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Lucid Dreaming

The Science of Achieving Awareness in Dreams

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Illustrated by Roger Ort

There is a 1 in 10 chance that you're in a dream right now. Let that sink in. Dreams can be bizarre and fantastic, but they can also be strikingly similar to reality. Telling the difference between the two is crucial to having one particular type of dream: lucid dreams in which the dreamer is aware that they're dreaming. Lucid dreams allow the dreamer to experience heightened vividness and reality, remember dreams better upon awakening, and even control them. According to researchers Schadlich and Erlacker, people use lucid dreaming for things as varied as changing a bad dream into a pleasant one, solving problems, getting creative insight, practicing skills, or simply having fun.

On average people spend about 7-9 hours sleeping, and 20–25 percent of that time is spent during rapid eye movement sleep in which dreams generally occur. Dreaming takes up around 10 percent of time outside of non-dreaming sleep—so there really is a 10 percent chance you're dreaming right now. Because of their potential for creativity, introspection, and exploration, lucid dreams are a great way to make use of your time.

Several studies have verified lucid dreaming as distinct from REM sleep. In a 2009 study, Voss and colleagues trained participants to become lucid and signal with eye movements in their sleep when lucidity occurred. The researchers compared brain activity of the participants while they were awake, in REM sleep, and experiencing lucidity, finding greater activity in the lucid state than the REM state for high frequency brain waves. High frequency brain waves are associated with learning, memory, and concentration. Interestingly, the differences in brain activity between REM and lucidity were particularly pronounced in the frontal and frontolateral areas of the brain, which control skills like problem solving and executive functioning. In another study examined in a 2017 review by Klara Ertl, researchers gave brain stimulation of high frequencies to frontotemporal areas. Participants then scored higher on a measure of lucidity than with other frequencies or placebo stimulation. This research indicates that lucidity is a real phenomenon—so how can people actually achieve lucid dreams?

Two habits fundamental to all lucid dreaming techniques are reality checks and dream journaling. Reality checks test if one is dreaming or awake by exploiting weaknesses in how the brain forms the dream environment. Good reality checks aren't prone to false positives or negatives, can be carried out before the dreamer loses focus, and are unobtrusive when performed in waking life. Jumping up to see if you float rather than fall may be reliable and fast, but it's far from inconspicuous! Common reality checks include reading text and glancing back to see if it's changed—oftentimes dreamed

text will seem scrambled upon a second glance. Another method is counting fingers, as dream hands often have strange numbers of fingers. Reality checks must occur in the dream to actually induce lucidity, and performing them consistently in waking life will ensure they eventually occur in dreams. Another essential habit is keeping a dream journal. A common claim for people struggling to start lucid dreaming is that they simply don't dream much, but this is just a lack of recall. People generally dream several times a night, but according to one study by Nielsen in 2012, people only remember around a single dream per month. Though it's difficult to start a dream journal without remembering any dreams to begin with, just intending to write down dreams will help in remembering them. Good habits of reality checks and dream journaling are the foundation for more complex techniques.

There are many lucid dreaming techniques that have been verified by scientific research or published in guidebooks. A good place to start is Mnemonic Induction of Lucid Dreaming, which relies on prospective memory—the dreamer focuses on their intention to become lucid and repeats an affirmation like “I'm aware I'm dreaming,” as they're falling asleep. Another option is WBTB, or Wake-Back-to-Bed, in which the dreamer gets up briefly in the middle of the night before returning to sleep. The theory is that activation of the frontal cortex is important in lucidity, so waking will activate that area and make lucidity easier. WBTB can be very reliable, but may cause problems for those who have trouble returning to sleep. Another method, Wake-Initiated Lucid Dream, is somewhat different—instead of facilitating awareness during the dream, WILD has the dreamer retain consciousness while falling asleep until entering a conscious dream.

There are many other methods, such as cycle adjustment, waking up later than usual to increase consciousness during that last part of sleep; hypnagogic imagery, paying attention to imagery experienced just before falling asleep; or even the eyelid method, focusing on little dots swirling on the eyelids and trying to make them form patterns or change color. It is unlikely that any of them will work on the first few nights though, so persistence is essential to growing a lucid dreaming ability.

Tibetan Buddhists have used dream yoga for centuries in the pursuit of self-transcendence. In the Tibetan yoga teachings of dreaming, lucidity is a powerful way to dispel the notion of reality being real. Lucid dreaming is inherently about testing the boundaries of what we really know—and as with all exploration, a mindset of patience, openness, and persistence is invaluable in moving toward new discoveries. ● ● ●

