

This is an excerpt from *GAIN Without Pain: The Happiness Handbook for Healthcare Professionals* by Greg Hammer, MD, which is available in paper and e-book versions on [Amazon](#)

HAPPINESS: THE GOAL

by Greg Hammer, MD

*Happiness is simply to allow
everything to be*

*exactly as it is from moment to
moment.*

Rupert Spira

This chapter is about happiness—what it is and how we get more of it in our professional and personal lives. More and more of us in medical practice are feeling less happy at work, and burnout is increasingly common. We can reverse this trend by embracing a few simple principles that we can put into motion in our everyday lives at the hospital, at home, or wherever we are. Thankfully, the “happiness tools” are fully portable.

What is happiness? Although every person on the planet wants happiness, its definition is elusive. Happiness has been described as “the experience of joy, contentment, or positive well-being¹.” Peace, contentment, joy, well-being—these are often used as synonyms of happiness. It may have a variety of definitions, but we know it when we see (or feel) it. A growing body of research tells us that happiness improves physical health, including our cardiovascular and immune systems. This a bi-directional process—fitness, in all of its manifestations, makes us happier; and happiness makes us more able to achieve and maintain functional fitness.

Two types of happiness may be described: well-being that arises from a sense of devotion or service to others (*eudaimonic* happiness); this is associated with long-lasting well-being and other benefits, including better immune health². The other version is *hedonic* happiness, which comes from making love, having a great meal, receiving a salary bonus, or acquisition of material goods. Hedonic happiness is not enduring. The joy we feel from completion of residency and fellowship, growth of our practice, and the next promotion or invited lecture will fade with time. The focus on self-centered pleasure and avoidance of displeasure brings fluctuating happiness in which periods of pleasure and displeasure alternate repeatedly³. In contrast, selfless ideations and actions bring a state of durable happiness that is less dependent on circumstances and more related to inner resources and abilities to deal with whatever comes along in life.

Deepak Chopra aptly stated, “The ultimate goal of all of us is happiness. If you want to be

¹ Lyubomirsky L. *The How of Happiness: A Scientific Approach To Getting The Life You Want*, New York: Penguin Press, 2008.

² Fredrickson BL. *Positivity: Top-Notch Research Reveals The 3 To 1 Ratio That Will Change Your Life*. New York: Three Rivers Press, 2009.

³ Dambrun M, Ricard M, Despres G, E, et al. Measuring happiness: from fluctuating happiness to authentic-durable happiness. *Front Psych* 2012; 3:16.

happy, make someone else happy.” In reality, of course, we enjoy both eudaimonic and hedonic happiness—embracing their unique qualities may help us maintain a healthy perspective on that which we seek.

Why is happiness, particularly eudaimonic happiness, important? Happiness leads to living a longer, healthier life. It is associated with longer telomeres, the tiny caps on our chromosomal DNA⁴. By connecting with other people, by devoting ourselves to serving others, by meditating, by being present, we can “grow” our telomeres and longevity. Functional imaging of the brain when people focus on happy thoughts or meditation shows activation of neurons in the prefrontal cortex, where happiness “lives.” By learning to be more optimistic, we can lower the likelihood that we will develop cardiovascular disease and stroke.

We can reap these benefits just by smiling and pretending to be happy! In other words, we can change the way we think, rewire our own brains, and become healthier and happier.

When asked whether they are happy, most people hesitate. Yes, they are happy sometimes, but not always. We all feel discomfort, pain, isolation, loss, fear, anxiety, insecurity, and that we simply do not measure up. People suffer from the “Imposter Syndrome” convinced that hiding behind a socially acceptable mask is the only way to be liked or respected. We all feel this way to a degree— it is the way our brains are wired.

Since happiness is what we seek and we know it will make us better, what are the essential underpinnings of happiness?

“The discovery that peace, happiness, and love are ever-present within our own Being, and completely available at every moment of experience, under all conditions, is the most important discovery that anyone can make,” wrote Rupert Spira, a teacher of nonduality (Advaita). He teaches that being *present* means being *happy*. So, how can we learn to be more present?

Human beings have been wired to think incessantly about the past and future, so being more present will require a substantial amount of *unlearning* or *rewiring* of the brain. The newborn baby almost certainly has no sense of time or place. A baby does not worry about the future or feel regret about the past. As she nurses contentedly at her mother’s breast, a baby is sweetly unaware of where her body stops, and her mother’s body begins. A baby *is* in the realm of timelessness and placelessness. Sounds blissful! As the infant grows, however, there is the inevitable development of a sense of separation, or “otherness.” The young separate self or ego arises. This is me, that is *not* me, that is my father. This is me, that is a dog. This is *mine*, that is *not* mine. These are my toys, and those are not my toys. Soon young people are spending a lot of time contemplating what happened yesterday or last month or last year. As we age, we think more about the future. High school students need to plan to get into a good college— in fact, youth are told to start planning for this earlier and earlier in life, to do community service, score well on pre-SATs, then SATs, then the MCATs, then the National Medical Board Exams. We are always planning for the next step, rarely appreciating the current one. Thinking about the future triggers anxiety, worry, uncertainty, and fear of failure.

On the other hand, thinking about the past often provokes feelings of shame and embarrassment, or regret. Sadly, a steadily dwindling amount of time is spent enjoying the present as a child grows into an adult. Of course, there is value in mining our history for victories to celebrate and wisdom to capture. We also need to consider the future—we need to perform well, to succeed, to put bread on the table. These are *adaptive* considerations. But it becomes *maladaptive* when the habit of

⁴ Telomeres are cap-like structures at the end of chromosomes that help protect DNA from damage as DNA replicates during cell division. As cells age, telomeres progressively shorten; when telomeres get too short and cannot be repaired, chromosomes fray, and the cells can no longer divide. Short telomeres are associated with aging, cancer, cardiovascular disease, and certain other age-related disorders, as well as premature death. Telomere shortening is mitigated by a healthy diet, regular exercise, and stress reduction.

worry or regret consumes the day, draining it of the pure happiness available by being present. The past is over and the future is not here yet. Nevertheless, the mind tends to wander back and forth between the two. Our brains are over-loaded, and we become impatient and distracted. We have “Attention Deficit Trait⁵.” When we are fully present, our prefrontal cortex is very active. As our minds wander, this activity shifts to the lateral temporal cortex, the posterior cingulate cortex, and other regions. When we become aware that our mind is wandering, the anterior insula and cingulate cortex kick in and return our attention to the present. This circuit continues all day— wasting a lot of time and energy.

It is well-known that humans have a “negativity bias.” Unpleasant experiences affect us more deeply than enjoyable ones. When shown pictures that evoke negative feelings (a dead animal, for example) and those known to produce positive or neutral feelings (a flower), people react more strongly to the negative stimuli. Experimental studies have shown that unpleasant stimuli evoke more pronounced and rapid automatic responses than equally extreme and arousing pleasant stimuli⁶. There is significantly increased electrical activity in the brain’s cerebral cortex in response to negative thoughts. There is a teleologic rationale for this— heightened interest and attention paid to unpleasant information alerts us to danger and helps us survive. Throughout human history, our survival has hinged on our skill at avoiding danger. Our brains developed circuitry to notice and respond to threats to our safety. As with our immune system, however, too much of a good thing can be destructive. Most people continually maintain a negativity bias, and this eventually erodes their ability to thrive.

Due to this negativity bias, thoughts of the past often include regret, shame, embarrassment, while thoughts of the future bring fear and anxiety. We are all wired this way. The good news is that we can rewire our brains so that this constant cycling of neuronal activity does not occur all of the time. We can learn to be more present, more *mindful*.

Mindfulness training is a well-established and straightforward way to increase our ability to be more present. When you notice that you are becoming distracted, that your mind is time-traveling in an unproductive manner, bring your attention back to right here, right now.

Easy-to-learn techniques include focusing on the breath, slowing it down, fully experiencing the passage of air as you inhale and exhale. When you walk, pay attention to the feeling as your feet connect with the ground. When you eat, savor your food as a sensuous pleasure. Close your eyes and appreciate the flavors, textures, warmth, sweetness, or saltiness. Understand the miracle of food being grown, nurtured, harvested, transported, prepared, and delivered to your table. When you shower, close your eyes, and delight in the sensation of the warm water cascading down your skin, the miracle of indoor plumbing. Life is pretty amazing when we slow down, become present, and fully sense these wonders.

Have you ever been in an exam room with a patient, or in a patient’s room or on rounds without *really* being there? You are not fully present because your mind is drifting into the past and future, thinking about how many patients you need to see, about a difficult case for tomorrow, or how you need to leave at 4:45 pm to pick up your child at school. You are thinking about a decision made by the current hospital administration, or about a parking ticket you got yesterday. These distractions drain energy and joy. Not being fully present magnifies end-of-day fatigue and predisposes us to burnout, one small increment at a time.

When you are about to enter a patient’s room in the hospital or clinic, pause and notice your

⁵ Hallowell EM. Overloaded circuits: Why smart people underperform. Harvard Business Review 2005: 55-62.

⁶ Cacioppo JT, Berntson GG. Relationship between attitudes and evaluative space: A critical review, with emphasis on the separability of positive and negative substrates. Psych Bulletin 1994; 115(3):401– 423.

breath. Notice the miraculous passage of air through your nose, into your chest, and out into the room. Witness the sensations this brings, the expansion of your lungs, then the relaxation of the diaphragm. When we inhale we take air for granted—but how long would we last without air? Notice how your body is supported. Consider the solidarity between your feet and the floor, between the floor and the foundation of the building, then the ground, then the earth. Notice your thoughts, and allow them to sink into the present. You enter sacred ground as you enter this patient's room. Through mindfulness, the ordinary becomes extraordinary. We will discuss mindfulness a bit more in the coming section on the practice of GAIN-based meditation.

To become *happier*, we need to reverse maladaptive thought processes. We need to learn to redirect our thoughts and rewire our brains so that our thinking processes are conducive to happiness. Fortunately, we are capable of doing just that.

Our brains are *plastic*, i.e. they have the ability to change structure and function. Contrary to popular belief, the brain retains this neuroplasticity even after the age of 30. When we appreciate, practice, and truly embody happy thoughts, we actually rewire our brains to “think happier.” Hence the expression, “neurons that fire together, wire together.” On the other hand, our brains react more strongly to negative experiences than positive ones due to our negativity bias. We tend to think of the bad experiences we have had rather than the pleasant experiences. For example, I remember very vividly the handful of genuinely awful experiences I have had in my medical practice, whereas I barely remember specific cases of triumph.

I have had patients literally die in my arms, or right in front of me. This is an occupational hazard of being a cardiac anesthesiologist and intensivist. A few years ago, I cared for a teenager with a cardiac arrhythmia (supraventricular tachycardia) who was undergoing an ablation procedure in the cardiac electrophysiology lab, an operating room-like facility packed with equipment for diagnosing and treating abnormal heart rhythms. The young lady was obese, and obtaining a blood pressure was somewhat tricky at baseline. During the procedure, with the patient under general anesthesia, the cardiologists had a challenging time finding the aberrant pathway, which turned out to be in the left atrium. They had to puncture a hole in the atrial septum to locate the lesion, which they then ablated using a radiofrequency (heated) catheter. The procedure took more than five hours. At the end of the procedure, her blood pressure remained somewhat difficult to measure and was a bit lower than it was at the beginning of the case, even though I had administered a measured volume of intravenous fluid. Her heart rate was higher than it had been prior to the induction of anesthesia. I was worried that she might have a pericardial effusion or hemorrhage, so we performed fluoroscopy of her chest as well as an echocardiogram, which were reassuring. I allowed her to emerge from anesthesia and removed her endotracheal tube, after which we transported her to the recovery room. She was talking but sedated. Her heart rate was higher, and her blood pressure difficult to measure when we arrived in the recovery room.

We repeated the echocardiogram, and the cardiology fellow read it as normal. Shortly thereafter, she lost consciousness, and her blood pressure became very low. We began doing CPR and called an “ECMO code.” The cardiac surgeon arrived and wanted to take her directly to the operating room to open her chest. In the OR, once her chest was opened, it was apparent that she had bled into her pericardium and had cardiac tamponade—the pressure on her heart made it impossible for it to function adequately. Once this fluid was drained, her vital signs improved. Over the next couple of days, it became clear that she had suffered a severe brain injury, and she was allowed to die.

This case continues to haunt me. If only I had followed my gut instinct! If I had put a needle into her pericardium or had the cardiologists do so, in the cath lab—or in the recovery room—she would have lived! I have had other cases similar to this in the intensive care unit over the more than 25

years in which I have been in practice. If one practices medicine for long enough, such events are bound to occur.

Why do we remember these painful events so clearly, as if they happened yesterday, while we fail to remember all of the excellent outcomes for which we are responsible? I have worked with countless anesthesiology trainees who have cared for three or four patients in a day that were undergoing high risk operations. They missed one arterial cannulation but performed every other aspect of each case with care and expertise. The patients all had good outcomes. As the resident prepares to go to bed at night and take inventory of their day, do they recall the facility with which they cared for their patients, and are they pleased with the outstanding outcomes? Or do they anguish over the missed arterial catheter placement? Sadly, the latter prevails. People dwell on the negative, beat themselves up over every mistake, however minor it may be in the scheme of things. This negativity bias keeps us up at night, tossing and turning. Doctors set very high standards for ourselves. We assume that our peers and our patients are continually judging us. There is simply no room for error.

This negative way of thinking pervades our lives outside of medicine as well. It affects everyone to varying degrees. Adolescents feel that other teens are better looking, more athletic, and more popular. Having developed the habit of comparing ourselves to others, we continue to embrace this habit. Our colleagues are smarter than we are—or at least many of them. No matter how intelligent others tell us we are, we remain skeptical, tormented by thoughts of making a mistake that will have disastrous consequences.

Stress fortifies negative thoughts, carving them deeper into our subconscious. Of course, this pressure gets to us at some point in our careers and predisposes us to burnout. Who can live with such constant pressure?

The good news is that we can rewire our brains and teach ourselves to think more rationally—and more positively.

More than 40 years ago, a study was conducted in a group of junior college students enrolled in a psychology class to determine whether personal happiness could be increased if the participants modified their behaviors and attitudes to approximate more closely the characteristics of happier people⁷. The students that completed a self-study program, designed to increase personal happiness and life satisfaction, increased their happiness to levels significantly higher than those in the control group, in which students performed incremental regular class assignments.

What was it about the program that helped the students become happier? The students developed sensitivity to their own happiness—this increased awareness was beneficial in and of itself. The participants came to value happiness more and realize its importance in their lives. Debriefing indicated that the most beneficial aspects of the study were the development of a positive, optimistic thinking pattern, trying new activities and living a more active life, being more social, and reducing negative thought patterns. The authors claimed to have debunked the notion that “pursuing happiness directly is the surest way to lose it.” They concluded that there seems to be a greater potential for happiness than individuals had believed prior to the study, and that happiness appears amenable to training and development. Whereas it has commonly been believed that personal happiness is related to high income, job satisfaction, and good health, the authors concluded that happiness could be enhanced simply by changes in attitude and behavior, which are accessible to everyone.

A more recent example of how very simple exercises that focus on positive thoughts can

⁷ Fordyce MW. Development of a program to increase personal happiness. *J Counseling Psych* 1977;24:511-21.

rewire our brain toward happiness is the “Three Good Things” program at Duke University⁸. Participants were recruited via an online website and randomly assigned to a placebo intervention (keeping a journal) versus the treatment group, wherein they are asked to write down three things that went well each day for one week. In an early publication related to this project, participants regularly commented about a ‘good day at work’ or that their ‘day went smoothly.’ One participant wrote, “Overall good day at work, no major problems with my patients.” The importance of collaboration at work was frequently cited, e.g., “Had a good and professional discussion with colleagues,” or “Great day at work, there were a couple of meetings that accomplished some previously set goals.” Many participants mentioned that good teamwork and supportive coworkers were important: “Today, I had the opportunity to work with an old co-worker and a new co-worker, and we worked together very well.” Eating a meal together, spending time together, talking and laughing together, and caring for the well-being of family members were mentioned. One participant noted: “Had breakfast with my mom and dinner with my mom-in-law. Love family time on my day off!” Relationships in various forms were seen as important and included family members, friends, coworkers, and pets. One participant wrote: “Enjoyed family and neighbors at a block party.” Another wrote, “Enjoyed watching my dogs and cat play together—I just had to stop and watch them.” Some participants wrote about their love for family members or friends: “Felt loved because family and friends called to check on how I was feeling.” Success at helping others in non-professional capacities was positively mentioned. One participant wrote, “My mom feels better with what I have researched—what to eat for her renal failure.”

Others supported their children for school tasks: “Found lots of books at the library that will help my son on his history project.” Alternatively, many participants were pleased when they helped with household chores: “On the way home stopped at the grocery store and bought items for a spaghetti supper.” Many participants reported making meaningful use of self-determined time, that they loved shopping, working in the garden, being physically active, or reading a book. Participants wrote statements like: “Enjoyed the fabulous weather by working in the yard with my husband. The flowers look fabulous.” Three Good Things responses highlighted three key themes: (1) having a good day at work, (2) having supportive relationships, and (3) making meaningful use of self-determined time. These simple pleasures are often ignored in our thoughts at the end of the day, displaced by thoughts of the things that did not go as well as we had hoped.

At the one-month follow-up, participants in the treatment group were happier and less depressed than they had been at baseline, and they stayed happier and less depressed at the three-month and six-month follow-ups. By one week following the intervention, participants in the placebo control group had returned to their baseline levels of happiness and depression symptoms, and there they remained through the six-month follow-up. By only doing this one exercise for a week, the participants had increased happiness and decreased depressive symptoms for six months. The participants who continued the exercises most diligently were the happiest. I acknowledge at least “Three Good Things” nightly before going to sleep and have found that this simple practice does indeed augment my happiness and improve my sleep!

Fortunately, we *can* rewire our brains and learn to think happier. What else can we do to pave the way toward a happier career and life in general?

We all wish we had more of one thing—*time*. Most of us would say that we have an adequate amount of money (granted, a relative term, especially in Silicon Valley) but not enough time. Time and money are often traded off in making decisions: “Should I pay more for a nonstop flight so I can arrive

⁸ Seligman, M, Steen, TA, Park N, Peterson C. Positive Psychology Progress: Empirical Validation of Interventions. *Am Psych* 2005;60(5):410-421.

sooner to spend more time with my family?,” “Should I accept a higher paying job that will mean working longer hours?” When asked whether they would like more time or more money, most people choose the latter. Those who choose more time, however, are happier.⁹ People are happier when they place a higher value on time compared with money.

The deficiency of time we experience might be called “time scarcity.” Time scarcity seems to be, in fact, an unintended consequence of an increase in our wealth, a phenomenon that exists worldwide. Might we consider using some of our wealth to “buy” more time? Could directing some of our discretionary income to hire someone to do our household cleaning, shopping, and cooking reduce the adverse effects of our time famine, thereby promoting greater well-being?

As incomes in many countries have risen, those with higher incomes report greater time scarcity. Stress over lack of time leads to a decrement in well-being and increased anxiety and insomnia, for example. Time stress contributes to rising rates of obesity, likely in part because lack of time is a reason that people fail to eat healthy foods and exercise regularly. Wealthy people tend to spend more time doing stressful activities, such as commuting to work. A recent study provides evidence that using money to buy time can provide a “buffer” against time scarcity, thereby promoting happiness¹⁰. The investigators showed that in adults in Canada, the US, Denmark, and The Netherlands paying someone else to do unpleasant tasks or “buying time” was linked to greater happiness. Interestingly, within the US, the authors observed a stronger correlation between buying time and life satisfaction among less-affluent individuals compared to the wealthy. Ironically, almost half of the millionaires surveyed spent *no* money on paying others to perform their disliked tasks.

Stanford University conducted a pilot study in which doctors were rewarded for filling in for colleagues, working late, and other “good citizenship” tasks¹¹. Doctors who received and used these vouchers for having their houses cleaned or having their clothes taken to the dry cleaner, for example, reported better work-life balance, and retention rates increased. This experiment suggests that organizations may benefit from rewarding employees with *time*. In the face of increasing “time famine,” hospitals and universities might move beyond their focus on promoting financial rewards to promoting time affluence as well.

In addition to spending money to buy time per se, purchasing *experiences* is valuable. Greater happiness comes from the acquisition of experiences, such as vacations, concerts, and meals out with friends, compared with material possessions, e.g., electronics, jewelry, and handbags. This applies across gender, ages, employment status, marital status, and place of residence around the US¹². When we give experiences to others, they feel closer and more connected to us than we give them material goods or money¹³. We *feel* more satisfied while walking along our favorite beach than we do wearing an expensive watch. The latter may be enjoyable at first, but we habituate to feeling good about our new material goods, while memories of romantic vacations and our time spent with family friends endure. Experiences are often shared with family and friends, thereby offering the lasting happiness that comes from interpersonal connection.

Placing a high priority on *time* versus *money* as well as using our money to buy experiences rather than material goods seem to contribute to happiness. *How* we spend our time is important, of course. Most people feel less happy doing passive activities (watching TV) than they do when they are

⁹ Hershfield HE, Mogilner C, Barnea U. People who choose time over money are happier. *Soc Psychol Pers Sci* 2016; 7:697-706

¹⁰ Whillans AV, Dunn EW, Smeets P, Bekkers R, Norton MI. Buying time promotes happiness. *Proc Natl Acad Sci* 2017; 114:8523-27.

¹¹ Fassioto M. Increasing joy in medicine. International Conference on Physician Health, Sept. 10, 2016, Boston, MA.

¹² Gilovich T, Kumar A, Jampol L. A wonderful life: Experimental consumption and the pursuit of happiness. *J Consum Psychol* 2015; 25:152-65.

¹³ Chan C, Mogilner C. Experiential gifts foster stronger social relationships than material gifts. *J Consum Res* 2017; 43:913-31.

engaged in active leisure (socializing, volunteering, exercising). People generally feel most happy when making social connections and giving to others. We need to formulate and actualize *intention* concerning the management of our money and our time — more about intention later in the book.

Take baby steps. Don't expect dramatic changes immediately. Slow but steady progress will result in pronounced, positive changes over time. Be easy on yourself. Self-compassion is an essential ingredient in happiness in and outside the practice of medicine. We have more than ample opportunity to beat ourselves up, to wallow in our failures.

Bottom Line:

- Notice what you are feeling and thinking, i.e. become more self-aware.
- Rewire your brain to be more present, i.e., mindful.
- Reconnect your brain to dwell on happier thoughts (try Three Good Things at bedtime!).
- Focus on gaining *time* more than money.
- Buy *experiences* more than “things.”
- Spend time with friends and family.