

Many scientists strongly believe that antigravity is not possible, given what they know about the universe and the laws that govern it. Antigravity would involve lessening the effects of gravitational pull on an object, and, according to these scientists, they just are not there yet. So for now, all those amazing antigravity gizmos seem to have to remain within the realm of science fiction.

However a team of French physicists lead by Emmanuel Fort, professor at ESPCI Paris and co-author of a paper about the project published in the journal Nature, has now discovered a new kind of buoyancy that they want to call "anti-gravity." In both theoretical and experimental trials, the researchers found that objects, such as small toy boats, could float on the opposite side of levitated fluids instead of falling down due to gravity. The cause of this bizarre physics discovery: **good vibrations**. These scientists tell us that vibrating a medium, like a body of water, at *just* the right frequency can cause strange physical properties to arise.

In a book published in the 1980s, a New Zealand scientist gave an intriguing extract from an article published in a German magazine, relating to a demonstration of levitation in Tibet (*Anti-gravity and the World Grid' edited by D.H.Childress, ch.8, Acoustic levitation of stones by Bruce Cathie, pp. 213-217*). He apparently witnessed Tibetan monks levitating large stones by producing acoustic vibrations with large trumpets and drums. Besides, Tibetan monks have the reputation to have the ability to levitate through vibrations triggered by meditation. In the Patanjali Yoga Sutra, a major yogic text, we are told that the practice of yoga, which increases the frequency and strength of our vibrations, may lead to acquiring Siddhis, or super powers.

Approximately twenty-five siddhis are listed in the third book of the Patanjali Yoga Sutras. We may view all the siddhis as variations on three basic classes:

1. EXCEPTIONAL mind-body control
2. CLAIRVOYANCE, the ability to gain knowledge unbound by the ordinary constraints of space or time and without the use of the ordinary senses; includes precognition and telepathy
3. PSYCHOKINESIS or mind-matter interaction, the ability of the mind to directly influence matter

Levitation is linked to the feeling of lightness. This siddhi is said to allow the yogi to float, hover, fly, or walk on water. It could be interpreted as a highly advanced form of psychokinesis. (Siddhi III.39 and 42).

We may come to experience the siddhis through concentration and focus on our inner energy that influences these abilities. This can be attained through the different levels of concentration/meditation:

- *Dharana* - complete focus or concentration
- *Dhyana* - meditation or contemplation
- *Samadhi* - divine union

The simultaneous practice and experience of these three limbs of yoga is called Samyama in sanskrit. Yogis are told, however, not to become conceited and arrogant because of them. The aim of yoga is not to gain these super powers to dominate others. They might just happen; but we must not lose sight of the ultimate goal, which is nirvana or moksha,

liberation. To boast around with them would only demonstrate our alienation. This is probably why you do not see many people in town floating around!

At this point, our heads might explode after trying to imagine the intense practice and skill required to attain these advanced siddhi states. So maybe it is wiser to return to a simpler practice of samyama. As we do so, it is possible to simply assume that after thousands of years of exploration, refinement, and discussion about these techniques, very advanced yoga practitioners may have advanced far beyond what science is currently capable of confirming, and we can leave it at that.

Gravity and balances

I see anti-gravity as what we need to do be able to move against the flow of gravity. If the pull of gravity started to increase on earth we would become unable to move. Coming back to Newton's definition, we might see gravity as a "force" and anti-gravity as an "anti-force". Vanda Scaravelli, in "Awakening the spine" compares this anti-force with the action in the waves of the sea: the crashing of the water on the sand with the force of gravity and the anti-gravity/the anti-force getting water to rebound and sucked back from the shore. It also may be experienced in echos, where the acoustic waves bounce back against the mountain.

Children start to develop strategies to counteract gravity when they start balancing, crawling and ultimately walking. However, not everyone manages to develop these skills fully. This is where anti-gravity postural work might help to enable us to move more smoothly and in a more controlled manner. The play between gravity and anti-gravity puts us in contact with the spine. Our body, in all movements, responds to gravity by letting the ground receive our weight and to anti-gravity by letting this anti-force travel through our limbs, like a wave, so our body goes into a stretch, in a natural desire to extend itself.

The tools

Although most people do not develop balance problems until well into their 50s, the optimal age range to begin developing our balance abilities is in our 30s and 40s. This is because balance is controlled by the brain via three systems: visual, vestibular (inner ear) and proprioceptive (sense of body in space), and all of these systems sadly start to erode after age 40. Each of the three systems help with balance by gathering information from our body and the environment around us, and sending it up to the brain where it is processed. Your brain then sends signals back to the muscles to make necessary adjustments in position, contraction or relaxation.

Vestibular organs: they are located deep within our inner ears. They detect and send information to the brain regarding gravity, linear movement and rotation. People experiencing tinnitus or inner ear damage find it difficult to balance.

Space awareness: The proprioceptive system normally acts at a subconscious level, but you can directly experience your proprioceptive system by simply closing your eyes and touching your nose with your finger. Your finger is guided to your nose by your proprioceptive sensors. Proprioceptors are located throughout the body, but major clusters of them are found in the soles of our feet, ankles, hips, spine (to help with spinal stability), and neck. Proprioception is the quickest of the balance systems to respond if get out of balance.

Visual: Soft gazing

A soft steady gaze can greatly help balance. For example, if we try balancing on one leg, fix your gaze at something still at eye level on the far wall in front of you. Most of us will find this makes balancing easier as the eyes have something stable to concentrate upon. The gazing of the eyes while balancing is related to drishti, the yogic practice of focusing the gaze during asana or meditation.

This week we are going to do a lot of stretching, opening postures (backbends) as well as inversions (forward bends) to counterbalance the effect of gravity on the organs and the skin. Miracles are not guaranteed!

