

Pill towards erasing bad memories?

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A widely available blood pressure pill could one day help people erase bad memories, perhaps treating some anxiety disorders and phobias, according to a Dutch study published on Sunday.

The generic beta-blocker propranolol significantly weakened people's fearful memories of spiders among a group of healthy volunteers who took it, said Merel Kindt, a psychologist at the University of Amsterdam, who led the study.

"We could show that the fear response went away, which suggests the memory was weakened," Kindt said in a telephone interview.

The findings published in the journal *Nature Neuroscience* are important because the drug may offer another way to help people suffering from post-traumatic stress disorder and other problems related to bad memories.

Traditionally, therapists seek to teach people with such disorders strategies to build new associations and block bad memories. The problem, Kindt said, is the memories remain and people often relapse.

Animal studies have shown that fear memories can change when recalled, a process known as reconsolidation. At this stage they are also vulnerable to beta-blockers like propranolol, which target neurons in the brain, the researchers said.

Kindt and her team's experiment included 60 men and women who learned to associate pictures of spiders with a mild shock. This experience created a fearful memory, the researchers said.

Other participants saw the same picture but did not receive an electrical shock. For these people this established a "safe" association without a fear response or bad memory.

One day later people given the drug had a greatly decreased fear response compared with people on the placebo when shown the picture and given a mild shock, the researchers said.

"There was no difference to the fear spider and the safe spider," Kindt said. "This shows it is possible to weaken the underlying memory by interfering with it."

The next steps are to look at how long the drug's effects on memory last, and testing the treatment in people who actually are suffering from some kind of disorder or phobia, Kindt said. //02.15.09 MiNa