

# Music therapy - A scientific Approach

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## I. INTRODUCTION

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usic is an inseparable part from our lives. Who doesn't like music? We hear some or the other kind of music everyday in our daily life. It's rare to find a person who doesn't like music. The taste of music may vary from person to person. The genre also may vary, but we are hardwired to music. It can be from the ocean of varieties, various forms of music easily available for us like classical music, light music, folk or regional music, western music etc.

Each of us selects our choice of music. We listen to our favourite music. However, does it ever strike to us that this music can be one's physiological or psychological need? The answer is, yes. It has been proven by researchers all over the world.

## II. POWER OF MUSIC

It is a well known fact that music has the power to heal. To reduce stress, make one feel lighter, to enhance moods, etc. The tune or melody gives one peace of mind. Today we see people plugging in headphones, listening to music even while travelling. This gives the listeners a good feeling. This "feel good" factor plays a very important factor in our day-to-day activities and improves our way of working. To get a favourable frame of mind, we listen to the music of our choice. In short we unknowingly undergo "Music Therapy"!!

Further, I would like to add that music as therapy can be used on bodily diseases and disorders as well. I can make this bold statement as it has been proved by scientific research. Music is an Art, but Music is a Science too!!

How?

This scientific aspect of music as a therapy I would like to explain on the basis of Ayurveda, physics – sound waves and Neuroscience.

## III. PRINCIPLE OF SOUND WAVES

Sound travels through mediums like air as a series of periodic vibrations, measured in Hertz or cycles per second. Swaras or musical notes are sound waves of different frequencies. When we listen to music, these sound waves, enter the ears to be transmitted to the brain. Actually, the sound waves reach every cell of our body, creating a number of vibrations which correct the disturbed body rhythms. Here healing through music comes into the picture.

## IV. INDIAN CLASSICAL MUSIC

Raagas in Indian Classical Music are nothing but various combinations of various musical notes i.e. sound waves. By the law of interference, superimposition of these sound waves creates secondary vibrations and a spectrum of sound waves. The resultant waveform has power to heal, thereby becoming an effective wave form in music Therapy.

Also "ragas" balance the doshas of the physiological functioning. According to Ayurveda, the ancient medical science, human body works on 3 basic energy strings i.e Vaat,Pitta,Kaph. When there is an imbalance of any one of the above, it's called as "doshas".

How does this happen?

For this we need to understand the working of a human brain.

## V. HOW MUSIC PROMOTES HEALTH

The brain is the most important and most complicated organ or CPU of the human body. Though complicated in structure and a subject of research to scientists, the way it responds to music is amazing. Under the influence of music, the brain works like magic, giving results useful for smooth functioning of body and mind.

## VI. THE STRUCTURE OF THE BRAIN

The working of the brain is through electrical impulses, called as brain waves. These brain waves are produced by communication between brain cells called as neurons. There are 1000,000,000,000 neurons in the brain. These neurons, while communicating secrete various chemicals, called neuro-chemicals or neuro-hormones. These hormones are responsible for the smooth functioning of the body. The brain sends signals to the various parts of the body to carry out their respective functions. These brain waves have different types classified as follows:

Delta 0 – 4 Hertz  
Theta 5 – 8 Hertz  
Alpha 8 – 12 Hertz  
Beta 12 – 30 Hertz

Different hormones are secreted at different brain wave levels. The imbalance in these hormones causes diseases or disorders of the body or mind. Research proves that various Mantras and Raagas in Classical Music can remove these imbalances.

When we hear, the sound waves enter the ear through the auditory canal and are transmitted to the hypothalamus. The hypothalamus in turn sends the signal to the pituitary gland which is the master gland controlling all the hormones. In short,

the musical notes, through the medium of various raagas help in restoring the balance of the rhythm and restoring the balance of the neuro-hormones. For this to happen, listening to music using headphones – as music therapy – for the sound waves to enter the brain flawlessly and bring about immediate vibrations in the auditory nerves, which actually initiates the process of healing.

Healing is nothing but regaining biorhythm which is disturbed. Music Therapist decides the type of music for healing. Music works as the best self healing therapy as the sound waves after entering the brain get converted into brain waves and the way brain processes music, balances the secretions of brain chemicals which are the messengers to various body

parts. Thus correct signals are sent all over the body by the nerves, balancing the doshas bringing about desired effect of healing.

Listening to given dose of music medicine, brings about brain workout for good health and also peace of mind as additional benefit without any side effects. That's the key to open the magic of healing.

#### **AUTHORS**

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