## HAPPINESS

Can acting like you feel good make you so? New research suggests the power of positive thinking is greater than we imagine. By Jenny McPhee Photographed by Alexei Hay

magine in some future world that you go to your doctor because you're feeling down, and she hooks you up to a brain-imaging device, watches a screen while she asks you a few questions and shows you images, and then sends you on your way with a prescription for, say, tickets to the philharmonic or a large slice of Junior's cheese-cake, a pair of Varda shoes or a stroll through the New York Botanical Garden. As hard as it is to believe, this scenario is not entirely implausible. There is a growing field called "happiness studies," and the aim of the embryonic discipline is to determine the basis for happiness.

For centuries, scientists and academics have studied what is wrong with us, paying scant attention to exploring what already works. The new happiness movement, which involves psychologists, neurologists, sociologists, and even economists, investigates not what is wrong but what is right, and seeks to discover how we can use our positive emotions to improve our quality of life.

A harbinger of this growing field is Martin E.P. Seligman, Ph.D., former head of the American Psychological Association and author of the best-selling book *Learned Optimism*. He calls his brand of happiness "positive psychology" and promotes it as a healthy alternative to either years of exploring an unhappy childhood with a psychotherapist or drugs such as Prozac, Zoloft, and Paxil. "This relentless focus on the negative," Seligman claims, "has left psychology blind to the many instances of ... drive and insight that develop out of undesirable, painful life events."

Basically, Seligman's idea is that you can train yourself to

spin the events in your life from an optimistic point of view. For example, if you're fired from your job, see it as an opportunity for a new beginning. Your relationship breaks up, so you decide to find someone who plays to your strengths, not your weaknesses. And you learn to fully appreciate the good things that happen to you—no thinking you pulled the wool over their eyes when you get a promotion. Seligman is convinced that "the positive social science of the 21st century will have as a useful side effect the possibility of prevention of the serious mental illnesses; for there are a set of human strengths that most likely buffer against mental illness: courage, optimism, interpersonal skill, work ethic, hope.... But it will have as its direct effect a scientific understanding of the practice of civic virtue and of the pursuit of the best things in life."

Recent studies linking happiness—in particular laughter—and health would appear to back Seligman's theory: People who smile more frequently tend to have lower blood pressure and stronger immune systems. A current UCLA study is attempting to find clear biological evidence for laughter's therapeutic effects on cancer patients. And filmmaker Mira Nair recently made a documentary on India's laughing clubs, a wide-spread phenomenon in which people laugh together for about 20 minutes a day with beneficial results. Employers have found that since initiating the laughing clubs in factories, there is less absenteeism and better performance among the workers.

But doesn't "the pursuit of the best things in life" cost money? How many times have we said to ourselves, If only I were rich, I would be so much happier? Economists are increasingly interested in just how money does contribute to our

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happiness levels. In fact, in 2000, the Woodrow Wilson School of Public and International Affairs at Princeton University opened its Center for Health and Wellbeing, staffed by a significant number of economists. For some time now, psychologists have been declaring the old adage is true: Money can't buy happiness. Despite the fact that over the past 30 years we have become richer as a nation, studies imply we are no happier.

here is, in fact, a wide body of evidence showing that people who aspire to have money, fame, and beauty are less happy than those who engage in daily activities they find fulfilling and pleasurable.

Pursuing the small pleasures of life as a formula for

happiness is reinforced by the preliminary findings of perhaps the most intriguing, indeed revolutionary, area in the new happiness studies: the neurobiology of happiness. Emotions—happiness, sadness, fear, anger, love, desire—have traditionally been perceived as spiritual, ephemeral things that were not of the body, belonging instead to the realm of the soul. Now, however, researchers are making connections

between brain activity and emotions. As neurologist Antonio Damasio, Ph.D., M.D., best-selling author of *The Feeling of What Happens*, describes, "We are not thinking machines. We are feeling machines that think."

Through the use of brain imaging techniques—PET scans and fMRIs—neuroscientists believe they have located joy, optimism, and a sense of well-being in the left prefrontal cortex. It seems people who approach the world optimistically experience increased activity in the left front part of the brain, while those who see the darker side of things have more neural activity in the right prefrontal cortex. The happy crowd also tends to have higher levels of the neurotransmitter dopamine, which is released when the brain's pleasure or reward pathway is activated, and lower levels of the stress hormone cortisol.

Some studies suggest that about 50 percent of a person's capacity for happiness is inherited. But others are wary of putting a fixed numerical value on the possibility for happiness, especially since one amazing neurological discovery of the past 15 years is the brain's plasticity. At one time, scientists thought that after the first years of life the brain was hardwired never to be altered. Neuroscientists are now finding that our environment not only can cause enduring changes to our DNA, it can affect the very shape of the brain, even into old age. In an interview for the recent PBS series *The Secret Life of the Brain*, Steven E. Hyman, M.D., former director of the National

institute of Mental Health, explains: "Anytime we learn something new, anytime we change our mind about something, anytime we remember something, we can do that only by changing the physical structure of our brain—by changing, literally, synaptic connections [in the brain] so that we're processing information differently."

This discovery has led experts to prescribe brain exercises for a wide range of conditions—from massive strokes to mild memory loss. "The brain is like a muscle," says behavioral neuroscientist Edward Taub, Ph.D. "And the more that you exercise it, the better it gets." Taub and others in the field recommend daily mind exercises for everyone, things like brushing your teeth with your left hand if you are right-handed, alternating the wrist on which you wear your watch, or making a mental list of

all the objects you see when you walk into a room. Above all, they are recommending what Buddhists and New Agers have long been telling us: Avoid or minimize stress. Studies by Stanford University neuroscientist and biologist Robert Sapolsky, Ph.D., suggest that stress takes a large toll not only on memory but on the overall well-being of your brain.

Which brings us back to the science of happiness and how we

might go about reshaping our brains and lives in order to maintain lower levels of stress and higher levels of contentment. Drugs are one way, but if a psychopharmacological solution is not for you (there is still the side-effects problem), there may be a more organic solution. Exercises devised to help improve your overall sense of well-being could involve determining the specific environmental cues in your life that activate neural systems that cause you to feel happy—eating a perfectly ripe persimmon, perhaps. Then, make sure you frequently do the things that fill you with a sense of joy, fun, and satisfaction. In *The New York Times* Science Times, behavioral geneticist David Lykken, Ph.D., gave this advice: "Be an experiential epicure... Find the small things that you know give you a little high... and sprinkle your life with them."

Forty-two years ago, Rodgers and Hammerstein, in their musical *The Sound of Music*, gave us the prescription in song: "I simply remember my favorite things / And then I don't feel so bad." And, as Aristotle indicated over two millennia ago, being happy is "activity in accordance with excellence," and excellence is something one must continuously work toward, not unlike engaging in regular exercise for a healthy body. Soon, it will be perfectly normal to go to your personal neurotrainer to work out the mind in order to have a happier and healthier life. In the meantime, just what is it that makes you happy?