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CLINICAL CARDIOLOGY

## Music, like laughter, benefits heart health

NOVEMBER 14, 2008 | Marlene Busko

From [Medscape Medical News](#)—a professional news service of WebMD

**AHA** **New Orleans, LA** – Listening to enjoyable music may be good for cardiovascular health, a new study suggests [1].

Researchers at the University of Maryland, in Baltimore, showed for the first time that positive emotions aroused by joyful music have a favorable effect on the endothelium.

"We believe that the brain plays a pivotal role in vascular health," lead author **Dr Michael Miller** said. "High cholesterol and high blood pressure are very important, but some individuals lacking these risk factors develop significant heart disease, and that may be partly related to their response to stress."

If music can evoke positive emotions to counteract negative stresses of everyday life, it could have a very important influence on vascular health, he said. "It should be incorporated into a healthy lifestyle, just as we might incorporate other healthy habits."

The study was presented here at the **American Heart Association 2008 Scientific Sessions**.

### Positive emotions

According to Miller, it has been known for some time that mental stress can cause vasoconstriction. He added that his group was the first to show that laughter has a beneficial effect on the endothelium. They wondered whether positive emotions evoked by music would have a similar effect.

To determine the effect of music on endothelial function, the researchers conducted a four-phase crossover randomized study. The participants included 10 healthy nonsmokers—seven male and three female—with a mean age of 36 years.

The volunteers selected 30 minutes of music they enjoyed. To minimize emotional desensitization, participants were told to avoid listening to this particular music for two weeks prior to the start of the study.

"We didn't assign music for them to listen to. We wanted participants to emote positively based on their previous experience with certain music," said Miller.

Volunteers were also asked to identify music that made them feel anxious.

On four separate occasions, one week apart, the subjects' endothelial function was assessed by measuring blood flow in the upper arm. On each occasion, brachial-artery-flow-mediated dilation was measured at baseline and after 30 minutes of one of four test stimuli: enjoyable music, anxiety-provoking music, a humorous video clip, and a relaxation tape.

The researchers found that compared with baseline, the subjects' mean flow-mediated dilation:

- Increased 26% after listening to enjoyable music (p=0.0002).
- Decreased 6% after listening to anxiety-provoking music (p=0.005).
- Increased 19% after watching a humorous video (p=0.08).
- Increased 11% after listening to a relaxation tape (NS).

The magnitude of increased flow-mediated dilation associated with self-selected enjoyable music was the same as that previously observed with aerobic activity or statin therapy.

"We think that the basis for this is due to endorphins or endorphinlike compounds released from the brain that have a direct effect on the vasculature. It comes back to that 'big black box' of mind-heart connection, which is so hard to quantify but is an underdeveloped area that is worth further investigation," he said.

The complete contents of [Medscape Medical News](#), a professional news service of WebMD, can be found at [www.medscape.com](http://www.medscape.com), a website for medical professionals.

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### Source

1. Miller M, Beach V, Mangano C, Vogel RA. Positive emotions and the endothelium: Does joyful music improve vascular health? American Heart Association 2008 Scientific Sessions; November 11, 2008; New Orleans, LA. Abstract 5132.

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# 1 of 1      November 17, 2008 08:09 (EST)

ghassan-s kiwan      **what type of music was predominant among patients?**  
was heavy metal included in the choice of candidates??if not what was the predominance.for those who do not know the virtue of music ...it is maybe time to start dicovering it...

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