound units that can become an assistant to the trance. For example after using light and sound in its proper sequence or program, the hypnotist will be able to identify various objective and subjective ways of determining trance recognition:

1. Glazed eye
2. Eye catalepsy
3. Swallow reflexes
4. Visual alterations
5. Blink Reflexes
6. Eye closure
7. Changes in breathing
8. Arm catalepsy
9. Response to suggestions
10. Attentiveness
11. Changes in bodily functions
12. Limpness of limbs
13. Time distortion

How Light and Sound Can Save a Hypnotist Valuable Time

In many cases hypnotists will have a specific office procedure. These procedures include several important and necessary stages in order to help the client through to the stage of trance.

Use light and sound specifically in a program that has Delta, because Delta is needed for Hypnosis. The specifically designed white light peripheral glasses will produce the exact same effects as hypnosis in Delta. There is one light and sound unit that combines Delta with other brain waves, as mentioned to include, binaural beats which is Sportslink.

As long as the hypnotists understands the client issues, light and sound program usage (which is brain wave frequency) that goes with that particular issue, and is using white light peripheral glasses, then it is assured that a hypnotic state will occur.

These stages may include some or all of the following first time client appointments:

- Suggestibility Tests 10 minutes
- Induction 5 minutes
- *Deepening Techniques 1 - 10 minutes
- Total Time in
- Pre Therapeutic Trance: 25 minutes

*Deepening techniques include: shoulder press, bombarding, counting, descending stairs, and others which many hypnotists can do in as little as a minute. It does not matter; light and sound will produce this same effect, with a client as demonstrated in this program.

- *Light and Sound 10 - 15 minutes (first time sessions with Delta)
(*Time replaces: suggestibility test, induction, deepening techniques)

In subsequent sessions your practice may include:

- Update 15 minutes
- Induction 5 minutes
- Deepening Techniques 1 -5 minutes

- *Light and Sound 5 -10 minutes (in sessions with Delta)
(*Time replaces: induction and deepening techniques)

In an analysis of cost vs. time, the hypnotist will save time by reducing personal time working directly with the client and for a first time session, save 25 minutes while the client is on Light and Sound. This does not reduce the effectiveness of any hypnotic session; in fact, you have provided the value added benefit of having a client that will leave your office with a synchronization sequence taking place that will have long term effects. Each time the client returns, the ability to synchronize the brain and get into the therapy session is reduced, providing the added value to the client!

An overall balance is the goal for good mental relaxation and improved focus. The Hypnotist's ability to utilize light and sound with any client needs to explore how light and sound tools can produce the positive mental balance needed before assisting in any therapeutic intervention. Therefore, the hypnotist may want to consider Light and Sound as a separate therapy from hypnosis as well.

We have identified in this introduction to light and sound how mental relaxation is an immediate product produced by the brain while using this tool. Light and sound has so many applications but for hypnotists the most important is the added benefits for successful sessions by returning clients and increased word of mouth! Light and sound works because it talks the language of the brain. How you will include it in your sessions will increase your success rate and profitability.

Recommendations and Pre-Cautions with Light and Sound

As with any device that has human intervention involvement, a recommendation of questions about the light and sound system is important in knowing what the quality, features and benefits the unit will provide or not, to your clients:

- Discover if the programs range up to 60Hz. How many programs in the unit do that and for how long? Anything 40-60Hz can cause brain damage for prolonged periods.
- Identify if the Light and Sound engineer is qualified to create programs. Is the engineer a degreed neurologist, educator, and certified biofeedback technician or clinician?

- Are the lights and sound synchronized? How?
- Are programs utilizing binaural beats?
- Do the programs have Delta frequencies, if so how many? (some units do not)
- How many programs come with the unit?
- Are the goggles clear, in order to see through? It is important so that a

Video/DVD or reading can take place so that learning and focusing are optimized.

- Are the goggles lights retina based and what kind of quality lights is being utilized to get the purest frequency available? (The quality of light and the frequency is the nourishment the brain requires, so the light quality is very important).
- Lastly, who developed the system you will use on your clients and do you have a biography on the individual so that you can assure yourself and your clients of the highest product quality in the market.

Marketing Tips

You may want to have Light and Sound mini-group sessions for targeted issues; such as grieving, pain reduction, improved learning, etc. The light and sound tool will bring the group into a state and then you can go right into the therapeutic group session without going through all the multiple levels of hypnosis before getting to the trance.

Using Subliminals and CD's with Light and Sound

Subliminals are powerful when used in conjunction with light and sound. In consideration to how hypnotists can use light and sound in your practice, schedule at the same time (either group or individuals) and place each individual on a program they need and play the Relaxation to Weight Loss subliminals or CD's. This strengthens your ability to go right into a group or individual hypnosis session. You have numerous ways of combining the positive influences of light and sound with CD's or Subliminals, be creative!

Opportunities

- Cardiologists are beginning to use the light and sound in order to stay focused during heart surgery.
- Houston Police department used the light and sound to train their officers.
- Parent's worldwide help their children stay focused in their schoolwork.
- Various neurologists use the light and sound for pain management.

CASE STUDY:

Dr. Peter Tarbox, of the Neurology and Clinical Neuropsychology in San Antonio, along with Dr. Steven Freitag, have used light and sound for the past few years with high success rates; specifically targeting people suffering from Menieres Disease. Using the Sportslink and the Tomatis sound system, Dr. Tarbox has been able to improve the quality of life for his patients as well as himself, who suffer with Menieres Disease and vertigo. This has allowed these patients to return to work and lead a semi-normal life.

How Light and Sound Affects Anxiety and Stress

Hypnotherapists recognize that anxiety is a popular precursor to the state of high stress, tension and numerous physical problems. Of these clients coming in, five out of ten have some stress related issue.

As we speak about the ANS (autonomic nervous system) we realize that this is the part of our body that the subconscious dominates. It includes high blood pressure, rapid heart beat, low peripheral temperature and mental panic.

According to Dr. Juan Abascal and Dr. Laurel Brucato, at the Miami Dade Community College, they conducted and measured results of light and sound programming on the coping mechanism in people. They developed a Coping Resource Inventory and found substantial evidence that the use of light and sound regularly diminished anxiety and strengthened the ability for people to cope with stress.

Researchers measured muscle tension, skin conductivity, finger tip temperature, heart rate, blood pressure and other indicators noting that light and sound sessions produced deeper relaxation than obtained by traditional relaxation techniques. Not only were the subjects more relaxed, they increased their level of released anti-anxiety brain chemicals.

Out of the 12 light and sound systems available only one can produce the binaural beats required for the brainwaves to accomplish the calmness and wellness to reduce anxiety and to release anti-anxiety brain chemicals.

Accelerated Learning Using Light and Sound

Accelerated learning methods require a relaxed mind, the ability to focus, concentrate and willingness to excel. Specific goals are equally important since very little focused learning is accomplished without direction.

Through research there is one light and sound instrument that has excelled and that is when the student assumes the role of the learner with subconscious openness as the proper brain wave is stimulated. The light and sound program in the instrument was designed in this one unit for just this task. The lights flash at the Hz (cycles per second) needed for the learning task. Usually these brain waves consist of Theta and high Alpha. However the growing number of people utilizing learning through light and sound identified that some learners have very little Beta waves and an abundance of Theta brain wave. No matter the need, the biofeedback light and sound instrument is prepared to guide the learner through the correct synchronization to promote accelerated learning.

It is of interest that all accelerated learning programs stem from the initial works of George Lazanov of Bulgaria. This method was titled SUPER LEARNING. Many methods have evolved from this first discovery. No matter the method, it has become apparent that relaxation, breathing and motivation are the key ingredients to a good learning method.

Increased Productivity through Light and Sound

Balancing our brains to accomplish the most we can in each day is a juggling act that can be performed by stimulating different waves of the brain whenever needed. Although increased productivity can be accomplished through meditation and other relaxation-

energizing techniques, light and sound places the user in the proper brain wave to increase productivity in any area through peak performance training.

Alpha and Beta are two important brain waves that compose the better part of our every day lives. We also have brain waves which helps us sleep, imagine and learn. All waves are important and compose our total brain. We spend the better part of our lives shifting from one wave to the other through out the day to allow us to function.

We all need some Alpha during the day. However it is important that Alpha be only a "passing through" station. Too much time there can cause us to:

1. Experience unproductive daydreaming
2. Have poor survival skills
3. Lack healthy fear of things
4. Become detached from societal needs
5. Misunderstand structure and routine
6. Live life for sensory pleasure only
7. Experience unproductive creativity
8. Miss opportunities
9. Waste time for years
10. Possess an undisciplined mind
11. Walk around in a mental fog

By having increased amounts of Beta brain wave, we miss out on the awareness of life and sensory memories we all need to survive in a mentally healthy atmosphere. The Beta brain is used for many things; however too much time spent there is as problematic as having an over-run of Beta which can cause us mental unrest through:

1. Performance anxiety
2. Concern of what others think
3. Fear of aloneness
4. Insomnia
5. An inability to relax
6. A fragmented, hurried life style

7. Need to talk continually
8. Narrowed thought process (black and white)
9. Overly critical of self
10. Learning problems

On the other hand too little Beta Can result in:

1. Poor memory
2. Lack of motivation
3. Irresponsibility to others without intent
4. A sense of mental dullness
5. Disorganized thought
6. Lack of organized routine
7. Learning problems.

Outline of Hypnotist's Interventions Using Light and Sound

Alert Attention	15 – 20 Hz
Mind/Body Balance	10Hz
Increased Creativity	5 – 9Hz
Problem Solving	4 – 7Hz
Test Preparation	8 – 12Hz

Motivation	13 – 43Hz
Memory	8-12Hz
Touretts Syndrome	31Hz
Depression	13 – 20Hz
Fibromyalgia	8 – 12Hz
Chronic Fatigue	12 – 20Hz
Lupus	0 – 8Hz
Attention Disorders	13 – 31Hz
Manic Depression	8 – 10Hz
Childhood Memories	0 – 5Hz

An abbreviated list of the focus trainer athletes:

Gary Hall Jr. 1996/2000
Olympic Swimming Multiple Gold & Silver Medalist

Nate Hobgood Chittick
St. Louis Rams, Super Bowl Champions, 1999

Jon Olsen
2000 Olympic Swimming Gold Medalist

Anthony Ervin
2000 Olympic Swimming Gold / Silver Medalists

Kim Hayashi
2000 and 2001 AVA U.S. National #1 Girl Cruiser (BMX)

Jonathan Byrd
PGA Pro, 2003 Buick Open

History

Initially let's review the history of previous discoveries in order to better understand Light and Sound.

- The existence of electrical currents in the brain was discovered in 1875 by an English physician Richard Caton.
- In 1924 Hans Berger, a German neurologist used ordinary radio equipment to amplify the brains electrical activity measured on the human scalp. (EEG) Berger laid the foundations for many of the present applications of EEG.
- In 1934 Adrian and Matthews published the paper verifying concept of "human brain waves" and identified regular oscillations around 10 to 12 Hz which they termed "alpha rhythm".
- In 1997 Light and Sound became known in the field through one of the first white light in peripheral (not retina), patented products developed by: Dr. Rayma Ditson Sommers, called Sportslink.

Bibliography:

-Equipment for Your Mind, by Rayma Ditson-Sommer, Ph.D.

-Peak Performance through Light and Sound Neurotechnology, by Rayma Ditson-Sommer, Ph.D.

-Sensory Integration Manual, by Rayma Ditson-Sommer, Ph.D.

FOR MORE INFORMATION ON LIGHT AND SOUND

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