

## ***Is Laughter the Opposite of Stress?***

**A study indicates that while stress decreases blood flow, laughter actually increases it.**

Groucho Marx once said, "A Clown is like an aspirin, only he works twice as fast."

Norman Cousins, the famous peace activist and former editor of the *Saturday Review*, watched Marx Brothers' movies as part of his self-devised "humour strategy" to recover from ankylosing spondylitis. This is a painful and deadly form of arthritis that causes the vertebrae to grow together making you stiff and inflexible.

Given a one in five hundred chance to survive, Cousins famously defied medical science, recovered fully and went on to write the best-selling book, *Anatomy of an Illness as Perceived by the Patient: Reflections on Healing and Regeneration*.

**Cousins found that 15 minutes of laughter allowed him to sleep pain-free for 2 hours. And indeed, blood samples taken at the time showed that his inflammation level was lowered after the laughter treatments. Published in the *New England Journal of Medicine* in 1979, this became the first documented case of humour positively affecting disease.**

Fast-forward 26 years and humour is broadly accepted for its therapeutic value. Many hospitals in the U.S. have both formal and informal laughter therapy programs. In India, laughing clubs, where people gather in the early morning for the sole purpose of laughing, are as numerous as Starbucks in the U.S.

And now there is a study from researchers at the University of Maryland School of Medicine that finds laughter can in fact significantly increase blood flow. It does this by causing the "endothelium" or tissue that forms the inner lining of blood vessels to expand.

In the study, a group of 20 healthy men and women watched either a graphically violent battle scene from the war movie "Saving Private Ryan" or a hysterically funny scene from the comedy "Kingpin." Before and after seeing these clips, the dilation of each subject's blood vessels was measured.

**The researchers describe the results as nothing sort of "dramatic." After seeing the battle scene, 14 of the 20 subjects had significantly reduced blood flow. However, after watching the funny film, 19 of the 20 had significantly increased blood flow. Specifically, blood flow decreased by 35% after experiencing stress and increased by 22% after laughter. This increase, by the way, is similar to the results you'd expect following a 15 to 30 minute workout.**

The effect of increased or decreased "vasodilation" lasted for about two hours, the same length of time Norman Cousin benefited from his laugh treatment. This is significant, because decreased vasodilation is a factor in development of heart attacks and strokes. Obviously, increasing blood flow is a good thing, just as decreasing it is a bad thing.

Study leader Dr. Michael Miller commented, "Given the results of our study, it is conceivable that laughing may be important to maintain a healthy endothelium, and reduce the risk of cardiovascular disease. At the very least, laughter offsets the impact of mental stress, which is harmful to the endothelium."

Past studies of the effects of stress and laughter have shown that these emotions also impact the release of body hormones and chemicals. **When you are stressed out, your body releases more adrenalin and cortisol which in turn suppresses your immune system and also constricts your blood vessels. On**

**the other hand, when you laugh your body releases chemicals called endorphins, which counteract the effect of stress hormones and cause your blood vessels to dilate.**

Does this mean you should avoid war movies or other movies which might be stressful and only go to comedies? Probably not, but it certainly won't hurt if you laugh more frequently. A few belly laughs a day, in fact, might actually keep the doctor away.

—*Dave Bunnell*