

S.I.N.G. – The Wonder Drug

Social

Singing and music are found in all cultures:

- · National anthems
- Opera
- · Music Theatre
- Sports events
- Songs love protest oppression story telling
- · Popular culture
- Shared experience
- · Social cohesion.



Music therapy research shows that music can:

- Reduce pain
- Decrease anxiety, withdrawal, depression
- Improve speech/language rehabilitation
- · Improve physical and motor rehabilitation
- Increase respiratory capability
- Facilitate expression of feelings, fears, hope
- Increase socialization, acceptance of disability, mood elevation.

Dr. Deforia Lane

Director of Music Therapy



Intellectual

Most of the brain is used in processing music including:

- · the frontal cortex
- · left and right hemispheres
- motor cortex
- auditory cortex
- · limbic system.



The chemical release of dopamine supports social interaction, empathy and cooperation.

Dr. Alan Harvey

Neuroscientist and musician

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- Musicians solve puzzles and problems more effectively and creatively.
- Musicians have higher levels of executive function.
- Musicians have highly developed memory systems.

Dr. Anita Collins

Educator and researcher

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Music manipulates the brain through neuro-plasticity by the:

- Regulation of neurotransmitters
- Clear signals
- Synchrony of neural firing (through rhythm)
- Engagement of multiple brain areas.

Dr. Elizabeth Stegemoller

Assistant Professor, Kinesiology

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Nature/Nurture

Music and language processing are closely connected.



Response to music begins in the womb.

Dr. Kathleen Howland



Music supports 'learning to learn':

- Cooperation
- Creativity
- Questioning
- Sharing
- · Strategic thinking
- Self discipline
- Flexibility
- Motivation
- · Self directed learning
- Curiosity
- Interest
- Community
- · Joy of learning.



Not everything that counts can be counted, and not everything that can be counted counts.

On the wall in the office of **Albert Einstein** at Princeton university



Music and singing are free medicine.

Musical activity is now a crucial part of 'social prescribing'.

'Working' songs enable higher levels of achievement.



Music increases blood flow, dopamine uptake and blood oxygen levels.

Dr. Robert Zatorre

Cognitive neuroscientist





Music and rhythm increases movement and flow of dopamine to support mobility for Parkinson sufferers.

Dr. Jessica Grahn

Assistant professor psychology

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After performing at a care home a patient who had stopped responding after the death of his wife a year ago — asked to see his family again.

The patient sang along to Moon River which was played at his wedding.

Robin Spielberg

Musician and composer

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