



Yoga as a Technology for Life Transformation

by Timothy McCall, MD

How does yoga work? Why is a system that has been used for more than 5,000 years still flourishing? Where do science and spirituality meet? In this article, medical doctor and yoga practitioner Timothy McCall explains how the millenia-old practice of yoga creates sustainable positive change.

Although medical knowledge is constantly being refined by ongoing scientific investigation, the basics of what we know about how to get and stay healthy haven't changed much in recent years. Pretty much everybody knows that you shouldn't smoke and that you should eat lots of fruits, vegetables, and whole grains, get some kind of regular exercise, and work on keeping your stress levels from spiraling out of control. The difficult part isn't in knowing what to do. It's how you make it happen.

Nevertheless, we doctors keep reminding our patients about what they need to do and keep getting frustrated when they mostly don't succeed. In my medical practice, I saw that even patients who really wanted to change and made valiant efforts had a tough time sticking with the program. The more I've studied yoga, the more I've become convinced that it offers the piece doctors and public health authorities are missing: a way to implement the changes people want to make. Along with offering direct health benefits, the various yogic tools—including the physical postures, breathing techniques, and meditation—are part of a systematic technology for life transformation, a step-by-step method for changing bad habits.

Overcoming Bad Habits

What yogis realized thousands of years ago—and what scientists are just now catching on to—is that changing dysfunctional habits is largely a matter of the mind. This is a subject that yoga has studied systematically and which until recently medical researchers pretty much ignored. What yoga can do, which can make the critical difference in your health and well-being, is give you greater control of your mind and a greater understanding of the tricks it can play. This, perhaps more than anything, is what leads to life transformation.

Critical to understanding the mind's contribution to perpetuating bad habits is what the ancient yogis called samskaras. Samskaras are the habits of action and thought, which, like grooves in a muddy road, get deeper all the time. From the yogic perspective, every time you do or think something, you increase the likelihood



that you will do it or think it again. That's true of both desirable and undesirable things.

When I was in medical school in the 1980s, we were taught that the brain wasn't capable of much change in adulthood. The number of neurons was fixed early in life and only declined from there. Connections between different brain cells were formed during certain critical periods early in life and after that the architecture couldn't be modified.

With advances in understanding and technology, scientists now talk about "neuroplasticity." The brain, they have realized, is plastic, meaning it is capable of change. Brain cells called neurons form new connections among themselves and the more you do something, the stronger these neural links become. Scientists have also learned that the body can create new neurons from stem cells, undifferentiated cells that are found even in adults.

Two thousand years ago, Patanjali wrote in the Yoga Sutra—classical yoga's foundational text—that the key to success in yoga was to practice regularly without interruption over a long period of time. This sounds like the perfect formula to create deep new behavioral grooves that take advantage of neuroplasticity: Regular repetition of a variety of yoga practices will increase the number of connections among neurons and may even cause new neurons to be recruited for the task.

The yogic model is that by creating new samskaras—and by systematically strengthening them through repetition—you then have habits that have become so strong they can compete with older, more dysfunctional ones. As Swami Vivekananda, the first person to bring yoga to the United States in the late 1800s, put it: "The only remedy for bad habits is counter habits."

The Yoga of Action

In the Yoga Sutra, Patanjali outlined a system of self-transformation that he called kriya yoga, the yoga of action. Kriya yoga comprises three elements: tapas, the fire and dedication that fuels practice, svadhyaya, self-study, and ishvara pranidhana, which literally means devotion to God but which I prefer to translate as giving up the illusion of being in control of what happens.

Tapas is the Sanskrit word for heat and shares a root with the English word "taper," a type of candle. To the ancient yogis, the human body without yoga is like an unbaked clay pot, and regular yoga practice is the kiln that gives the body the strength and resilience to withstand the wear and tear it is subjected to. If mustering



the willpower to practice regularly seems like too much for you, don't despair. There's something about doing yoga every day that makes you want to do it every day—and this tapas, which tends to grow over time, can be extended to other aspects of your life.

Self-study builds the ability to sense what's happening in your body and mind when you do your yoga practice, and this, too, can be extended off the mat. You begin to be able to feel when the hamstring muscles in the back of your thighs are being stretched in a forward bend, or if you are fully straightening your elbows in a warrior pose. As you continue your practice, your ability to monitor the state of your body, breath, and emotions becomes progressively more refined. After a while, you may find yourself realizing that you always feel groggy or congested after eating certain foods, even if you like their taste, or that certain television programs you watch to relax consistently leave you feeling more restless and unhappy. Once you really feel the effects of your choices, you may end up wanting to do some things in your life differently.

The third element of kriya yoga is letting go of the illusion of being in control of what happens. Thus, a yogic approach to weight loss would not be to tell yourself "I'm going to lose 50 pounds in the next two months," but rather something like "I intend to walk every day for half an hour and eat slightly smaller portions, especially at dinner." The first approach is results-oriented, geared to an outcome that you can influence but ultimately can't control—and can therefore become a formula for frustration and even fatalism. The second approach of setting an intention about what you're going to do is a plan of action. That's the part you have much more control of. Kriya yoga says focus there and let what happens as a result take care of itself.

Taking It Home

To deepen samskaras, the key is repetition. In the case of yoga, this means practice, ideally every day. This is what will most efficiently forge new neural pathways and strengthen grooves you've already begun to dig. Yogis find that setting an intention to practice daily for a specific amount of time can help it happen. Be realistic, though, and shoot for an amount that you are likely to be able to do, perhaps 15 or 20 minutes a day to begin. While yoga classes can be valuable, I advocate a personal practice, usually done at home, to best deepen the grooves. Part of this comes down to practicalities.

Few people have more than a few hours per week that they can dedicate to yoga. If it takes half an hour to get to a class, half an hour to get home, and extra time to change your clothes, pack your mat, and whatever else you need to do, a single 90-minute class could easily consume three hours. In that same amount of time you

could do a 20-minute practice six days a week and a hour-long session once a week. If you can afford the time, the combination of a single class weekly and a daily home practice works well. For others, a home practice combined with intermittent weekend or weeklong retreats to learn new material and get inspired gives them what they need.

At first, a daily practice of even 20 minutes a day may seem like a lot. If so, see if you can muster the tapas to practice any amount you can daily—even if it’s only taking a single conscious breath—until the groove and your sensitivity to the benefits of yoga deepen. You may then notice that you feel so much better that—without being cajoled by your doctor or your spouse—you find yourself simply making the time you need, and even wanting to increase it. This is a sure sign that some kind of transformation is underway.

Keep in mind that despite your best attempts, you may be unable to live up to your intention. If so, that’s okay. The first step to life transformation is to see what is; that is, to acknowledge, at least to yourself, where you are right now. You may not be able to change patterns immediately, but all change begins with seeing clearly. If your first attempt doesn’t work, you might want to scale back your intention a bit or simply try again.

Be advised, though: Creating new samskaras will not magically make old ones disappear. You may still be drawn to cigarettes or greasy cheeseburgers long after you’ve given them up. Even if you’ve overcome much of the negative conditioning that goes into low self-esteem, you may still find self-doubt surfacing in challenging times. The reemergence of signs of old programming doesn’t signal failure of the yogic path. It simply illustrates how persistent old samskaras can be. Your response to such a relapse should not be despair but a recommitment to practice. Every day you go to your yoga mat or meditation cushion, you are working to deepen the grooves that serve your life.



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