

Music Therapy Benefits

The following information comes from books and from an extensive search of journal literature. A bibliography is available in the online version of this exhibit. Information also came from the website for the Second International Sound Healing Conference, held in November, 2007, in Santa Fe, New Mexico. http://www.bizspirit.com/soundhealing/so_index.html

Why do music and music therapy benefit people?

Through the technology of positron-emission-tomography (PET) scans, it is possible to watch which areas of brains light up when people are listening to music. The following has been discovered:

- Music involves multiple areas of the brain, thereby "exercising" the brain.
- Areas governing memory such as the amygdala and the hippocampus are involved.

Who can benefit from music therapy?

Almost all people can benefit from music therapy.

Following are specific areas where music and/or music therapy have been found to benefit.

Intelligence and brain development:

- Speeds up development of auditory cortexes of children receiving musical training by three to four years, compared with children receiving no musical training
- Increases intelligence and brain plasticity (particularly performing music), the latter helpful in cases of stroke, and injuries either congenital or acquired later in life
- Increases short-term memory retention on intelligence tests (passive listening to music)
- Enhances healing from wounds and trauma in performing musicians
- Enhances exercise experience through increasing heart rate and oxygen consumption
- Improves muscular coordination through musical rhythms

Soft, slow, soothing music:

- Slows heart rate
- Reduces blood pressure
- Reduces oxygen consumption
- Reduces heart stroke volume
- Reduces pain levels

Benefits for surgery:

- Reduces anxiety prior to surgery (especially important with preverbal children (2 or 3 years old) who may not understand the necessity for surgery and painful procedures)
- Reduces the need for anesthesia during surgery
- Reduces the need for post-surgical pain medications
- Improves the ambience in the post-surgery recovery room
- Helps surgeons, nurses and other operating room personnel in smoothly performing surgeries

Benefits for the following surgical procedures:

- Applying or removing casts for broken bones and sprains
- Cataract surgery
- Gastrointestinal surgery
- Gallbladder surgery and/or ultrasound to dissolve gallstones
- Knee arthroplasty
- Prostate surgery
- Hysterectomy and other gynecologic surgeries
- Heart surgery, including bypass surgery



Helpful with other procedures:

- Lithotripsy (ultrasound to dissolve kidney stones)
- Dental procedures, and ultrasound to dissolve dental plaque
- Angiography
- Sigmoidoscopy or gastrointestinal endoscopy
- Bronchoscopy
- Mammography
- Autologous stem cell transplantation
- Ventilation support
- COPD patients
- Procedures such as debridement for burn patients
- Other invasive and/or painful procedures

Music is helpful in intensive care units, although patients typically remember little of times in ICUs.

Premature infants:

- Increases sucking behaviors, feeding, and weight gain (music with fast tempos)
- Improves oxygen saturation
- Reduces pain during procedures such as heel lancing
- Reduces pain in baby boys undergoing circumcision (perhaps special "Bris music" can be developed)

Mental health problems:

- Reduces depression
- Improves schizophrenic patients' understanding of speech, including picking up implicit content such as sarcasm
- Improves social interactions with others through enhancing of patients' understanding of people's intentions and emotional states
- Helps regularize mood in bipolar patients

Children with developmental disabilities:

- Improves communication skills of autistic children or those with Asperger's syndrome learn communication skills, through programs such as "Songs for Transitions", and through instructors singing to them and their singing back, eventually translating into speech (see the "Hello Song" elsewhere in the exhibit)
- Improves social interactions with others
- Decreases self-mutilation
- Enhances focus and social interaction of ADHD (Attention Deficit with Hyperactivity Disorder) children
- Helps children with dyslexia (and normal children) learn to read more easily

Stuttering:

- Transforms highly arrhythmic speech patterns through use of musical rhythms

Cancer patients

- Helps them to deal with pain
- Helps them to accept life changes
- Reduces physical and psychic pain from tests, radiation therapy, and chemotherapy, as well as mitigating other sequelae such as nausea

Grieving and dying:

- Helps people to deal with loss of loved ones
- Helps dying people to deal with impending death

Alzheimer's disease and dementias:

- Improves appetite and consequently, increases energy
- Increases melatonin levels in Alzheimer's patients
- Reduces agitated behaviors and "wandering"
- Improves social interactions

Movement disorders:

- Helps Parkinson's patients to initiate movement by unlocking the parts of the brain involving intention to move
- Rhythm patterns helpful to Parkinson's patients, cerebral palsy patients, and other patients, in regularizing movements
- Increases respiratory muscle strength in multiple sclerosis patients

Traumatic brain injury, stroke, amnesia, epilepsy:

- Unlocks access to functions in damaged brain areas
- Increases plasticity and development of alternative pathways
- Decreases epileptiform activity (Mozart's Piano Concerto in D Major (K.440) mentioned specifically)

Musicians and singers:

- Helps with focal dystonia problems such as carpal tunnel syndrome, loss of embouchure in horn players, "fiddler's elbow", etc. (Overuse of muscle groups in prescribed music therapies must be avoided.)
- Helps with vocal problems
- Benefits singers due to the deep breathing required to sustain tones,
- Improves respiratory function and expiratory volume
- Releases endorphins
- Improves overall mood (for choral singers, the camaraderie with fellow singers is also helpful)
- Reduces plasma cortisol; reduces stress and anxiety
- Increases natural killer cell activity,

Other areas of benefit:

- Improves sleep (soothing music)
- Helps to wake up and face the day (cheerful, upbeat, fast tempo music)
- Helps psoriasis patients and those with other skin problems
- Enhances acupuncture point stimulation
- Enhances productivity
- Improves consciousness raising
- Helps balance chakras
- Enhances shamanistic rituals
- Helps to induce trance states
- Synchronizes activity in brain hemispheres

Sounds too good to be true? A few caveats:

- Decreased response (paradoxically) from trained musicians, who tend to analyze the music rather than allowing therapeutic aspects to work
- Difference in response between men and women (women in pain benefit more from music; men tend to prefer hard-driving music with fast tempos; women tend to prefer soothing music with slow tempos)
- Negative response from people with amusia, a.k.a. tone-deaf people, to whom music sounds like kitchen pots and pans clattering (percussion therapy might work with them)

