

# OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Michiel Rorick

## The Healing Power of Music

*Music is power in lyrical form. It has been known to lead men into battle, sell products and lull babies to sleep. Present at all of our major milestones — from high school graduations to weddings and funerals — music is the soundtrack of our lives.*

*Best of all, however, notes Dr. Rorick, are the wealth of studies singing the praises of music's positive effect on health and well-being.*



In 550 B.C., Greek mathematician and philosopher Pythagoras developed theories involving the use of music in healing (*Integr Physiol Behav Sci* 2000;35:199-207). Centuries later, researchers continue to build on those concepts.

Dr. Rorick supports music as part of the **chiropractic lifestyle**: a way of life that focuses on preventing illness and disease by maximizing optimal wellness.

The following are just a few of the many drug-free, health-boosting benefits associated with listening to — and making — music.

### Instrumental Intelligence

When young children take music lessons, they're learning more than har-

mony, theory and technique; they're actually improving their memory, according to recent research published in the peer-reviewed medical journal *Brain*.

The study included a year-long observation of two groups: children who took music lessons (outside of school) and children who did not. Testing included asking children to discriminate between harmonies, rhythms and melodies — in addition to a memory exercise requiring them to listen to a series of numbers, remember the sequence and repeat it back to researchers. The music students consistently performed better than those not taking music lessons (*Brain* 2006;129:2533-53).

Another study compared 45 music students with an equal number of non-music students — all boys between the ages of 6 and 15. Findings showed that music students recalled significantly more words during subsequent testing than their peers (*Neuropsychology* 2003;17:439).

Listening to classical music, particularly compositions written by Wolfgang Amadeus Mozart, has also been linked to higher cognitive functioning.

In 1993, researchers at the University of California, Irvine, found that a group of 36 college undergraduates "improved their spatial-temporal intel-

ligence (the ability to mentally manipulate objects in three-dimensional space) after listening to 10 minutes of a Mozart sonata. Results showed that student's IQ scores improved by 8-9 points and lasted for 10-15 minutes." These findings were later dubbed the "Mozart effect."

### Immune System Rhapsody

Stress zaps the immune system, weakening the body's defense against disease and illness. That's why it's important to add music — along with exercise, plenty of sleep and regularly scheduled chiropractic care — to your stress-busting regimen.

In a study involving 18 students in Japan, researchers exposed subjects to either silence, high-uplifting or low-uplifting music following a stressful task. Results showed that low-uplifting music increased students' sense of well-being while high-uplifting music boosted liveliness and decreased depression (*J Music Ther* 2003;40:189-211).

Marching to the beat of your own drumming works just as well, according to another study in which subjects were exposed to an hour-long stressful endeavor. Following the task, some of the subjects participated in a recreational music-making program while others sat in silence.

Researchers discovered that, out of 45 markers linked to a stress-induced compromise of the immune system, 19 were "significantly reversed" by making music (*Med Sci Monit* 2005;11:31-40).

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## Harmonious Heart Rates

Preterm infants traditionally have faster heart rates than full-term babies. But doctors in Israel have discovered that a half hour of live music therapy can “significantly reduce” preterm heart rate. And not just during the therapy itself, but upwards of 30 minutes *after* the music has stopped.

Researchers exposed 31 preterm infants to either live music, prerecorded music or no music. “Compared with recorded music or no music, live music therapy is associated with a reduced heart rate and a deeper sleep at 30 minutes after therapy in stable, preterm infants.” (*Birth* 2006;33:131-6.)

## Orchestrated Osteoarthritis Relief

There are numerous health benefits linked with performing music.

Take the case of four older patients with osteoarthritis of the hands. Four days a week — over a period of four weeks — they played folk and big-band melodies for 20 minutes on a touch-sensitive electronic keyboard.

All four experienced an increased range of motion in their hands, and two recorded “significant decreases in arthritic discomfort after playing, while three participants showed significant improvement in finger velocity and hence, finger strength/dexterity due to treatment.” (*J Music Ther* 2001;38:97-113.)

## Tuning Out Labor Pain

Music, according to a score of studies, helps reduce labor pains *without* drugs.

In one example, 55 women listened to three hours of music early in the active phase of labor. The result? “Significantly less sensation and distress of pain” than a control group of 55 other laboring moms who didn’t listen to music (*Pain Manag Nurs* 2003;4:54-61).

## Singing Away Stress & Depression

Research shows that singing enhances

the ability to cope with stressful situations. This ability, in turn, can reduce depression (*J Music Ther* 2004;41:241).

What’s more, according to a German study, “music therapy [including singing] is able to work at a psychotherapeutic level in persons seemingly unable to be influenced by conventional psychotherapeutic-methods.” (*Z Gerontol* 1992;25:391-6.)



## Memory Melodies

Several scientific investigations demonstrate that music reduces agitated behaviors in those with dementia. They concluded that the “use of music as an effective strategy in managing this behavioral problem.” (*Hu Li Za Zhi*;53:58-62.)

Additional research shows that music therapy also lessens dementia-related apathy.

Researchers exposed 32 patients with moderate to severe dementia to either live, interactive music, passive pre-recorded music or silence for 30 minutes. The level of “positive engagement” in those without musical intervention was a mere 12.5 percent. Pre-recorded music ranked slightly higher, with 24 percent engagement.

But all of those who listened to live music “had immediate and positive engagement effects,” note researchers, “regardless of the severity of their dementia. Pre-recorded music is non-harmful but less clearly beneficial.” (*Int Psychogeriatr* 2006;18:623-30.)

## A “Note” of Caution

It’s a well-known fact that loud music

can be hazardous to your hearing. However, specific safety guidelines have been somewhat sketchy. Until now.

A new analysis by researchers at the University of Colorado at Boulder and Children’s Hospital looked at iPods and other portable, digital music players. The result is the first-ever detailed guidelines for safe listening levels using earphones.

The study reveals that a typical person can “safely listen to an iPod for 4.6 hours per day at 70 percent volume using stock earphones,” according to Cory Portnuff, a doctoral researcher in the university’s speech language and hearing sciences department.

However, listening to music at full volume through an iPod for more than just five minutes a day — using stock earphones — can increase the risk of hearing loss.

## Compose a Musical Life

- ♪ Hold a family sing-a-long once a week.
- ♪ Learn to play a musical instrument.
- ♪ Take advantage of community concerts.
- ♪ Attend local high school and college musicals.
- ♪ Perform volunteer concerts at retirement communities.
- ♪ If you have a piano, call your local university’s music department and ask if any students need additional practice time (on-campus music rooms are often over-booked).

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