

## Propranolol – Solving PTSD

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Posttraumatic Stress Disorder (PTSD) is an anxiety disorder that can develop after exposure to one or more traumatic events that threatened or caused grave physical harm to an individual. Events throughout a person's life after the events can bring back these memories of the tragedy and put them in the same state of hysteria as when it happened.

At McGill University in Montreal psychologist Alain Brunet is studying a drug that could relieve Post Traumatic Stress Disorder. The prescription Propranolol, used to treat hypertension, is believed to repress the effects of adrenaline created by the sympathetic nervous system of the ANS. A Harvard psychiatrist Roger Pitman already demonstrated how administering Propranolol soon after a traumatic event greatly reduces the emotion affects of PTSD verses individuals who were not given medication. The two professors are looking to develop a method that would be administered to those who have been suffering from PTSD for longer periods of time unmediated.

Nader, also from McGill, administered Propranolol to rats and showed that memories were not completely fixed in the brain afterwards. When the events of the emotional scaring are recalled, the brain stores the memory in the short-term memory, where it is easily edited. The way in which Pitman and Brunet see this drug helping individuals with PTSD is that once the traumatic event is in the short term memory it would be possible to recreate memories of the emotional event.

In a related study on soldiers coming back from Operation Iraqi Freedom with PTSD were administered Propranolol after traumatic events. The study examined the relationship between PTSD and the administration of Propranolol. Of a group of soldiers suffering from burns, 31 were administered Propranolol, 34 received no medicine. The study revealed that the soldiers who received medication PTSD was prevalent in 32.3% vs. 26.5% in those not receiving medication. This study suggested that propranolol does not decrease PTSD, but does require more research to determine the relationship between the two.

Ethical concerns with this drug is that should it be proven to work as a method to erase memory it could be used too liberally. Individuals may be able to use it to just erase the memory of a bad night or a sad event. Other concerns are physiological one; memory is yet to be fully understood. The use of this could alter a memory for the better however affect a different memory or even a different function of the brain. More research in the physiology of the brain is required before this procedure should be put into practice.

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The effect of propranolol on posttraumatic stress disorder in burned service members.  
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