

Real Yoga Will Not Wreck Your Body

By Swami Jnaneshvara Bharati

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The New York Times published an article on January 5, 2012 entitled “How Yoga Can Wreck Your Body”. This article has since spread like wildfire throughout internet. I am writing comments below to strongly refute much, if not most of what William J. Broad (the author) has said. I have copied the original article here, and then inserted comments within the body of that article. I have broken some of the original paragraphs so that I can easily comment on individual sentences where appropriate. Other than that, I have not changed Broad’s article in any way; it is exactly as I copied it from the New York Times website. My comments are indented in a way that it should be clear which parts are the original article (not indented) and which are my comments (indented with italics).

After repeatedly running into this article I wrote to the author: “Amazing that everybody seems to forget that the so-called ‘yoga’ that they are talking about is so far off from traditional yoga that it is not worthy of being called yoga. Getting hurt from doing gymnastics and physical fitness regimes is not uncommon at all; just ask any chiropractor. Real yoga has to do with sitting for meditation and that is not a posture in which one is likely to have the body wrecked. The main problem that needs to be dealt with is to come home to what yoga is really about... It would be useful if you would explore more authentic yoga instead of just going with the modern distortions.” While I sincerely appreciate his courtesy in replying to my email, no direct response came about my suggestion that he “explore more authentic yoga”.

While I admit to a degree of sarcasm in my comments about Broad’s article and the current state of yoga in general, my hope is that this whole subject of how yoga may or may not “wreck” the body will trigger a much more widespread public discussion about yoga in general, both traditional yoga and the popular revisions which have turned yoga into gymnastics or fitness. It appears that for recent decades most of the public information has been about the physical. Maybe this article about how yoga can “wreck” your body can be a way to at least somewhat bring attention back to the more traditional and authentic meanings and practices of yoga. Real, authentic, or traditional Yoga is an incredible practice, aspects of which are fitting and safe for all human beings. Yoga appears to have diverged in two directions: either it is perceived as physical fitness or it is seen as religion, while in actual fact it is neither, being instead a process of introspection into and through the levels of attractions, aversions, fears, and false identities in our minds so as to uncover the joyous depth of our own being.

~Swami Jnaneshvara Bharati

On a cold Saturday in early 2009, Glenn Black, a yoga teacher of nearly four decades, whose devoted clientele includes a number of celebrities and prominent gurus, was giving a master class at Sankalpah Yoga in Manhattan.

Black is the teacher of “gurus”? Who are these “gurus” and what are the qualifications of Black to be such a teacher of other “gurus”? Traditionally, the word “guru” implies that one has attained some degree of enlightenment, Self-realization. Are these “gurus” referred to here new age, self-appointed gurus? What are their traditions? Are their traditions authentic yoga lineages, or does the use of the word “guru” here simply mean that they practiced new age yoga with any of the numerous people who have done something like put their own surname in front of the word “yoga” and call it a style of yoga?

Black is, in many ways, a classic yogi: he studied in Pune, India, at the institute founded by the legendary B. K. S. Iyengar, and spent years in solitude and meditation.

“Classic” yoga? Where is the linkage to the “classic” yoga of the ancient sages and rishis, which was about Self-realization, not gymnastics or physical fitness? Is Mr. Iyengar the “guru” who appointed Mr. Black as being such an advanced “guru” that he, himself is teacher to other “gurus”, as noted above, but not named? What makes Mr. Iyengar a “guru”?

To answer that we only have to look at his own website, bksiyengar.com. The site is titled as “the official website” of B.K.S. Iyengar where we find him referred to as “Guruji”. His site also explains that “Guruji was a sincere and committed practitioner. His own practice helped him to explore and achieve perfection in yoga asanas.” Thus, his “perfection” (according to his own website) is in asanas, physical postures, apparently not Self-realization.

It is widely known and takes minimal online research to find that Iyengar was a student of Tirumalai Krishnamacharya, who has been referred to as “the father of modern yoga”. However, Krishnamacharya is also credited with the revival of hatha yoga. Krishnamacharya was born November 18, 1888. At best, this then is the source of the tradition of which Mr. Iyengar is a “guru” and is a “hatha” tradition. There was no such yoga or tradition on November 17, 1888 (the day before Krishnamacharya was born) or any previous date.

Krishnamacharya and Iyengar may clearly have significant expertise in physical or postural yoga, and possibly even in more authentic yoga, but this does not mean they were focusing their teachings on the traditional yoga of the previous several millenia. The significance of this here, in this article about yoga “wrecking” the body, is that the background of Mr. Black and his predecessors emphasizes physical body work, not traditional yoga as meditation and contemplation for the realization of the Self, Atman, or Brahman.

He now lives in Rhinebeck, N.Y., and often teaches at the nearby Omega Institute, a New Age emporium spread over nearly 200 acres of woods and gardens.

The fact that Omega is acknowledged as a “new age” place immediately reveals that Black’s interest is not in traditional yoga of the ancient sages, but is in one or more of the many “new age” styles of gymnastic or fitness “yoga”.

He is known for his rigor and his down-to-earth style. But this was not why I sought him out: Black, I’d been told, was the person to speak with if you wanted to know not about the virtues of yoga but rather about the damage it could do.

The author has settled for some very limited perspectives on yoga. It appears that his whole article is based on this one man, and from this, naturally concludes that yoga is all about the physical body, and that yoga is, in turn, dangerous to the body. By missing or ignoring the higher, deeper, more authentic meanings of yoga, he can easily talk about people getting hurt or “wrecked” by yoga. If he had sought out people better trained in traditional yoga he would have probably had very different outcomes or conclusions. It is highly unlikely that any true yogi is going to be hurt or physically “wrecked” by sitting quietly, introspecting through meditation and contemplation, which are the true practices of yoga.

Many of his regular clients came to him for bodywork or rehabilitation following yoga injuries.

The author has just discovered from Mr. Black the true nature of his work with “clients” (not with students of yoga). His “regular clients” came to him for “bodywork” or “rehabilitation”. They did not apparently come to him for the traditional goals of yoga, such as realization of the union (the meaning of “yoga”) between atman and brahman, jivatman and paramatman, or shiva and shakti, or purusha standing alone as distinct from prakriti.

This was the situation I found myself in. In my 30s, I had somehow managed to rupture a disk in my lower back and found I could prevent bouts of pain with a selection of yoga postures and abdominal exercises. Then, in 2007, while doing the extended-side-angle pose, a posture hailed as a cure for many diseases, my back gave way. With it went my belief, naïve in retrospect, that yoga was a source only of healing and never harm.

It is highly unlikely that he would have hurt himself through the practice of classical yoga of meditation and contemplation. Clearly, he states that his treatment of “pain” was doing “postures and abdominal exercises”, revealing his personal view that the true nature of yoga is as a physical treatment for physical maladies.

Who in the thousands of years history of yoga first said that “the extended-side-angle pose” is “hailed as a cure for many diseases”? Was it Patanjali, codifier of yoga principles in the Yoga Sutras? Was it Krishna in the Bhagavad Gita? Was it Yama of the Kathopanishad? Was it Vyasa? Was it Adi Shankaracharya in any of his well known writings? Was it Gaudapada in the Karika? Was it Swami

Svatmarama, codifier of hatha yoga in Hatha Yoga Pradikika? Or, was it some modern, self-appointed “guru” who is famous only because of his gymnastic and physical fitness expertise? If the latter, then was that man a physician, did he have any other proper training in medical sciences, or was it just his opinion that this posture was a cure all?

I also suggest that the reason for the author’s naïve belief is that he felt in the first place that the goal of yoga is “healing”, which it is not. In fact, yoga has to do with transcending all of the pairs of opposites such as “healing” versus “harming”, realizing the consciousness which is independent of, and beyond these.

At Sankalpah Yoga, the room was packed; roughly half the students were said to be teachers themselves. Black walked around the room, joking and talking. “Is this yoga?” he asked as we sweated through a pose that seemed to demand superhuman endurance. “It is if you’re paying attention.” His approach was almost free-form: he made us hold poses for a long time but taught no inversions and few classical postures. Throughout the class, he urged us to pay attention to the thresholds of pain. “I make it as hard as possible,” he told the group. “It’s up to you to make it easy on yourself.” He drove his point home with a cautionary tale. In India, he recalled, a yogi came to study at Iyengar’s school and threw himself into a spinal twist. Black said he watched in disbelief as three of the man’s ribs gave way — pop, pop, pop.

Black raises a most important question, “Is this yoga?” If it was not yoga, was that only because the man broke three ribs, or was it not yoga because the orientation of the practice was off in the first place?

Swami Satyananda Saraswati, founder of Bihar School of Yoga, Bihar, India, describes the modern situation of Yoga quite well in the Introduction of the Hatha Yoga Pradipika commentary by Swami Muktibodhananda Saraswati, where he writes:

"In ancient times hatha Yoga was practiced for many years as a preparation for higher states of consciousness. Now however, the real purpose of this great science is being altogether forgotten. The hatha Yoga practices which were designed by the rishis and sages of old, for the evolution of mankind, are now being understood and utilized in a very limited sense. Often we hear people say, 'Oh, I don't practice meditation, I only practice physical Yoga, hatha Yoga.' Now the time has come to correct this view point. Hatha Yoga is a very important science for man today....

"The main objective of hatha Yoga is to create an absolute balance of the interacting activities and processes of the physical body, mind and energy. When this balance is created, the impulses generated give a call of

awakening to the central force (sushumna nadi) which is responsible for the evolution of human consciousness. If hatha Yoga is not used for this purpose, its true objective is lost."

After class, I asked Black about his approach to teaching yoga — the emphasis on holding only a few simple poses, the absence of common inversions like headstands and shoulder stands. He gave me the kind of answer you'd expect from any yoga teacher: that awareness is more important than rushing through a series of postures just to say you'd done them. But then he said something more radical. Black has come to believe that "the vast majority of people" should give up yoga altogether. It's simply too likely to cause harm.

Give up yoga because it is "likely to cause harm"? This is absolutely ridiculous. The thing to give up is all of the modern distortions of so-called "yoga" and the thing to do instead is real yoga, provided one has the inclination towards the authentic goals of yoga. If one has no longing, no calling in the depth of the heart to know, to directly experience that inner most being, the still, silent, ever pure center of consciousness, then one should definitely not do yoga. But, that longing is the measure of doing or not doing, not a question of whether bending in some "wrong" way is going to hurt you. That question arises only once you have taken the bait of the promoters of the incorrect opinion that yoga is merely a physical practice.

Not just students but celebrated teachers too, Black said, injure themselves in droves because most have underlying physical weaknesses or problems that make serious injury all but inevitable.

"Celebrated" teachers? Being "celebrated" may feed the ego, but that is not a measure of progress in real yoga, whether a practitioner or a so-called "teacher". One more time, the author shows that he either knows little or nothing about authentic, traditional yoga, or does know but chooses to ignore it. He obviously has totally bought into the modern idea that yoga is a gymnastic or physical fitness practice.

Instead of doing yoga, "they need to be doing a specific range of motions for articulation, for organ condition," he said, to strengthen weak parts of the body. "Yoga is for people in good physical condition. Or it can be used therapeutically. It's controversial to say, but it really shouldn't be used for a general class."

Wrong! Yoga is for people who seek the direct experience of the eternal center of consciousness, which is one and the same with the universal consciousness. To say that "Yoga is for people in good physical condition" completely misses the depth and breadth of yoga. With this line of reasoning, people in ill health should avoid yoga practices such as breathing smoothly, ahimsa (non-harming),

santosha (contentment), and vairagya (non-attachment), practices which might actually help them.

Black seemingly reconciles the dangers of yoga with his own teaching of it by working hard at knowing when a student “shouldn’t do something — the shoulder stand, the headstand or putting any weight on the cervical vertebrae.” Though he studied with Shmuel Tatz, a legendary Manhattan-based physical therapist who devised a method of massage and alignment for actors and dancers, he acknowledges that he has no formal training for determining which poses are good for a student and which may be problematic. What he does have, he says, is “a ton of experience.”

Here we go again, citing the background of this yoga “guru”, now including physical therapy and massage. It has become so popular to tag “yoga” with many prefixes, we cannot be too far away from labeling massage therapy (an independent, licensed profession) as “yoga massage” and physical therapy (physiotherapy, a healthcare profession) as merely being branches of “yoga therapy”.

“To come to New York and do a class with people who have many problems and say, ‘O.K., we’re going to do this sequence of poses today’ — it just doesn’t work.”

Finally, we have a point of agreement, one of the few, though for different reasons. One view is that it “doesn’t work” because it is dangerous, and the other is that it “doesn’t work” because it ignores the real goals of yoga, and therefore does not lead to the fulfillment of those real goals.

According to Black, a number of factors have converged to heighten the risk of practicing yoga. The biggest is the demographic shift in those who study it. Indian practitioners of yoga typically squatted and sat cross-legged in daily life, and yoga poses, or asanas, were an outgrowth of these postures. Now urbanites who sit in chairs all day walk into a studio a couple of times a week and strain to twist themselves into ever-more-difficult postures despite their lack of flexibility and other physical problems.

Yoga has been complete for a very long time, often said to be thousands of years old, though now, according to the author, yoga is evolving into “ever-more-difficult postures”.

Many come to yoga as a gentle alternative to vigorous sports or for rehabilitation for injuries. But yoga’s exploding popularity — the number of Americans doing yoga has risen from about 4 million in 2001 to what some estimate to be as many as 20 million in 2011 — means that there is now an abundance of studios where many teachers lack the deeper training necessary to recognize when students are headed toward injury.

There may be 20 million people doing something in the “name” of yoga, but that does not mean that what they are doing actually “is” yoga. The word “yoga” has been hijacked and has little or no meaning anymore. Authentic yoga is neither an

“alternative” to “vigorous sports” nor an alternative to “rehabilitation for injuries”. I know that it is being repetitive to say it, but the goal of yoga has to do with realization of the union (the meaning of “yoga”) between atman and brahman, jivatman and paramatman, or shiva and shakti, or purusha standing alone as distinct from prakriti.

Georg Feurstein, a well known scholar and teacher, is quoted in a July/August 2003 article in the online LA Yoga Magazine. When asked, “How would you describe Yoga in the US today?” he responded:

“ It’s a mess. And you can quote me on that. Anything that comes to America or the West in general, immediately gets individualized and commercialized. There has always been great diversity in traditional Yoga, and this diversity was based on the experience of masters. Today even beginning teachers feel qualified to innovate and create their own trademarked Yoga system.

“So, looking at the Yoga movement today, part of me feels very saddened by it, but then I also see that it contains the seeds of something better. Also, amazingly, Yoga can be beneficial even when it is reduced down to posture practice. But people shortchange themselves when they strip Yoga of its spiritual side.”

“Today many schools of yoga are just about pushing people,” Black said. “You can’t believe what’s going on — teachers jumping on people, pushing and pulling and saying, ‘You should be able to do this by now.’ It has to do with their egos.”

Once again, we have a point of partial agreement, though not due to shared reasons. Most of modern “yoga” has to do with feeding egos. Real yoga has to do with attenuating the attractions, aversions, and fears associated with ego, so that the pure consciousness (purusha, atman, shakti) can be experienced directly.

When yoga teachers come to him for bodywork after suffering major traumas, Black tells them, “Don’t do yoga.”

It would be far better to tell them, “Don’t do modernized, gymnastic, physical fitness ‘yoga’.” “If you want to do authentic, real yoga as meditation and contemplation, please go to a real yogi to learn these practices that lead to peace, happiness, and bliss, but do not put such stresses on your physical body.”

“They look at me like I’m crazy,” he goes on to say. “And I know if they continue, they won’t be able to take it.” I asked him about the worst injuries he’d seen. He spoke of well-known yoga teachers doing such basic poses as downward-facing dog, in which the body forms an inverted V, so strenuously that they tore Achilles tendons. “It’s ego,” he said. “The whole point of yoga is to get rid of ego.” He said he had seen some “pretty

gruesome hips.” “One of the biggest teachers in America had zero movement in her hip joints,” Black told me. “The sockets had become so degenerated that she had to have hip replacements.” I asked if she still taught. “Oh, yeah,” Black replied. “There are other yoga teachers that have such bad backs they have to lie down to teach. I’d be so embarrassed.”

These are not, not, not yoga teachers. Wake up, everybody. What is happening in the name of yoga is mostly not yoga. It is a case of telling a big enough lie often enough that people will come to believe it.

Among devotees, from gurus to acolytes forever carrying their rolled-up mats, yoga is described as a nearly miraculous agent of renewal and healing. They celebrate its abilities to calm, cure, energize and strengthen. And much of this appears to be true: yoga can lower your blood pressure, make chemicals that act as antidepressants, even improve your sex life. But the yoga community long remained silent about its potential to inflict blinding pain. Jagannath G. Gune, who helped revive yoga for the modern era, made no allusion to injuries in his journal *Yoga Mimansa* or his 1931 book “Asanas.” Indra Devi avoided the issue in her 1953 best seller “Forever Young, Forever Healthy,” as did B. K. S. Iyengar in his seminal “Light on Yoga,” published in 1965. Reassurances about yoga’s safety also make regular appearances in the how-to books of such yogis as Swami Sivananda, K. Pattabhi Jois and Bikram Choudhury. “Real yoga is as safe as mother’s milk,” declared Swami Gitananda, a guru who made 10 world tours and founded ashrams on several continents.

More than supporting that yoga can “wreck” your body, Broad’s comments support the idea that real yoga has been almost completely distorted in recent decades. Interestingly, the quoted comment of Swami Gitananda may be right on track, that “real” yoga is safe. The yoga that is of questionable safety is not the traditional yoga of the sages of the distant past, but the innovations of the recent hundred years or so, plus or minus a few decades.

B. K. S. Iyengar writes in his discussions on the Yoga Sutras that yoga is both the means and the goal, and that yoga is samadhi and samadhi is yoga:

"... Through the discipline of Yoga, both actions and intelligence go beyond these qualities [gunas] and the seer comes to experience his own soul with crystal clarity, free from the relative attributes of nature and actions. This state of purity is samadhi. Yoga is thus both the means and the goal. Yoga is samadhi and samadhi is Yoga...."

"... Usually the mind is closer to the body and to the gross organs of action and perception than to the soul. As asanas are refined they automatically become meditative as the intelligence is made to penetrate towards the core of being. Each asana has five functions to perform. These are conative, cognitive, mental, intellectual and spiritual...."

But a growing body of medical evidence supports Black's contention that, for many people, a number of commonly taught yoga poses are inherently risky. The first reports of yoga injuries appeared decades ago, published in some of the world's most respected journals — among them, *Neurology*, *The British Medical Journal* and *The Journal of the American Medical Association*. The problems ranged from relatively mild injuries to permanent disabilities. In one case, a male college student, after more than a year of doing yoga, decided to intensify his practice. He would sit upright on his heels in a kneeling position known as *vajrasana* for hours a day, chanting for world peace. Soon he was experiencing difficulty walking, running and climbing stairs.

Here we go again. Were these reports of "yoga injuries" about traditional yoga, or the revised yoga? There is no suggestion given here that the yoga referred to is anything other than the recently invented gymnastic yoga.

Doctors traced the problem to an unresponsive nerve, a peripheral branch of the sciatic, which runs from the lower spine through the buttocks and down the legs. Sitting in *vajrasana* deprived the branch that runs below the knee of oxygen, deadening the nerve. Once the student gave up the pose, he improved rapidly. Clinicians recorded a number of similar cases and the condition even got its own name: "yoga foot drop."

Patanjali clearly states in the Yoga Sutras that the posture (for meditation) should be steady and comfortable. The fact that this fellow hurt himself by forcing himself beyond his comfortable capacity is not a condemnation for sitting in meditation. It is not evidence of following the instructions, but is actually evidence of NOT following the instructions.

More troubling reports followed. In 1972 a prominent Oxford neurophysiologist, W. Ritchie Russell, published an article in *The British Medical Journal* arguing that, while rare, some yoga postures threatened to cause strokes even in relatively young, healthy people. Russell found that brain injuries arose not only from direct trauma to the head but also from quick movements or excessive extensions of the neck, such as occur in whiplash — or certain yoga poses. Normally, the neck can stretch backward 75 degrees, forward 40 degrees and sideways 45 degrees, and it can rotate on its axis about 50 degrees. Yoga practitioners typically move the vertebrae much farther. An intermediate student can easily turn his or her neck 90 degrees — nearly twice the normal rotation.

You do not need to stretch your neck to such extremes to sit for introspection through meditation and contemplation, the central-most practices of authentic yoga.

Pandit Rajmani Tigunait, head of the Himalayan Institute of the USA writes in an article entitled Real Yoga that: "Yoga has become the health and fitness system of choice. This is odd because it is the mind - not the body - that is the main target of all genuine Yoga practices.... To regard Yoga primarily as a set of practices for

increasing strength and flexibility while calming the nervous system is to mistake the husk for the kernel."

Hyperflexion of the neck was encouraged by experienced practitioners. Iyengar emphasized that in cobra pose, the head should arch "as far back as possible" and insisted that in the shoulder stand, in which the chin is tucked deep in the chest, the trunk and head forming a right angle, "the body should be in one straight line, perpendicular to the floor." He called the pose, said to stimulate the thyroid, "one of the greatest boons conferred on humanity by our ancient sages."

These "hyperflexions" have nowhere been recommended in any of the traditional texts and practices of yoga.

Extreme motions of the head and neck, Russell warned, could wound the vertebral arteries, producing clots, swelling and constriction, and eventually wreak havoc in the brain. The basilar artery, which arises from the union of the two vertebral arteries and forms a wide conduit at the base of the brain, was of particular concern. It feeds such structures as the pons (which plays a role in respiration), the cerebellum (which coordinates the muscles), the occipital lobe of the outer brain (which turns eye impulses into images) and the thalamus (which relays sensory messages to the outer brain). Reductions in blood flow to the basilar artery are known to produce a variety of strokes. These rarely affect language and conscious thinking (often said to be located in the frontal cortex) but can severely damage the body's core machinery and sometimes be fatal. The majority of patients suffering such a stroke do recover most functions. But in some cases headaches, imbalance, dizziness and difficulty in making fine movements persist for years.

Russell also worried that when strokes hit yoga practitioners, doctors might fail to trace their cause. The cerebral damage, he wrote, "may be delayed, perhaps to appear during the night following, and this delay of some hours distracts attention from the earlier precipitating factor."

In 1973, a year after Russell's paper was published, Willibald Nagler, a renowned authority on spinal rehabilitation at Cornell University Medical College, published a paper on a strange case. A healthy woman of 28 suffered a stroke while doing a yoga position known as the wheel or upward bow, in which the practitioner lies on her back, then lifts her body into a semicircular arc, balancing on hands and feet. An intermediate stage often involves raising the trunk and resting the crown of the head on the floor. While balanced on her head, her neck bent far backward, the woman "suddenly felt a severe throbbing headache." She had difficulty getting up, and when helped into a standing position, was unable to walk without assistance. The woman was rushed to the hospital. She had no sensation on the right side of her body; her left arm and leg responded poorly to her commands. Her eyes kept glancing involuntarily to the left. And the left side of her face showed a contracted pupil, a drooping upper eyelid and a rising lower lid — a cluster of symptoms known as Horner's syndrome. Nagler reported that the woman also had a tendency to fall to the left.

Her doctors found that the woman's left vertebral artery, which runs between the first two cervical vertebrae, had narrowed considerably and that the arteries feeding her cerebellum had undergone severe displacement. Given the lack of advanced imaging technologies at the time, an exploratory operation was conducted to get a clearer sense of her injuries. The surgeons who opened her skull found that the left hemisphere of her cerebellum suffered a major failure of blood supply that resulted in much dead tissue and that the site was seeped in secondary hemorrhages.

The patient began an intensive program of rehabilitation. Two years later, she was able to walk, Nagler reported, "with [a] broad-based gait." But her left arm continued to wander and her left eye continued to show Horner's syndrome. Nagler concluded that such injuries appeared to be rare but served as a warning about the hazards of "forceful hyperextension of the neck." He urged caution in recommending such postures, particularly to individuals of middle age.

The experience of Nagler's patient was not an isolated incident. A few years later, a 25-year-old man was rushed to Northwestern Memorial Hospital, in Chicago, complaining of blurred vision, difficulty swallowing and controlling the left side of his body. Steven H. Hanus, a medical student at the time, became interested in the case and worked with the chairman of the neurology department to determine the cause (he later published the results with several colleagues). The patient had been in excellent health, practicing yoga every morning for a year and a half. His routine included spinal twists in which he rotated his head far to the left and far to the right. Then he would do a shoulder stand with his neck "maximally flexed against the bare floor," just as Iyengar had instructed, remaining in the inversion for about five minutes. A series of bruises ran down the man's lower neck, which, the team wrote in *The Archives of Neurology*, "resulted from repeated contact with the hard floor surface on which he did yoga exercises." These were a sign of neck trauma. Diagnostic tests revealed blockages of the left vertebral artery between the c2 and c3 vertebrae; the blood vessel there had suffered "total or nearly complete occlusion" — in other words, no blood could get through to the brain.

Two months after his attack, and after much physical therapy, the man was able to walk with a cane. But, the team reported, he "continued to have pronounced difficulty performing fine movements with his left hand." Hanus and his colleagues concluded that the young man's condition represented a new kind of danger. Healthy individuals could seriously damage their vertebral arteries, they warned, "by neck movements that exceed physiological tolerance." Yoga, they stressed, "should be considered as a possible precipitating event." In its report, the Northwestern team cited not only Nagler's account of his female patient but also Russell's early warning. Concern about yoga's safety began to ripple through the medical establishment.

These cases may seem exceedingly rare, but surveys by the Consumer Product Safety Commission showed that the number of emergency-room admissions related to yoga, after years of slow increases, was rising quickly. They went from 13 in 2000 to 20 in 2001. Then they more than doubled to 46 in 2002. These surveys rely on sampling rather than exhaustive reporting — they reveal trends rather than totals — but the spike was nonetheless statistically significant. Only a fraction of the injured visit hospital

emergency rooms. Many of those suffering from less serious yoga injuries go to family doctors, chiropractors and various kinds of therapists.

It is no wonder that there are physical injuries. Yoga has been redefined as a gymnastic or physical fitness regime, which it is not.

Paramahansa Yogananda, the well-known author of Autobiography of a Yogi, responds to the question "What is Yoga?" in the text The Essence of Self-Realization:

"Yoga means union. Etymologically, it is connected to the English word, yoke. Yoga means union with God, or, union of the little, ego-self with the divine Self, the infinite Spirit. Most people in the West, and also many in India, confuse Yoga with Hatha Yoga, the system of bodily postures.

But Yoga is primarily a spiritual discipline. I don't mean to belittle the Yoga postures. Hatha Yoga is a wonderful system. The body, moreover, is a part of our human nature, and must be kept fit lest it obstruct our spiritual efforts. Devotees, however, who are bent on finding God give less importance to the Yoga postures. Nor is it strictly necessary that they practice them. Hatha Yoga is the physical branch of Raja Yoga, the true science of Yoga. Raja Yoga is a system of meditation techniques that help to harmonize human consciousness with the divine consciousness.

Around this time, stories of yoga-induced injuries began to appear in the media. The Times reported that health professionals found that the penetrating heat of Bikram yoga, for example, could raise the risk of overstretching, muscle damage and torn cartilage. One specialist noted that ligaments — the tough bands of fiber that connect bones or cartilage at a joint — failed to regain their shape once stretched out, raising the risk of strains, sprains and dislocations.

In 2009, a New York City team based at Columbia University's College of Physicians and Surgeons published an ambitious worldwide survey of yoga teachers, therapists and doctors. The answers to the survey's central question — What were the most serious yoga-related injuries (disabling and/or of long duration) they had seen? — revealed that the largest number of injuries (231) centered on the lower back. The other main sites were, in declining order of prevalence: the shoulder (219), the knee (174) and the neck (110). Then came stroke. The respondents noted four cases in which yoga's extreme bending and contortions resulted in some degree of brain damage. The numbers weren't alarming but the acknowledgment of risk — nearly four decades after Russell first issued his warning — pointed to a decided shift in the perception of the dangers yoga posed.

It is self evident that their results would be skewed in the way described above solely because of the confused belief that yoga is a physical exercise program. If they had prefaced their questions with descriptions of yoga as introspection

through contemplation and meditation, it is highly unlikely that people would have reported all these problems with lower back, shoulders, knees, necks, and strokes.

In recent years, reformers in the yoga community have begun to address the issue of yoga-induced damage. In a 2003 article in Yoga Journal, Carol Krucoff — a yoga instructor and therapist who works at the Integrative Medicine center at Duke University in North Carolina — revealed her own struggles. She told of being filmed one day for national television and after being urged to do more, lifting one foot, grabbing her big toe and stretching her leg into the extended-hand-to-big-toe pose. As her leg straightened, she felt a sickening pop in her hamstring. The next day, she could barely walk. Krucoff needed physical therapy and a year of recovery before she could fully extend her leg again. The editor of Yoga Journal, Kaitlin Quistgaard, described reinjuring a torn rotator cuff in a yoga class. “I’ve experienced how yoga can heal,” she wrote. “But I’ve also experienced how yoga can hurt — and I’ve heard the same from plenty of other yogis.”

To have the editor of Yoga Journal talk like this shows how utterly widespread is the misunderstanding of the true nature of yoga, or even worse, it may show the intentional misrepresentation of yoga if its real meaning is known by these people. It would have been much better (above) to say something like, “I’ve experienced how physical postures can heal, but I’ve also experienced how physical postures can hurt — and I’ve heard the same from plenty of other people who do physical postures.”

Swami Rama writes about the situation of traditional Yoga and modern Yoga in his text, Path of Fire and Light:

"The majority of people view Yoga as a system of physical culture. Very few understand that Yoga science is complete in itself, and deals systematically with body, breath, mind, and spirit.

"When one understands that a human being is not only a physical being, but a breathing being and a thinking being too, then his research does not limit itself to the body and breath only.

"For him, gaining control over the mind and its modifications, and the feelings and emotions, become more important than practicing a few postures or breathing exercises. Meditation and contemplation alone can help the aspirant in understanding, controlling, and directing the mind."

In the opening paragraph of Lectures on Yoga, Swami Rama explains:

The word Yoga is much used and much misunderstood these days, for our present age is one of faddism, and Yoga has often been reduced to the

status of a fad. Many false and incomplete teachings have been propagated in its name, it has been subject to commercial exploitation, and one small aspect of Yoga is often taken to be all of Yoga. For instance, many people in the West think it is a physical and beauty cult, while others think it is a religion. All of this has obscured the real meaning of Yoga.

In the second volume of Path of Fire and Light, Swami Rama goes even further, where he flatly declares:

"The word 'Yoga' has been vulgarized and does not mean anything now."

One of the most vocal reformers is Roger Cole, an Iyengar teacher with degrees in psychology from Stanford and the University of California, San Francisco. Cole has written extensively for Yoga Journal and speaks on yoga safety to the American College of Sports Medicine. In one column, Cole discussed the practice of reducing neck bending in a shoulder stand by lifting the shoulders on a stack of folded blankets and letting the head fall below it. The modification eases the angle between the head and the torso, from 90 degrees to perhaps 110 degrees. Cole ticked off the dangers of doing an unmodified shoulder stand: muscle strains, overstretched ligaments and cervical-disk injuries.

Yoga is NOT a "sport", period. Saying that yoga is a sport reveals an extreme ignorance about the true nature of yoga. If yoga had not become so totally distorted, it would be absurd to even have to point out that yoga is not a sport, and thus, has no place being included in the respectable field of Sports Medicine.

But modifications are not always the solution. Timothy McCall, a physician who is the medical editor of Yoga Journal, called the headstand too dangerous for general yoga classes. His warning was based partly on his own experience. He found that doing the headstand led to thoracic outlet syndrome, a condition that arises from the compression of nerves passing from the neck into the arms, causing tingling in his right hand as well as sporadic numbness. McCall stopped doing the pose, and his symptoms went away. Later, he noted that the inversion could produce other injuries, including degenerative arthritis of the cervical spine and retinal tears (a result of the increased eye pressure caused by the pose). "Unfortunately," McCall concluded, "the negative effects of headstand can be insidious."

The mere fact that we consult with physicians about yoga tells us that we have an odd understanding about yoga. If we are going to integrate yoga with a profession, at least it would fit better with psychology or psychiatry, as yoga has far more to do with the mind, its emotions and habits than it does to do with the physical body and its ailments. Surely physicians can be of value in the postures aspect of hatha yoga, but that is a minor part of yoga.

David Frawley, an internationally recognized scholar and teacher, is quoted in the Sep/Oct 2000 issue of Yoga Journal:

Yoga in the West "has only scratched the surface of the greater Yoga tradition," he says. "The Yoga community in the West is currently at a crossroads. Its recent commercial success can be used to build the foundation for a more profound teaching, aimed at changing the consciousness of humanity. Or it can reduce Yoga to a mere business that has lost connection with its spiritual heart. The choice that Yoga teachers make today will determine this future."

Swami Chidananda Saraswati, former head of the internationally known Sivananda Ashram (Divine Life Society) in Rishikesh, India explains that:

"Yoga is not mere acrobatics. Some people suppose that Yoga is primarily concerned with the manipulation of the body into various queer positions, standing on the head, for instance, or twisting about the spine, or assuming any of the numerous odd poses which are demonstrated in the text-books on Yoga. These techniques are correctly employed in one distinct type of Yoga practice, but they do not form an integral part of the most essential type. Physical posture serve at best as an auxiliary, or a minor form of Yoga."

Almost a year after I first met Glenn Black at his master class in Manhattan, I received an e-mail from him telling me that he had undergone spinal surgery. "It was a success," he wrote. "Recovery is slow and painful. Call if you like."

The injury, Black said, had its origins in four decades of extreme backbends and twists. He had developed spinal stenosis — a serious condition in which the openings between vertebrae begin to narrow, compressing spinal nerves and causing excruciating pain. Black said that he felt the tenderness start 20 years ago when he was coming out of such poses as the plow and the shoulder stand. Two years ago, the pain became extreme. One surgeon said that without treatment, he would eventually be unable to walk. The surgery took five hours, fusing together several lumbar vertebrae. He would eventually be fine but was under surgeon's orders to reduce strain on his lower back. His range of motion would never be the same.

Black is one of the most careful yoga practitioners I know. When I first spoke to him, he said he had never injured himself doing yoga or, as far as he knew, been responsible for harming any of his students. I asked him if his recent injury could have been congenital or related to aging. No, he said. It was yoga. "You have to get a different perspective to see if what you're doing is going to eventually be bad for you."

Black recently took that message to a conference at the Omega Institute, his feelings on the subject deepened by his recent operation. But his warnings seemed to fall on deaf ears. "I was a little more emphatic than usual," he recalled. "My message was that

'Asana is not a panacea or a cure-all. In fact, if you do it with ego or obsession, you'll end up causing problems.' A lot of people don't like to hear that."

I quite relate to this problem of having comments "fall on deaf ears". I and others I know have dealt with this for years and decades in relation to real yoga versus gymnastic or fitness yoga. The audience that Black is talking about is the same audience that does not listen to the voices of traditional yoga. Though he is complaining that yoga is dangerous, the traditional voice is saying that what is being done in the name of yoga is not actually yoga, and in one way or another is calling for the cessation of the hijacking of the name of "yoga".

Unfortunately the voice of traditional yoga now falls on two kinds of yoga people with deaf ears: those who promote the physical yoga as being safe, and those who say it is dangerous and should be stopped. Neither of these groups--each for their own reasons--seem to have any interest in the traditional, authentic, or real yoga of the masters. Black is right in pointing out that "A lot of people don't like to hear" this.

This article ["How Yoga Can Wreck Your Body"] is adapted from "The Science of Yoga: The Risks and Rewards," by William J. Broad, to be published next month [February 2012] by Simon & Schuster. Broad is a senior science writer at The [New York] Times.