

# Transforming the Experience of Childbirth With Sound and Music Therapy

Evidence-based modality improves outcomes for patients and providers



Since the earliest times, humans have created and listened to music and sounds to inform and remember, calm and soothe, inspire and activate. Native peoples around the world have and still do use harmonic chants, bells, bowls and chimes, and other sounds as part of healing, including the labor and delivery process. This vital but oft-forgotten tradition is being reimagined in a modern way. Now, technology leverages the power of sound to enhance one of life's most momentous and intense milestones: maternity and birth.

Today pregnancy, labor and delivery, and post-partum care is focused primarily on the physical aspects and too often doesn't pay enough attention to women's emotional and psychological needs. Sound and music therapy is a promising modality to foster women's self-confidence and engagement, improved postpartum health, and healthcare provider satisfaction. For providers, sound and music therapy is a cost-effective means to upgrade clinical outcomes, reduce legal risk and increase brand reputation.

This paper examines what sound and music therapy is and how it facilitates enhanced management of labor and delivery, improves both patient and caregiver experiences, and drives stronger healthcare brand reputations.

## Music Therapy: A Definition

The American Music Therapy Association defines music therapy as “the clinical and evidence-based use of music interventions to accomplish individualized goals” including stress management, pain alleviation, improved communication and more. The practice originated after World War II when physicians noted that soldiers experienced faster physical and emotional recovery when musicians performed in hospitals.

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## Evidence-Based Outcomes

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One study found that patients who were played music after surgery reported feeling less pain and anxiety than those who did not listen to music, and were less likely to require pain medication. This effect was even stronger for patients who chose the music they listened to. Music has also been found to be more effective than drugs in reducing anxiety before surgery and it also decreases levels of the stress hormone cortisol. Researchers have even discovered that listening to and playing music boosts the body's production of the antibody immunoglobulin A and natural killer cells.

There are known benefits for providers, too. The Aesthetic Surgery Journal reported that researchers from the University of Texas Medical Branch at Galveston found that plastic surgeons closed incisions better and faster when done while listening to their preferred music.

Today, Western healthcare providers across the globe are incorporating sound and music. For example, John Hopkins' Music as Medicine is expanding research on the effect of music on neurological diseases such as Parkinson's, Alzheimer's, epilepsy and strokes.

Dr. Hank Capps, executive vice president and chief information and digital officer at Wellstar explains why sound and music are so indispensable: "The emotional connection to sound and music creates intimacy that exists inside your experience of health. This dynamic is unbelievably strong and follows you throughout your life."

One essential arena for expanding the application of music and sound therapy is in maternal healthcare, especially during labor and delivery.

## Enhancing Well-Being During Childbirth

The entire pregnancy journey may be marked by moments of great joy, debilitating worry and agonizing fear. Physical and emotional changes; job or relationship insecurity; medical tests, and discomfort are among the many challenges that may contribute to anxiety and unpleasant emotions for the mother.

The continuity of care concept has traditionally oriented around the move from a hospital to home, or a care facility and then to home. For women in labor, this journey is reversed, as they transfer from home to the hospital or birthing facility. During this emotional, expectant and worrisome time, women are typically required to move from the familiar and comfortable sanctuary of their

home to a clinical, sterile, sometimes hostile and rushed, environment. On top of the vortex of emotions already in motion, added stress and unfamiliar surroundings often magnify anxiety and can generate a sense of vulnerability and loss of control. One outcome is that too many women have poor labor and delivery experiences, with a byproduct that more than 15 percent of women would like to change their maternal care provider. (REACH, 2021)

**An important adjunct.** A thoughtful birth plan helps women feel more prepared and can dramatically improve their experiences, and therefore contribute to positive healthcare brand reputation. The feeling of safety promoted by a supportive environment is essential for gaining control during birth and for focusing on techniques that enable women to manage labor. Music therapy can empower women and help prevent or reduce some of the stressors that accompany pregnancy, labor and delivery.

Additionally, by combining immersive sound in the birthing space with imagery, such as Visual Healing—a virtual immersive program of Moving Art by Louie Schwartzberg—the experience can be even further elevated.

## Understanding binaural beats

**Binaural beats are a perception of sound created by your brain. If you listen to two tones, each at a different frequency and each in a different ear, your brain creates an additional tone you can hear. This third tone is called a binaural beat. You hear it at the frequency difference between the two tones. Binaural beats can be used to entrain the brain and achieve benefits including reduced anxiety, entering a meditative state, deep relaxation, improved focus and attention, and pain relief and healing.**

**Less pain and anxiety, more serenity.** Researchers believe that listening to music might activate mental processes that change how a person perceives pain and may even promote pain relief by helping laboring women relax and reducing anxiety, while offering a positive source of distraction. Researchers have also concluded that music stimulates the pituitary gland inside the brain to release endorphins and dopamine and increase levels of serotonin. In particular, binaural beat therapies may have a positive effect on conditions such as anxiety.

Caroline J. Hollins Martin of the College of Health and Social Care, University of Salford, Greater Manchester, says, "Listening to music has been shown to counteract the physiological stress reaction, with response released acetylcholine lowering heart rate, blood pressure and enhancing blood flow to the vital organs. . . Since the majority of relaxants and antidepressants cross the placental barrier to affect the fetus, this justifies an exploration of alternative non-pharmaceutical methods of reducing stress in childbearing women."

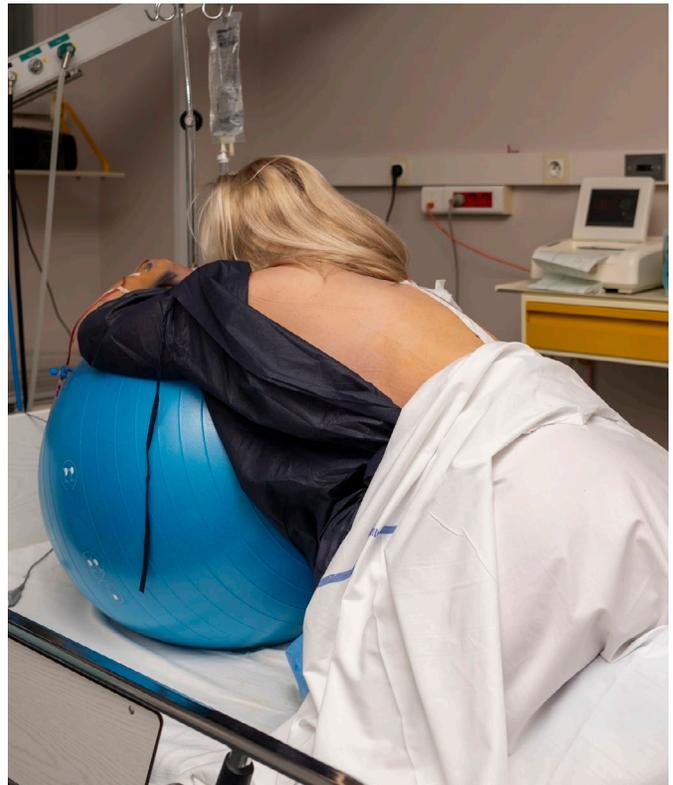
In fact, studies reveal that music interventions had statistically significant effects in decreasing pain, emotional distress from pain, anesthetic use, pain medication intake, heart rate, blood pressure and respiration rate. Women in a music therapy group had a lower level of pain and anxiety compared with those in the control group at all stages of labor. Additionally, a significant difference was observed between the two groups in terms of maternal hemodynamics and fetal heart rate after intervention. Postpartum analgesic requirement also significantly decreased in the music therapy group. Furthermore, mothers who listened to self-selected music during labor reported a statistically significant lower level of postpartum pain and anxiety at 1-, 4-, 8-, 16- and 24-hour post-partum. Also, a significant difference was observed between the two groups in terms of satisfaction rate and postpartum depression rate at postpartum day 1 and day 8.

## Benefits for neonates

**Music therapy during pregnancy can help strengthen the bond between mother and child, aiding mothers who find it hard to connect emotionally with their babies. The impact of music on newborns has been observed as well. Therapeutic music has been shown to:**

- **Increase formula intake and weight gain**
- **Improve oxygen saturation**
- **Reduce heart rate**
- **Reduce pain response behaviors and days to discharge**
- **Increase parental reports of calmed infants**

And, as cesarean section use continues to rise, music therapy has a critical role there as well. Intraoperative meditation music, as an adjunct to spinal anesthesia, has been found to deliver statistically significant less postoperative pain and anxiety, and better overall psychological well-being.



## Summary

The Music Therapy Association of British Columbia reports, "Research has shown that those women participating in a music therapy-assisted childbirth program experience significantly more positive perceptions of their childbirth experience than those not participating in such a program."

Currently, the U.S. is one of the only countries where maternal morbidity and mortality rates have worsened over the last few decades and too many women suffer PTSD related to traumatic birth incidents. In line with efforts such as the HHS' recently created "Birthing-Friendly" hospital designation, there exists a significant opportunity for healthcare providers to enhance brand reputation by creating better labor and delivery experiences. Recognized for reducing pain and anxiety and improving post-partum well-being for women, sound/music therapy is one more tool in the critical process of empowering women through childbirth and helping them leave the birth facility with positive memories and facility connotations.

For healthcare providers with a commitment to maternal health and well-being, sound and music therapy can easily be integrated into maternity care services, to offer an inviting labor and delivery environment that supports women in feeling safe, appreciated, empowered, one where they are true co-decision-makers in establishing a space that reflects their needs and wants.



## Happy Mama: Reimagining birth environments, facilitating positive birth experiences

Designed for and with pregnant women, Happy Mama is the first fully comprehensive biopsychosocial wellness platform for maternity care. Much more than an app, Happy Mama offers an innovative, personalized response to the unique needs of women from pre-conception through pregnancy, labor and delivery, and up to 12 months postpartum.

Fostering a greater sense of familiarity and command, the benefits of the Happy Mama platform extend to the birthing room. It is the first immersive, multi-sensory platform to give a woman complete control over the birthing experience through immersive sound, visuals, biofeedback, and relaxation techniques—without the need to wear any technology. Happy Mama includes a robust library of audio tracks for training, preparation, and use during pregnancy and labor, all personalized for the expectant woman.

Happy Mama comes equipped with HealthTunes, a digital pharmacy streaming evidence-based music therapies; Spatial, an immersive three-dimensional soundscape creator; and Visual Healing by Moving Art by Louie Schwartzberg, a virtual imagery program.

HealthTunes integration with Happy Mama offers breathwork, mindfulness, meditation, visualization and affirmations for use in preparing for and during childbirth. Spatial converts clinical birthing spaces into familiar and empowering environments, via immersive audio on surround-sound speakers, controlled by bio and room sensors and a simple mobile device. The solution incorporates interactive elements, nature and artistic visuals from Moving Art. The result is a more personalized, comforting, and encouraging labor and delivery experience.

The experience of all three elements—music, immersive sound and visualization—are easy to select features within the Happy Mama app. Expecting moms can select and practice these techniques at home. They can also create a personal favorites list to experience these invigorating and soothing techniques in their chosen birth environment and part of their birth plan. Happy Mama guides users through the creation of a birth and postpartum plan.

### About Reach



Established in 2016, REACH is a 501c3 global social impact organization whose mission is to improve the healthcare experience for patients and providers. Reach is focused on sustainable, large-scale improvements in the delivery of care and in the health journey of all people through research, education, thought leadership, and innovation.

Reach is the founder of Happy Mama (<http://happymama.global>) - Winner of the CES 2022 Tech Innovation Award.

**Website:** <https://reachtl.org/> | **YouTube:** <https://youtube.com/c/Reachtl/> | **Reach Radio:** <https://reachtl.org/reach-radio>

**Reports:** <https://reachtl.org/resources?blogcategory=Maternal+Health> | Also visit: <https://savemoms.us>

## REACH'S PARTNERS FOR HAPPY MAMA MUSIC, SOUND AND VISUAL THERAPY

### About HealthTunes

**HEALTHTUNES**  HealthTunes is an innovative streaming digital pharmacy prescribing evidence-based playlists to improve one's physical and mental health. The carefully curated playlists are accessible on a browser or via mobile app and offer a range of original compositions and Billboard hits in various genres.

The advantage of HealthTunes is that these playlists are designed as a music therapy solution available 24/7 that can be streamed anywhere. **Website:** <https://www.healthtunes.org/>

### About MovingArt



Moving Art Studios is the work of Director and Cinematographer, Louie Schwartzberg. The Studio created Visual Healing, a virtual immersive program of Moving Art, availing his stunning award-winning body of work collected from over 40 years, to health and wellness institutions and organizations wanting to bring a sense of natural wonder, healing serenity, restoration and well-being to their environment.

**Website:** <https://movingart.com/visual-healing/>