Take Note: Therapeutic Music Can Be Powerful

Historical Perspective
Melodic bird songs and other sounds of nature may have inspired early humans. Ancient mythology hints that early humans believed music could heal wounds and exorcise evil spirits. Indigenous healers from many cultures used music to strengthen the will of the human spirit, lower heart rates and fever; chanting and drumming were considered medicine for those who were sick or dying. Aristotle and Pythagoras suggested that music would enhance health. Pythagoras wrote, “All things are constructed of harmonic patterns. It is only when we are out of step with the natural harmonic that disharmony arises.” Medieval monarchs employed court minstrels and later commissioned musicians such as Mozart and Bach to relieve melancholy, fevers and depression. Music was used to treat mental disorders in Europe in the mid-1800s. In the U.S., music was successfully used to boost morale and decrease symptoms of depression in WWII veterans with battle fatigue (PTSD). As a result, music was deemed worthy of scientific investigation and, in 1950, the National Association for Music Therapy (NAMT) was founded.

Human Responses to Therapeutic Music
Music therapy is defined as the systematic use of live music by a specially trained therapist/musician to result in changes in a patient’s physical and/or emotional health. Therapeutic music, on the other hand, may be either live or recorded. It requires neither a specially trained therapist, nor active participation by the patient...except to listen. The goal of therapeutic music is for the listener to experience a state of relaxation by processing a progression of musical notes of varying tone, rhythm and instrumentation of pleasing effect. Nature sounds are sometimes incorporated within the music to enhance the calming effect.

The right brain recognizes and processes auditory stimulation in the form of musical note and chord progressions, especially when music is instrumental. However, verbal acuity is a function of the left brain which intercepts auditory stimulation of music with lyrics. Thus, music without lyrics promotes a greater sense of relaxation than music with lyrics. When lyrics are sung in an unfamiliar language the brain merely interprets the voice as a calming instrument. Music that consists of a series of repetitive beats or notes may act similar to a mantra, inducing a meditative state of relaxation.

No single type of music is appreciated or perceived as relaxing by all subjects. Fifty male surgeons self-selected a piece of instrumental music to listen to while performing stressful mental tasks. During all sessions their heart rates and systolic and diastolic blood pressures were lowered while listening. However, speed and accuracy of task performance was significantly better while listening to the music of their choice. The type of music didn’t matter, but self-selection (the degree to which the subject liked the music) was critical.

Clinical Research Review
In hospital settings, music reduces the amount of requested pain medication and/or improves its analgesic effect for burn care and after surgery. Music has short and long term positive effects on alleviating pain in breast cancer patients following radical mastectomy.

Intraoperative music decreases postoperative pain, and postoperative music therapy reduces anxiety, pain and morphine consumption. A Cochrane meta-analysis showed that music reduced anxiety, pain, heart rate, blood pressure and respiratory rate in patients with cancer and also suggested a positive impact on mood. Chemotherapy patients treated with music therapy showed improvement in anxiety, fear, fatigue, relaxation and diastolic BP.

Some music acts as an effective audio-anxiolytic, improving restfulness and the quality of sleep, inducing relaxation and reducing measures of vital signs. Mothers around the world sing lullabies to calm their babies. For infants born prematurely, research findings suggest the benefits of music on the “suck-swallow-breathe” rhythm required in feeding can be dramatic.

Regular self-directed music listening during early stage post stroke enhances cognitive recovery and prevents negative mood with greater improvement on focused attention and verbal memory. Studies also demonstrate effectiveness of music...
Linda Long -a biochemist, musician, composer, and research fellow in complementary medicine used X-ray crystallography to define the three-dimensional positions of the amino acids in a molecule of a particular protein. The data is filtered and mapped onto musical parameters such as pitch and amplitude with no arbitrary assignment of musical notes in the process. Protein helices emerge as arpeggios; other structures take on other musical forms. Long’s research demonstrates that a protein’s structural features can be both visualized and heard. Visitors to a Bristol, England touch-screen interactive exhibit can transform the shapes of their body’s proteins into melodies. Visit www.molecularmusic.com. Elsewhere, researchers exposed sections of human DNA to infrared light to determine the distinctive frequencies for each DNA molecule, then converted the ratios of light frequencies into ratios of sound. The result was beautiful but haunting sound with microtonal pitch changes, much like we associate with the music of India. To listen to DNA music, visit www.oursounduniverse.com

CONSIDERATIONS FOR USE OF THERAPEUTIC MUSIC IN YOUR TREATMENT AREA

Therapeutic music is appropriate for people of all ages in any health care setting. Sometimes called a “universal language,” it can convey a message of calm and caring, but without words. Used in waiting areas and treatment rooms, therapeutic music calms tension. Its “grey noise effect” enhances privacy and confidentiality. The accuracy and speed of physicians’ work may be enhanced when favorite music is selected; if the same selection of music is appreciated by the patient and staff members, everyone may benefit. Music is a low-cost modality that may improve provider, patient and employee satisfaction.

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Listen to samples of therapeutic music: (select moodscape and breathing) http://www.muzak.com/samples/music_programs/category/instrumentals

References:

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