

# Is a Spotless Mind the Quiet After Chaos: Should Memory-Altering Drugs Be Allowed to Erase Trauma?

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Over the last few years, cases of mental health disorders like depression and anxiety have skyrocketed, especially among young people. Disorders such as PTSD (post-traumatic stress disorder), bipolar, schizophrenia, all stem from multiple factors such as genetics, trauma, stress, and unpleasant early life experiences. Although efforts including psychotherapy, medication, and self-care strategies notably improve mental wellbeing, oftentimes they are rendered pointless. An alternative method should be considered when dealing with treatment-resistant mental health cases such as addicts or victims of assault, car accidents, or terrorist attacks. However, there is no instant cure that returns the mind to its equilibrium. One would begin to wonder if memory-altering drugs such as propranolol could be implemented to deal with such high-risk mental health patients. The idea of memory reconsolidation is the scientific basis for this strategy. Recalling a memory causes it to momentarily become unstable and must be "re-stored" in the brain. It could be feasible to change the memory's emotional intensity during this unstable period. If these drugs were used, would they do more harm through cascading negative effects or more good through reducing the rate of growth of suicide attempts?

When faced with psychological adversity, the first step is usually consulting a psychologist and engaging in therapy sessions to manage and improve one's well-being. The American Psychological Association (APA) reports that about 75% of people who try psychotherapy, alternatively known as talk therapy or, simply, therapy, show some benefit from it such as improved emotional and psychological well-being, as well as associated positive changes in the brain and body. The other 25% do not find therapy effective due to misaligned expectations, misdiagnosis, or one-size-fits-all treatments. The primary signs that therapy is not working are no clear improvement in symptoms, deterioration of mental health, dreadful outlook on therapy sessions, and unmet goals (Ducharme, 2023). Therapy is not necessarily effective for all cases since each person has a unique approach and coping mechanism when faced with hardship. Two people who were a part of the same car accident might respond differently because of multiple factors such as background, genetics, or brain chemistry. The first individual might respond well to therapy, whereas the second might feel emotionally paralyzed no matter how many sessions are held. Therefore, what measure should be taken when therapy falls short? Experts may suggest consulting specialists about alternative methods for treatment such as hypnosis, coaching, or even brain SPECT imaging, which gives a specialized treatment plan that targets the core issue (Amen Clinics, 2025). However, the aforementioned treatment plans may fail when complex PTSD and repeated trauma cause continuous triggers which lead to treatment-resistant PTSD (TR-PTSD). In this case, therapy as well as the alternative methods previously listed will stagnate the healing process. Hence, a progressive method should be explored when the risks of ongoing suffering and suicide peak.

What initially led us to consider memory-altering procedures as an effective treatment in the extreme mental health cases we previously mentioned was an example from a movie we

watched. In the movie "Eternal Sunshine of the Spotless Mind," Clementine, portrayed by Kate Winslet, undergoes medical treatment at a company named "Lacuna, Inc." to erase memories of former partner Joel, portrayed by Jim Carrey. The heartache caused by their relationship was unbearable, leading to this decision. When Joel hears of Clementine's efforts to erase him, he goes through the same procedure. However, as memories of Clementine are being deleted one by one, he realizes he doesn't want to lose her. As an attempt to preserve memories of his former partner, Joel tries to "hide" all memories of her in unrelated brain areas. At the end of the film, the two reunited as strangers and felt magnetically drawn, as before. Even after rediscovering their history, they choose to give their relationship another shot. This movie sparked our curiosity to research the memory erasing mechanism used. According to Merel Kindt from the University of Amsterdam, propranolol is a memory-altering drug that most closely resembles the method used in the movie. When memories are brought back to mind, proteins at synapses are broken down and must be rebuilt. Scientists think that this process, known as "reconsolidation," aids in the integration of new information into preexisting memories. Propranolol exiles fearful responses by blocking the production of new proteins the moment memories are brought to the surface again. It belongs to the beta-blocker group of drugs which are essentially used to regulate blood pressure. However, they were found to interfere with the binding of the hormone adrenalin to its respective receptor. This occurs in the amygdala, which is linked to emotions, and not the hippocampus, where events are preserved. Therefore, propranolol makes memories less vivid by inhibiting protein synthesis when old memories are revisited (Yong, 2009). This drug's mechanism isn't to wipe memories as seen in the movie. Instead, it reduces the emotional burden that individuals suffering from PTSD carry. Managing emotions is not an easy task, but propranolol could enhance the healing process by teaching victims how to properly regulate

emotions. The use of this drug appears capable of rewiring the brain; however, how effective would these methods be in real-life scenarios? In the fictional world, Joel and Clementine's efforts were proven to be futile since they slipped back into a vicious cycle. However, would this drug be successful in real-life cases?

Roger Pitman, a psychiatrist at Harvard Medical School, examined the use of these drugs to stabilize mental states in human subjects. Pitman illustrates how emotionally charged memories are deeply engraved in the brain contrary to neutral memories. To further support this claim, according to Laura King, traumatic events are vivid and long-lasting emotional experiences. King believes that this is due to stress hormones found in the amygdala that help strengthen these memories (King, 2025, p.236). This explains why up to one third of individuals who witness a traumatic event develop PTSD (Vince, 2005). In 2001, Pitman and other researchers tested the effect of propranolol in humans by using car crash or rape victims admitted to the Massachusetts's General Hospital as subjects in their experiment. The participants who consented were either given propranolol or a placebo. Immediately after, Pitman recorded audio tapes of the patients describing the event. Three months later, he made each patient listen to their own recording and monitored heart rate and other biological responses. 43% of individuals who took the placebo experienced an increased heart rate and excessive sweating. However, the individuals who were given the propranolol drug did not display intense stress (Vince, 2005). Thanks to Pitman's work, it is proven that neuroscience can facilitate the healing process in people suffering from PTSD. The use of a singular drug was able to release victims from a cycle of psychological pain. After analyzing the results of this experiment, we believe that hospitals should give psychiatric emergency cases the option of taking the memory-altering drug to give patients a chance to recover smoothly. The traumatic event is embedded into PTSD victims' brains. The

effect of this event doesn't stop when an individual recovers physically. It has long-term effects that influence an individual's sleeping patterns, academic/work performance, and simple daily tasks. Propranolol facilitates the healing process by allowing detachment and severing ties with one's past. Patients are then able to overcome the force that attempted to redefine their future.

In the last paragraph, propranolol was tested experimentally in a lab setting. However, as of 2026, propranolol has been tested on sexual violence victims and recovering addicts. Studies have been conducted to examine whether propranolol is able to reduce the risk of PTSD in women that suffered sexual assault. In fact, propranolol was found to reduce the likelihood and severity of developing PTSD when given soon after the crime, showcasing the important role of pharmacological approaches in treating mental disorders (Health Daily Digest, 2026). Furthermore, research conducted at University of Murcia led to the understanding of the role of propranolol in morphine addiction. When exposed to a stressful stimulus, memories associated with opioid withdrawal are reactivated, possibly leading to relapse. However, upon the use of propranolol, a beta-adrenergic receptor blocker, the activation that follows stress situations is attenuated. This reduces the likelihood of relapse by interfering with drug-related memory recall, modifying these specific memory pathways (NewsRx Drug Daily, 2026). Hence, propranolol works in many areas to reduce emotional intensity of traumatic memories.

While the drug seems to be effective on the psychological level, there are ethical drawbacks of this treatment that one can't ignore. Memory-altering drugs are proven to cause disorder within judicial systems. According to the authors, our responsibility as citizens is to testify when we witness a crime or accident since memories are the basis of fact-finding. Based on Henry et. al.'s research, a form of tampering with evidence is the intake of propranolol for therapeutic

purposes after surviving a car crash or crime. Valuable information is kept from investigators and prosecutors when a witness uses propranolol since this drug weakens memories. A solution offered by the authors is that victims should be informed of the consequences of taking this drug as it can interfere with their role as citizens (Tenenbaum & Reese, 2007). We are all responsible for preserving certain values and ethics in our society. A crucial aspect in the determination of a verdict is the witness testimony. If one decides to take propranolol immediately after witnessing a crime, they are making the conscious decision of obstructing the process of seeking justice. The witness would become an ineligible testifier due to impaired memory, leading to the inability to reach a verdict to prove someone's guilt or innocence. However, is enduring months or maybe even years of PTSD symptoms worth settling a case? By not taking the drug, an individual sacrifices their own well-being to fulfill a role society deems necessary, even though no legal obligation explicitly requires one to prioritize the justice system over their own mental health. This makes us question if it is acceptable to expect a person to put the public interest above personal interest and healing. Even after recognizing the contributions that individuals who decide to retain their memory make to justice through this article, we believe that they should not come at the expense of one's mental stability.

In conclusion, complex cases of PTSD may not show signs of improvement with psychotherapy, hypnosis, coaching, or meditation. In this special case, we could consider memory-altering drugs such as propranolol which reduces the emotional intensity of a traumatic event. This drug has been tested by experts and proven to be effective by lowering stress levels, leading to a hassle-free healing journey. However, other researchers highlighted an important shortcoming in this reasoning that would affect society as a whole. They point out that taking propranolol after a traumatic incident, especially a car crash or crime, could impede the legal process to determine a

verdict. With no eligible witnesses, it is unlikely to settle a case. After thoroughly exploring this topic, I believe it is safe to say memory-altering drugs should be recognized as a potential approach when dealing with treatment-resistant psychiatric cases. Even though we recognize the importance of fulfilling one's role towards society, we believe that the importance of maintaining a stable mental health outweighs satisfying the demands of judicial engagement. However, to ensure full transparency between the healthcare and judicial systems, doctors should be required to inform the police before prescribing these drugs to individuals who may need to testify in court (Connor, 2011). To build a harmonious society, change starts on a personal level. When one focuses on personal growth through stabilizing emotional well-being, he/she would be uplifting society in ways far greater than through solely testifying and sacrificing inner balance.

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