Yoga As Medicine

THE SCIENCE & PRACTICE OF THERAPEUTIC YOGA

Can you Prove That Yoga Works?

Do backbends help fight depression? Maybe.

by Timothy McCall, MD

As yoga moves more into the mainstream and yoga therapy grows in prominence, advocates of the practice are under increasing pressure to explain exactly how it works. It is natural to reach for scientific terms in an attempt to legitimize yoga's therapeutic benefits; thus we hear, for example, that backbends fight depression by stimulating the adrenals. My response to claims like this is, "Maybe."

From our direct experience as practitioners and teachers, we have observed that backbends are energizing and seem to help people suffering from depression marked by lethargy and inertia. (They are thought to be too stimulating for those with more agitated depressions.)

When you come down from Urdhva Dhanurasana (Upward-Facing Bow Pose), for instance, your heart is pounding and you may feel like you've just downed a double espresso. It feels as if adrenaline, one of the hormones secreted by the adrenals (the glands that rest just above the kidneys), is coursing through your body. But as far as I know, nobody has actually measured adrenaline levels before and after someone has done a backbend. And even if scientists did document a spike in adrenaline after backbends, we still wouldn't know for sure that it's adrenaline that alleviates the symptoms of depression.

Science supports several possibili-ties for how yoga helps with depression. Studies have found that it reduces levels of cortisol (a stress hormone that's also secreted by the adrenals), which is often elevated in people with the disease. And a study in India found that a yoga program that included asana, pranayama, and meditation raised levels of serotonin and lowered levels of monoamine oxidase—two neurochemicals involved in depression.

Yoga is known to induce the relaxation response—to lower the activity of the sympathetic nervous system's "fight or flight" mechanism and increase the work of the more restorative parasym-pathetic system; this characteristic could help with depression. But if that were the whole story, then poses that seem to rev up the sympathetic side—such as backbends and Sun Salutations— as well as rapid breathing techniques might be counterproductive to fighting stress and depression. The reality is that some yoga practices stimulate the nervous system

and some are relaxing. It is the combination that in some complex way is beneficial.

One of the fruits of yoga practice is the realization of interconnections. Our bodies, minds, and emotions interact in complex ways that science is only just beginning to understand. In this dense web of interconnections, nothing we do has a single effect. In Urdhva Dhanurasana, you bring more oxygen into the bottom of the lungs (an area that usually gets less than the upper regions), your blood pressure and heart rate rise, pressure increases in the head and neck, and you stretch the muscles and organs in the front of the body as you compress those in back, where the adrenals are located. It's my guess that the interrelated actions of this pose—along with other elements of a complete yoga practice—are what create the therapeutic benefit.

When we don't know precisely why something works, it's best to admit it, rather than dress it up in the language of science to make it sound more impressive. The easiest thing to do is acknowledge your sources: This comes from my teacher, this from Patanjali, this from my own experience, and this from a trial study done at the Mayo Clinic.

From Patanjali's perspective, the most reliable knowledge is derived from direct experience. The irony is that when we try to explain yoga in scientific terms when the science just isn't there, we risk undermining our attempts to persuade others of yoga's benefits.

Timothy McCall, MD teaches yoga therapy seminars worldwide. He is a board-certified internist, the medical editor of *Yoga Journal* and the best selling author of *Yoga as Medicine*. This article originally appeared in *Yoga Journal*. You can download a PDF of this article and other articles and view his teaching schedule at DrMcCall.com.