Don't think about chocolate. Just forget last night's quarrel with your spouse. Put those tormenting memories of childhood trauma out of mind.

Impossible? Psychological consensus is that, yes, we cannot just will away unpleasant thoughts. In fact, as most people who have actively tried to put something out of mind know, usually the opposite occurs. Think of smokers and cigarettes, dieters and ice cream. But some researchers are starting to question that assumption. Indeed, a new study suggests that people can under certain circumstances force themselves to forget—a finding that may explain how the mind normally purges memories, including emotional demons, on its own.

Just as remembering is essential for all learning, forgetting is also a crucial cognitive skill, says Michael Anderson, a neuroscientist at the University of Oregon-Eugene. People constantly need to filter out irrelevant information, such as out-of-date phone numbers or last month's minor skirmish at work.

To demonstrate the mind's ability to run its own memory banks, Anderson had subjects memorize 50 word pairs. Then participants were told, when they were shown one word of a pair, to "not think" of the paired word. In later tests, participants couldn't recall the suppressed words as well as they could the others. Clues didn't help. Neither did bribes. And memories grew worse the more times the information was suppressed.

The results, published last week in the journal Nature, may illuminate the controversial issue of long-repressed memories of childhood sexual abuse. Sexually abused children, Anderson says, are far more likely to repress
traumatic memories if the abuser is someone they see often. Every time they see the abuser, they try to forget the abuse—and, like the subjects in the experiment, succeed with continued effort.

Emotional stress. Other memory experts, while acknowledging the importance of this work, say it stops far short of explaining the unknowing repression of traumatic childhood memories—or why they suddenly reappear years later. Anderson concedes that long-term forgetting under emotional stress needs more investigation. Already, he notes, imaging studies have revealed an area in the brain that goes blank during memory repression, then lights up when memories return.

Being able to suppress unwanted thoughts might also be a useful tool for therapy, says University of Pittsburgh psychologist Jonathan Schooler. Patients might use the techniques to stop thinking about anything from the pleasure of cocaine to a bad run-in with a cow, he says, potentially lessening the weight of negative associations: "Over time, you might learn to love cows again."