

Laughter Is Good Medicine

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STORY AT-A-GLANCE

- › Anthropological research suggests laughter and humor are genetically built-in, and that humor, historically, has functioned as “a social glue.” The critical laughter trigger for most people is not necessarily a joke or funny movie, but rather another person
- › Laughter is contagious. The sound of laughter triggers regions in the premotor cortical region of your brain, which is involved in moving your facial muscles to correspond with sound
- › While children laugh on average 300 times a day, adults laugh only 17 times a day on average. Suggestions for how to get more laughter in your life are included
- › In one study, even after adjusting for confounding factors, the prevalence of heart diseases among those who rarely or never laughed was 21% higher, and the ratio of stroke 60% higher, than among those who laughed every day
- › Benefits of laughter have been reported in geriatrics, critical and general patient care, rehabilitation, home care, hospice care, oncology, psychiatry, rheumatology, palliative care and terminal care

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Many studies support the notion that optimism has a beneficial influence on your health. So, what about laughter? Indeed, there’s a lot of evidence suggesting that laughter is good medicine, too, both physically and psychologically.

Anthropological research suggests laughter and humor are genetically built-in, and that humor, historically, has functioned as “a social glue.” As noted by Danish comedian Victor Borge, “Laughter is the shortest distance between two people,” and the point, according to Spiceworks,¹ is that “People feel closest to one another when they can laugh together.”

Laughter – A Social Mechanism

Real, involuntary laughter involves brain mechanisms (many of which remain a mystery) and triggers unexpected sensations and thoughts. When you laugh, your entire body may be affected, from your facial expressions and breathing patterns to the muscles in your arms and legs.

In the video above, Robert Provine, Ph.D.,² who has been studying laughter for 20 years, explains some of the fascinating reasons why we laugh and what this primal mechanism reveals about our psyche.

According to Provine, the research he’s conducted suggests the critical laughter trigger for most people is not necessarily a joke or funny movie, but rather another person.

After observing 1,200 people laughing in their natural environments (a process he described as “sidewalk neuroscience”), Provine and his team found that laughter followed jokes only 10% to 20% of the time.

In most cases, the laughter followed a banal comment or only slightly humorous one, which signals that the individual is more important than the material. Often, there was a playfulness in the group and a positive emotional tone as well.

Interestingly, nearly half the time it was the speaker doing the laughing, as opposed to the “audience,” but virtually all of the laughter occurred in a group setting. In fact, one of the key reasons why we laugh may be as a way to bond with others and strengthen our relationships.

Laughter Is Contagious

The saying "laugh and the whole world laughs with you" is more than just an expression: laughter really is contagious. The sound of laughter triggers regions in the premotor cortical region of your brain, which is involved in moving your facial muscles to correspond with sound.³ As explained by Provine in a Psychology Today article:⁴

"Since our laughter is under minimal conscious control, it is spontaneous and relatively uncensored. Contagious laughter is a compelling display of Homo sapiens, a social mammal.

It strips away our veneer of culture and challenges the hypothesis that we are in full control of our behavior. From these synchronized vocal outbursts come insights into the neurological roots of human social behavior and speech ...

The irresistibility of others' laughter has its roots in the neurological mechanism of laugh detection.

The fact that laughter is contagious raises the intriguing possibility that humans have an auditory laugh detector – a neural circuit in the brain that responds exclusively to laughter ... Once triggered, the laugh detector activates a laugh generator, a neural circuit that causes us in turn to produce laughter."

It's thought that laughter may have occurred before humans could speak as a way to strengthen group bonds, as even today our brains are wired to prime us to smile or laugh when we hear others laughing. Interestingly, while children laugh on average 300 times a day, adults laugh only 17 times a day on average.⁵

Also interesting is laughter's distinctive pattern. It rarely occurs in the middle of a sentence. Instead, laughter tends to occur at the end of sentences or during a break in speech, which suggests language is given the priority. As explained by Provine:⁶

"The occurrence of speaker laughter at the end of phrases suggests that a neurologically based process governs the placement of laughter in speech, and

that different brain regions are involved in the expression of cognitively oriented speech and the more emotion-laden vocalization of laughter."

All of that said, it should be mentioned that not all laughter is positive or beneficial. When laughter is cruel or when you're laughing at someone rather than with them, it can cause social bonds to break and result in serious emotional harm. At the cruel and insensitive end of the spectrum, laughter can be a powerful tool for exclusion, manipulation and even social control.

Health Benefits of Laughter

So, what do scientific investigations reveal about the health effects of laughter? As you might suspect, it's good for your heart and cardiovascular health.

In a cross-sectional study⁷ of cardiovascular disease among 20,934 Japanese seniors, published in 2016, they found that even after adjusting for confounding factors such as high blood pressure, weight and depression, the prevalence of heart diseases among those who rarely or never laughed was 21% higher, on average, than among those who laughed every day.

The adjusted prevalence ratio for stroke was even higher — a whopping 60%. According to the authors, the results suggest that "Daily frequency of laughter is associated with lower prevalence of cardiovascular diseases," and "The association could not be explained by confounding factors, such as depressive symptoms."

In the 2009 review,⁸ "Laughter Prescription," published in the Canadian Family Physician journal, author William B. Streaan, Ph.D., notes there are "several good reasons to conclude that laughter is effective as an intervention." For starters, virtually all studies on laughter have demonstrated benefits. What's more, there are virtually no negative side effects.

"Morse's conclusion about laughter and humor in the dental setting summarized the literature to date: 'Laughter and humor are not beneficial for everyone, but

since there are no negative side effects, they should be used ... to help reduce stress and pain and to improve healing,” Streaan writes, adding:⁹

“Findings range from suggesting that, in addition to a stress-relief effect, laughter can bring about feelings of being uplifted or fulfilled to showing that the act of laughter can lead to immediate increases in heart rate, respiratory rate, respiratory depth, and oxygen consumption.

These increases are then followed by a period of muscle relaxation, with a corresponding decrease in heart rate, respiratory rate, and blood pressure. Overall, the arguments against using laughter as an intervention appear to be ... unduly cautious ...

The arguments in favor of laughter as an intervention are grounded in the virtually universal positive results associated with existing studies of laughter. Although scholars and practitioners recognize the value of further study, more replication, and identification of specifics, the call for more application of laughter as an intervention seems warranted.”

According to Streaan’s review of the published evidence, benefits of laughter have been reported in:

Geriatrics	Oncology
Critical and general patient care	Psychiatry
Rehabilitation	Rheumatology
Home care	Palliative care
Hospice care	Terminal care

“These and other reports constitute sufficient substantiation to support what is experientially evident – laughter and humor are therapeutic allies in healing,” Streaan

writes.¹⁰ The Mayo Clinic¹¹ and an information pamphlet¹² by the University of Kentucky cite even more specifics, pointing out researched benefits of laughter include:

Improved blood pressure	Lower levels of stress hormones
Strengthened immune function	Muscle relaxation
Pain reduction	Improved brain function, including the ability to retain more information
Improved oxygenation	Reduced risk of heart attack
Abdominal, facial and back muscle conditioning	Improved emotional health and energy levels

Laughter Therapy

A 2015 randomized controlled trial¹³ looking at laughter therapy for general health concluded it “can improve general health and its subscales in elderly people.”

Here, participants in the experimental group attended two 90-minute laughter therapy sessions per week for six weeks. While no correlation was found between the therapy and social dysfunction or depression, positive effects were seen in general health, somatic symptoms, insomnia and anxiety.

Similarly, a theoretical review¹⁴ published in 2016 argued laughter is a healthy and useful way to combat stress and depression. It’s beneficial effects on relationships can also significantly improve quality of life. As noted by the authors:

“Laughter therapy, as a non-pharmacological, alternative treatment, has a positive effect on the mental health and the immune system. In addition, laughter therapy does not require specialized preparations, such as suitable facilities and equipment, and it is easily accessible and acceptable ...

Decreasing stress-making hormones found in the blood, laughter can mitigate the effects of stress. Laughter decreases serum levels of cortisol, epinephrine, growth hormone, and 3,4-dihydrophenylacetic acid (a major dopamine catabolite), indicating a reversal of the stress response ...

Laughter can alter dopamine and serotonin activity. Furthermore, endorphins secreted by laughter can help when people are uncomfortable or in a depressed mood ... In conclusion, laughter therapy is effective and scientifically supported as a single or adjuvant therapy."

A study¹⁵ published in 2010 pointed out there's a distinct difference between humor and spontaneous laughter, and that distinguishing between the two was necessary to assess outcomes elicited by laughter alone. Once that was done, the evidence (again) confirmed that the act of laughing has "physiological, psychological, social, spiritual and quality-of-life benefits," and that:

"Therapeutic efficacy of laughter is mainly derived from spontaneous laughter (triggered by external stimuli or positive emotions) and self-induced laughter (triggered by oneself at will), both occurring with or without humor."

Have You Laughed Today?

When it comes to dosage, HelpGuide.org recommends getting a daily dose lasting 10 to 15 minutes:¹⁶

"Think of it like exercise or breakfast and make a conscious effort to find something each day that makes you laugh. Set aside 10 to 15 minutes and do something that amuses you. The more you get used to laughing each day, the less effort you'll have to make."

As for how to add more laughter to your day, the University of Kentucky lists several suggestions, including the following:¹⁷

Observe young children and follow their lead – Find delight and amusement in the ordinary (for an example, see the laughing baby video above; the simple act of ripping paper is a source of seemingly endless delight)

Watch comedies, go to comedy clubs and read funny books

Spend more time with friends who make you laugh

Remind yourself to play and have more fun

Spend more time with optimistic, [happy people](#)

Avoid sources of distress, be it difficult relationships, horror movies or the daily news

Sources and References

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