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## Entrainment music for pain reduction

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#### Abstract

*As conflict in the music smoothly transforms into tranquility, the listener experiences sympathetic sensations, resulting in the reduction or elimination of pain. These "Musical Mirrors" imitate, and mask the negative energy and transform it into positive energy. By matching resonance frequencies, the physical and emotional essences are "re-harmonized". My findings are based on five Years of personal work with hundreds of individuals. Original live and taped music is administered, often using the Feeling Stressed tape, with headache, muscle/backache, arthritis, cancer, and other chronic pain patients. The components of music, such as rhythm and pitch, are shown to be intimately related, subtly reflecting, as a microcosm, the balance or imbalance of the forces within the subject, and ultimately, his or her perception of pain.*

### 1. Introduction

In this article, I offer my personal observations regarding the pain-reducing potential of sound. It is more than purely theoretical, as I have witnessed actual positive results in pain patients. On the other hand, it is not a report of empirical data either, because formal clinical testing has been difficult to arrange. I attempt here to show, in a logical sequence, how the mind and body connection can be positively influenced by a special kind of music that paces the listener through an actual transformation. This is called "Entrainment Music."

Out of necessity, I've composed all the music used in the research myself -- wether live or taped. I use only acoustic piano, through the principles herein are applicable to other instruments. To prepare for creating the music, I study the nature of the condition, and research many healing approaches. When it comes time to actually compose the music, I then rely mostly

on my intuitive and musical awarenesses to create a spontaneous improvisation.

When Entrainment Music can be matched to a specific condition, we can call it Specialized Entrainment Music. Although my tapes are available for the reader's experimentation, I certainly make no claims to having the "definitive" tape for pain, or for any other illness. In fact, I encourage people to explore their own composing abilities. The resulting music will be determined by the composer's unique perception of the illness in question, and on his or her ability to translate this into sound.

### 2. Pain is Indicator of Disharmony

Harmony is balance. Disharmony is imbalance. Every aspect of our being contributes to the total balance. Our emotional, chemical, structural, intellectual, and spiritual selves are in a state of constant adaption -- to become harmonious.



Disharmony can occur not only within one of these areas, but also between these areas. The imbalance creates stress or concentrated energy that cannot be efficiently used or released. This will build until it reaches a threshold, taking the form of pain. We often think of pain as being purely physical, but we can certainly have emotional pain. An uncontrollable habit, anger, depression, or self-hatred all represent expressions of emotional pain. Usually, we will automatically release certain "safety valves" in response to a pain. This will, in effect, assist the re-balancing of energy. For example, if we cut our finger or stub or toe, we will instinctively yell, "ouch"! Or the emotional pain caused by the loss of a loved one can be eased by crying. But sometimes, as in the case of a long-term, pain-related illness, the energies remain terribly imbalanced. In fact, even if the source of the original problem or stress has been eliminated, the patient has "learned" a way of imbalance, which perpetuates the pain sensation. In these cases, if we can discharge the charged and charge the discharged, thereby strengthening and rebalancing the harmonic integrity of the individual, the pain sensation will naturally subside.

### 3. Sound Reaches Physical and Emotional Pain

Every physical and emotional aspect of our being can be associated with one or more vibrations or frequencies. These frequencies range anywhere from the pulse of our heart to brain waves. Each organ and each cavity of our body has a "resonating" frequency, and every emotion or thought can be represented by a frequency. In fact, one might observe a frequency connection between certain body parts, and certain emotions, thus offering support to the field of psychoneuroimmunology.

Sound lends itself quite naturally as a modality of influence to these frequencies. This is because of its ability to reach both the physical and the emotional levels of imbalance, or of pain. Specifically we can "feel" a sound in our body and we also can be moved by its emotional power. Sound reaches both. With this understanding, we must be cautious, because the "wrong" sounds could increase an imbalance, thus making us ill!

### 4. Rhythm is Pitch

The Pitch, A-440 divided by two is A-220. This is the 'A' one octave lower. Continue this division process and we see that cycles-per-second change from a pitch to a perceivable rhythm: 220 - 110 - 55 - 27.5 - 13.75 - 6.875 - 3.4375 - 1.71875. This last figure is the hypothetical 'A' which is eight octaves below A-440. Its fre-

quency is so slow, the beats created form an audible rhythm. This pulse would equal metronome marking 103.125, or approximately 103 beats per minute. So, 103 beats per minute = the note A! Seeing how pitch and time are interrelated, we can also see how each of the other components of music have an organic vibratory connection. Pitch, rhythm, dynamics, articulation, phrasing, texture, timbre, and harmony each can be defined in terms of a frequency or periodicity, relating one to another. The careful combination of these elements can bring about a powerful synergy which has the potential to heal or to harm. Note that it is not necessary for these components to conform to the same "pitch" or vibration. What is important is that the elements be crafted together in such a way that they reflect a true harmonic balance.

## 5. Different Approaches to Music and Pain

Just as there are infinite combinations of musical elements, there are also infinite combinations of mind and body resonances that can be addressed. For example, for ulcer pain, should the music be pinpointed towards the stomach? Or towards the nerves that influence acid-production? Or towards the emotions which are engulfed in stress and worry? Or all of the above? Should it reach these areas simultaneously or in sequence? And what should the sequence be?

### 5.1 Music that Masks

A very popular approach to music for pain is to listen to music which reflects the opposite of the present condition. This indeed can have a numbing effect, offering a temporary relief of the symptom of pain. A good application of this approach is where the pain source is temporary, such as when having one's teeth drilled. Slow, calm baroque music, played at a fairly loud volume, can help block out the sound of the dentist's drill. It therefore also helps the "imagined" pain as well as some actual pain (irrespective of any pain-killing injections). When the pain source is ever-present, however, this approach can become addictive and ineffective.

### 5.2 Music that Imitates the Present State

Normally, much rock music seems to go against bodily rhythms. Yet, after a hectic, stress-filled day, many people find it to be the perfect aid in helping them wind down. This is because its high energy will mirror or reflect the same in the individual and provide an outlet through which it can be expressed or released. However, when used to excess, this approach can induce the very thing it otherwise would release.



### 5.3 Music that Imitates the Ideal State

The pain of cancer is compounded by emotions of fear and worry. If music that evokes a sense of trust and peace is administered, the listener's negative feelings can be transformed with positive ones, producing a sympathetic effect on the "pain-perception". The problem with this often is that the ideal state is so different from the present state, that they cannot get in "sync." This approach can then be more of an irritant than a help.

## 6. Entrainment Music for Pain

Combining positive elements of the other three approaches, Entrainment music can be astonishingly effective for pain. As defined by Webster's Collegiate Dictionary, to entrain is: to determine or modify the phase or period (of a condition). In Entrainment music we both determine and modify. Determining (imitating) the pain of the listener helps lock in or "pace" with it. Gradually and gently transforming, the music becomes reflective of the calm or pain-free goal, and the listener is smoothly led to this point. Entrainment music can be seen more as a linear, cathartic approach, moving from 'A' to 'B', and ending at 'B'.

### 6.1 Specialized Entrainment Music

Entrainment music that is created for a specific individual or for a specific illness becomes Specialized Entrainment Music. Acknowledging the resonating frequencies of various body parts and emotions, it is possible to customize the composition. Also, just as pitch and rhythm can be compared, body and mind appear to be more and more connected. For example, for pain, specific musical frequencies will resonate at the portions of the brain that produce endorphins and enkephalins. Yet a similar release of these natural pain-killing hormones can be induced also from an emotional response, triggered by music. Since Specialized Entrainment Music is more or less "customized" for the listener, the chances of experiencing both the physical and the emotional impact of the composition is greatly enhanced. The resulting effectiveness should therefore be greater.

### 7. Performer or Listener?

Knowing 'how' to play an instrument is not a criteria for successfully using it for self-healing. In fact, I have shown non-musicians to express negativity through the piano, who find that the immediate dissonances produced soon become quite consonant -- reflecting a profound change in their inner feeling.

What is needed is a self-trust, an abandon, to let go and create what is felt rather than what is thought. In fact, "trained" musicians often find this impossible! The advantage of creating music for oneself is that it can be intimately correct, for that moment, for that individual. Also, the physical act of doing can be just as beneficial, in itself, as responding to the sound that is created. In contrast, there are several reasons why being the performer can be ineffective. First, the individual may lack the self trust to connect to the feeling level in order to create the right sound. Second, it is possible that the performer cannot produce the needed sounds simply due to lack of technical skills at the instrument. Third, the individual risk becoming so engrossed in the creative process, that he or she cannot fully respond to the music then created.

It is my observation that, although there are certain cases where self-performed music is preferred for healing purposes, generally with right music, the most effective results will be when the subject can be 100 per cent listener.

## 8. Entrainment Music Listening Guidelines

Entrainment Music is essentially a catalyst. Any change in the listener is dependent on his or her response to this catalyst. For this reason, to allow for the maximum effect, it is much more important to observe certain listening guidelines with Entrainment Music, than with other music.

Since Entrainment Music will, at certain points, reflect negative aspects of the listener by way of "Musical Mirrors", it can be expected that these portions may be momentarily unpleasant, or discomforting. As the music unfolds, becoming calmer and more beautiful, the listener should experience a sympathetic change. While listening to this special music, it is therefore important to hear it all the way through, to its natural resolution, and also to react honestly in response. It is through one's reaction that the negative stress or pain may be released.

The listening environment should be arranged for reactive listening. Specialized Entrainment Music is not "background" music. If you do other activities while listening, you will not be able to respond honestly, thus cheating yourself of the potential benefit. Listen to the piece all the way through, without interruption. Take off your shoes and lie down or sit in a relaxed position. Never listen if you're in a hurry. Headphones are fine, but if you have access to a good sound system, and play the tape through speakers, the sound will permeate your entire body, as well as your ears. Please be aware



that the frequency or rate of repeated listening sets up a "rhythm" in itself, and can be influential to the overall results. So that you will feel free to listen responsively, it will probably be better if you can either be alone at the time, or in a group monitored by a therapist. This will minimize any inhibitions you might have about really letting go.

### 9. Expected Responses

The original cause of the pain will play a role in the listener's response to Entrainment Music for pain. If the original problem stems from an emotional block, the response will be more emotional. If the original problem stems from a physical block, the response will be more physical.

Biofeedback monitoring shows that listeners of Entrainment Music experience extreme fluctuations during the tape and a clear reduction of anxiety by the end. As the negative energy is released, visual images may be brought up, both pleasant or unpleasant. Thoughts, feelings and sensations may come and go. Emotionally, one can experience a full spectrum from crying, laughter, anger, joy, and anything in between. Physically, there may be a momentary increase in pain as the negative energy comes forth. Tingling, warming sensations or numbness may be felt in the afflicted areas. Even old (and possibly suppressed) injuries may come "alive" with a new muscle twitch or spasm as the negative energy is dislodged.

Immediate pain such as a migraine headache can have an instant dissipation, where long-range pain, such as that associated with an illness, may require repeated listenings before relief is felt.

### 10. Advantages of Entrainment Music for Pain

Several features of Entrainment Music make it attractive for use in pain-reduction programs. First of all, as with most music, both the physical and emotional aspects of an illness can be reached. This makes it a marvelous adjunct to other therapies. Entrainment Music can provide a non-verbal experience to complement other conscious efforts.

Each person is allowed to experience a release of pain, in an individual way -- even with the same music. This makes it a desirable alternative to "programmed" hypnosis or visualization tapes.

A most important feature of Entrainment Music is that there is less danger of becoming addicted to it, a concern for many pain-treatment programs. This is because Entrainment Music is cathartic, or transfor-

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