

The New York Times

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January 14, 2010

Morphine May Help Traumatic Stress

By [BENEDICT CAREY](#)

Doctors have long hoped to discover a “morning-after pill” to blunt the often disabling emotional fallout from traumatic experiences. Now it appears that they have had one on hand all along: morphine.

In a large [study](#) of combat casualties in Iraq, Navy researchers reported Wednesday that prompt treatment with morphine cut in half the chances that troops would develop symptoms of post-traumatic [stress](#) later on. Other opiates are likely to have similar effects, experts said.

In previous work, researchers had found that larger doses of morphine given to children with severe burns also reduced post-traumatic symptoms, like flashbacks, depression and jumpiness. These symptoms have become lasting in about one in eight service members returning from Iraq.

The new study, appearing in The [New England Journal of Medicine](#), supports the standard practice in settings like the battlefield and emergency rooms, where morphine is often used readily. But experts say it may have implications for the timing of treatment and for a wider variety of traumas, like those resulting from [rape](#) or muggings.

“This idea that medicine can be used in the wake of a trauma to diminish the risk of developing a significant psychiatric disorder is incredibly important,” said an expert who was not connected with the study, Dr. Glenn Saxe, a psychiatrist at Harvard Medical School and director of the [Center for Refugee Trauma and Resilience](#) at Children’s Hospital Boston who conducted the studies on burn patients. “If the findings hold up,” he said, “the implications are huge and go well beyond the military” — for example, to civilian [hospitals](#), where victims of rape and other terrifying ordeals may benefit.

Dr. Saxe and other experts cautioned that any benefit must be stacked up against the drugs’ risks: they are habit-forming with repeated use, and can blur memories of events that can be life-changing.

In the new study, researchers at the Naval Health Research Center in San Diego reviewed detailed medical records of 696 troops who had been wounded in Iraq between 2004 and 2006, determining whether and when morphine was used in treatment. Military doctors used the drug for most serious injuries — generally in the first two hours after the injury — but sometimes administered others, like anti-anxiety medications.

The study found that 243 of the servicemen and women were given a diagnosis of post-traumatic stress within two years of their injury. When the severity of the wounds was taken into account, researchers calculated that the diagnosis was half as common in those who had received morphine as in those who had not.

Age, sex and the cause of injury did not significantly alter the findings, said Troy Lisa Holbrook, the study’s lead author.

“This is just one paper, one analysis, but it’s exciting because of the strength of the finding,” Dr. Holbrook said. “A lot of people have been looking for a secondary preventive to interrupt the formation of traumatic memories.”

Her co-authors were Michael R. Galarneau, Judy L. Dye, Kimberly H. Quinn and Amber L. Dougherty.

Doctors have known of opiates' effects going back at least to Homer, who in "The Odyssey" described a drug that "had the power of robbing grief and anger of their sting and banishing all painful memories."

The drugs appear to blunt the emotional charge of traumatic memories in several ways. Most obviously, they kill the pain when it is most excruciating; often, they scramble the ability to recall what exactly happened. Opiates also inhibit the production of a chemical messenger called [norepinephrine](#), which is thought to enhance fear signals in the brain.

Researchers are not sure how the brain creates what is, in effect, too strong an emotional memory after a frightening experience. It may be that in those first days after the experience, people continually ruminate, reminding themselves, say, how close they came to dying. That thought in turn prompts a release of fear hormones, which further inflame the emotional charge of the memory, said Dr. Andy Morgan, a psychiatrist at the [National Center for P.T.S.D.](#) in New Haven. Opiates could keep this process in check.

Finally, Dr. Saxe said, opiates appear to mimic some of the actions of oxytocin, a hormone that helps cement human bonds.

"At least in the children with burns that we studied," Dr. Saxe said, "the drug lessened this anxiety of being alone in one's suffering."

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