



The Science of Smiling

Smiles are calming. They're contagious.
And they have the power to transform our outlook.

BY LESLIE GOLDMAN

JAIME PFEFFER'S morning routine starts with coffee and journaling and ends with a smile. The smile isn't just a quick grin of content, though—it's 60 seconds of bare-teethed, crinkly-eyed, Julia Roberts-style beaming. Kicking each day off with a smile "supercharges" the success coach's mood, and when life throws a wrench in her plans, putting on a happy face helps Pfeffer loosen up and not take things so seriously.

"But it's more than that," she says. "I believe our thoughts create our reality, so I want to be in a position of thinking positive things are going to happen." When Pfeffer recently happened upon a misplaced jury summons, only to realize she was

supposed to serve that morning, she used her trick to ease the tension and reframe her thoughts from "I'm going to have a bench warrant out for my arrest" to "It will all be OK." Smiling, she called the court, explained her slipup, and was excused.

There's a reason the tears-of-joy smiley face is the most popular emoji. A sunny countenance—the most frequent of all facial expressions—has the power to cheer up friends and make strangers feel at ease (predators don't usually walk around with authentic smiles plastered on their mugs). But can we actually smile ourselves happy, as Pfeffer claims to do? And if so, can we use this as a tool to transport ourselves into a more optimistic headspace? We investigated this curve that seems to set everything straight.

When you smile, the whole world... well, you know

Smiling starts in utero, and babies reward adults for feeding and caring for them by flashing a gummy grin. (See parents' 3 a.m. refrain, "Good thing you're cute!") That, in turn, triggers the reward center in the brain of mothers, which may be a vital component in facilitating parent-infant attachment. "We get rewarded by infant smiles, and that's why we keep taking care of them," says Paula Niedenthal, PhD, a psychology professor at the University of Wisconsin-Madison and past president of the Society for Affective Science.

Smiling remains a powerful communication tool throughout the life cycle, with adults primarily relying on three types of smiles, which Niedenthal's Emotions Lab has dubbed reward, affiliation, and dominance. Those baby beams fall under the reward umbrella, as do the smiles of joy that spontaneously happen when we're happy to see someone or open a fabulous present. These feature a symmetrical lifting of the corners of the mouth, crinkling around the eyes, a little eyebrow lift and some sharp lip pulling, according to Niedenthal.

Affiliation smiles (toothless, lips pressed together, corners of the mouth upturned) are used to acknowledge the presence of another person—a friendly nod at the stranger in the elevator, an appreciative exchange with the barista, "and they convey harmless intentions" without necessarily feeling rewarding to the receiver, says Niedenthal. Dominance smiles are more of a smirk or sneer, a way to negotiate status while conveying a feeling of superiority or defiance.

Reward smiles are the ones that elicit the most positive response from others, and, like yawns, they're contagious, thanks to a phenomenon called facial mimicry. From smiles to displays of disgust, "we try on other people's facial expressions without even realizing it," Niedenthal says. Doing so helps us better understand how our family, friends, romantic partners, and colleagues are feeling, and guides us in responding

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in an appropriate manner. "It's like a little dance," she adds. When you flash a friend an authentic reward smile, she automatically mirrors your expression. A happy side effect of this is she'll likely feel a bit of your delight.

Smiley folks, then, are more likeable, according to research, in part because they make people around them feel better. That can translate into scoring a better job and being deemed more attractive.

Smiles tell us we're happy

As for why saying cheese brightens our mood, the secret is in the eyes, but for a different reason than you probably think. Many people have heard that the difference between a real or fake smile lies in the crinkling of the eyes. (Real ones, technically known as Duchenne smiles, have it; forced ones don't.) But those cheery crow's feet are more than evidence of authenticity; they relay a "Yay!" memo to your brain via something called the oculocardiac reflex, a response to gentle pressure around the eyes that stimulates a major nerve involved in the body's relaxation response. "Smiling, particularly smiling that involves the eye, seems to have arousal-reducing benefits," says Sarah Pressman, PhD, a psychological science professor at University of California, Irvine, whose research focuses on the interplay between positive emotions, stress, and health. If your heart rate was elevated, it will go down. Ditto for blood pressure. In this way, Pressman says, smiling "can lead to decreased feelings of stress." If you've ever rubbed your eyes during a stressful conversation or relaxed while donning a weighted sleep mask, you've experienced some degree of the oculocardiac reflex.

In a study coauthored by Pressman, 169 college students were divided up and then instructed to hold chopsticks in their mouths in a way that engaged those facial muscles needed for a Duchenne smile, a standard (cheeks only, no eyes) smile, or a neutral expression. They were then asked to complete various stress-inducing activities, such as tracing a star with their non-dominant hand while being criticized by a test administrator or submerging their hand in ice water. The students who held the chopsticks in a way that made them smile—whether it was a



Duchenne one or not—recovered more quickly from the stress, meaning their heart rate returned to normal faster, compared to those wearing neutral facial expressions.

“We believe that when you smile, even if you’re faking it, the muscle activation in your face sends a message back to your brain that says, ‘Hey, you’re happy,’” says Pressman, who adds that a career highlight came when late-night host Stephen Colbert mocked this study with a photo of the Joker, whom Colbert said, “seemed really chipper!” Pressman and her colleagues replicated these findings in a 2020 paper that saw chopsticks-induced smiling result in a 40 percent drop in perceived pain when being injected with a needle.

(Botox fans, take note: While the wrinkle reducer may smooth the area around your eyes, it makes it harder for you to generate a genuine smile while simultaneously rendering it more difficult for you to mirror other people’s smiles, which may make you come off as less empathetic.)

You can smile your way to a better frame of mind

Science, then, seems to support Pfeffer’s daily dose of smiling. “You can, in essence, fake it until you make it,” Pressman says, noting this works best for short-term stressors, like traffic. “It’s not going to make the pandemic go away, but if you’re in an uncontrollable situation, like you can’t get into a Zoom meeting or your computer crashes or your child wakes you at 2 a.m., that subtle shift to smiling can make a big difference.” (As Buddhist monk Thích Nhất Hạnh put it, “Sometimes your joy is the source of your smile, but sometimes your smile can be the source of your joy.”)

But when you live in a world where baby pandas and old SNL skits exist, why not focus on the things that innately make you smile ear to ear? “Absolutely, this is the time to watch *Schitt’s Creek* or *The Office* for the 10th time,” Pressman says. Scroll through your favorite photos on your phone; crank “Uptown Funk” and have a family dance party.

Don’t be surprised if all that grinning makes you

feel a bit more optimistic about life in general. “When we feel a positive emotion, we start feeling good and our predictions about the future change,” Niedenthal says. “We think that positive things are more likely to happen and negative things are less likely to happen.” That may also help explain the results of a study that found that college students who smiled in their school ID photo were more likely to have sought out preventive health care in the previous year compared with straight-faced students, or why when Wayne State University researchers examined baseball cards from 1952, they found that the intensity of a player’s smile was predictive of his life span, with major league smilers living an average of nearly seven years longer than the serious athletes. “Smiling tells you something about a person’s disposition,” Pressman says, “and happier people tend to take better care of themselves—they eat [healthier], exercise more.” Smiley people may have more and better relationships, and there is a rock-solid link between social connectedness and health.

Positive emotions can be energizing too, Pressman adds, and since smiling fosters upbeat emotions, it may give you the mojo you need to



take concrete steps toward any goals—health or otherwise.

Now, we’re not suggesting you go around exhorting strangers to “turn that frown upside down,” which tends to come off as downright annoying. But you can certainly take strategic steps to spread that kind of cheer. For freelance writer Shannon Guyton of Los Angeles, adopting a puppy has brought miles of smiles to her family. “My son is a senior in high school, and the pandemic brought everything to a crashing halt for him. Our daughter was diagnosed with type 1 diabetes last year,” Guyton says. “This dog is a ball of happy energy and has been so much fun. Her tail wiggles so hard when she sees us that she looks like she’s going to fly away like a helicopter. She just pulls us into the moment and we can’t help but smile.” ■

SMILING AND OTHER WAYS TO SPREAD SUNSHINE

Masks hiding your smile? Show it through your eyes, voice, and body language.

Along with slowing the transmission of Covid-19, masks, sadly, make it harder for us to enjoy each other’s smiles. Many hospital workers have taken to wearing photos of themselves, beaming and mask-free, to help patients feel more at ease. But for us everyday folks, try these strategies (smiling optional):

SMILE WITH YOUR VOICE.

French research has determined that smiles have an “acoustic fingerprint” that lets others know you’re smiling even if they can’t see it. So long as you’re smiling, you’ll automatically send the right auditory signals, but intensifying your smile can help your smiley voice carry through the mask, says Reneé Carr, PsyD, a psychologist based in Washington, D.C.

MAKE EYE CONTACT AND TILT YOUR HEAD

Both movements signal an interest in what the other person is saying, Carr says, and while that doesn’t necessarily tell them you’re smiling, the combo does help you come off as more

sincere, attentive, caring, and respectful.

SMILE THROUGH KIND ACTIONS

Hurrying through stores and swerving to avoid strangers on the street has left us in a desert of affiliative smiles—those friendly looks that serve as social connectors. Make an effort to keep them up under your facial covering, but supplement them with kind actions, says Elizabeth Blevins, a PhD candidate in the psychology department at Stanford University whose research focuses on cultural differences in emotional values. “If the person behind you in line at the grocery store only has a few items, you let them go ahead of you,” she suggests, “or give your barista a wave or a thumbs-up. These are all ways to convey your positivity even if your mask is obstructing your smile.”