



Smiling Reduces Stress And Helps The Heart

A new study suggests that **holding a smile on one's face during periods of stress may help the heart**. The study, due to be published in a forthcoming issue of *Psychological Science*, lends support to the old adage "grin and bear it", suggesting it may also make us feel better.

The study is the work of psychological scientists Tara Kraft and Sarah Pressman of the University of Kansas. They looked at how different types of smiling, and people being aware of smiling, affected their ability to recover from stressful episodes.

Kraft told the press they wanted to explore whether old adages like "grin and bear it" had any scientific merit.

The age-old saying suggests smiling not only signals happiness to others, but could also be a way to help cope with life stresses.

Previous studies have shown that smiling affects emotion, and that positive emotions have an effect on [stress](#). But Kraft and Pressman are the **first to experiment with types of smile to see what effect they have on stress**.

Researchers often class smiles as being of two types: standard smiles, where only the mouth shapes the smile, and genuine or Duchenne smiles, where the muscles around the mouth and the eyes shape the smile. (The latter was named after Guillaume-Benjamin Duchenne, who used electrophysiology to show how truly happy smiles also use the muscles around the eyes).



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For their latest study, Kraft and Pressman invited 169 volunteers from a Midwestern university to undergo an experiment in two stages: training and testing.

In the training stage, the researchers taught the volunteers how to either hold their faces in a neutral expression, hold a standard smile, or hold a Duchenne smile.

They also got some of the volunteers to hold their face in a forced smile by holding chopsticks in their mouths.

In the testing phase, the volunteers performed some multi-tasking activities, during which they held their faces in the manner instructed.

The activities were designed to increase stress levels, but the volunteers didn't know this. One test for instance, asks the participant to use their non-dominant hand to follow the path of a moving star that they observe in a mirror. The other test involves plunging a hand into a bucket of ice water.

The researchers monitored the participants' heart rates as they performed their various tasks.

They found the participants who were instructed to smile, and in particular those whose faces expressed genuine or Duchenne smiles, had lower heart rates after recovery from the stress activities than the ones who held their faces in neutral expressions.

Even the volunteers who held chopsticks in their mouths, that forced the muscles to express a smile (but they had not explicitly been instructed to smile), had lower recovery heart rates compared to the ones who held neutral facial expressions.

The researchers say their findings suggest smiling during brief periods of stress may help reduce the body's stress response, regardless of whether the person actually feels happy or not.

Pressman said this could be useful to know, for instance if you find yourself stuck in a traffic jam, try to hold your face in a smile for a few moments: it may do more than just help you "grin and bear it", it may actually help your heart health too.

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