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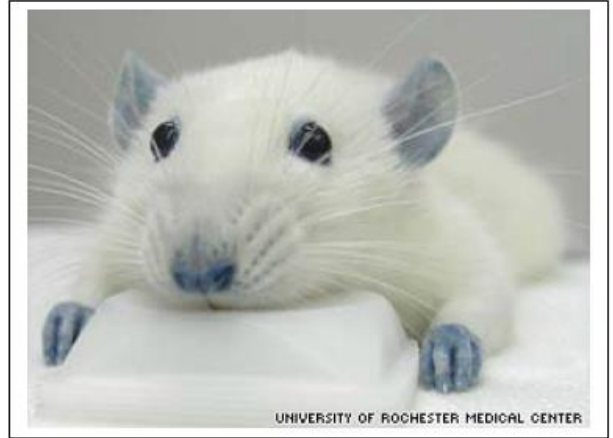
## BLUE #1: THE NEW MIRACLE DRUG

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*Reported by CNN July 28, 2009*

The same blue food dye found in M & M's and Gatorade could be used to reduce damage caused by spinal injuries, offering a better chance of recovery, according to new research.

Researchers at the University of Rochester Medical Center found that when they injected Blue #1 (also called Brilliant Blue G or BBG) into rats suffering spinal cord injury, the rats were able to walk again.



The only side effect was that they temporarily turned blue. How can this work?

A chemical called ATP is both an energy source and a neurotransmitter, depending on its location. It creates energy in every cell for normal activity, and the FDA has known for some time that Blue #1 is toxic to the mitochondria<sup>1</sup> which are like tiny factories inside each cell where the ATP is made. This causes a problem for people using a feeding tube. Until recently hospitals added Blue #1 to the food used in such feeding tubes, but some of the patients died and their colon was found to be bright blue. The researchers determined that it was the color – not the disease – which had killed them.<sup>2</sup>

However, in the case of a spinal injury, ATP is released from the injured cells, binds to a molecule called P2X7, and kills off healthy cells in the spinal cord, thus making the initial injury far worse.

If only there were a way to prevent the ATP from attaching to P2X7, or a way to deactivate the P2X7, then the ATP could not kill the spinal nerves. Luckily, Blue #1 was already known to be able to stop the function of P2X7. While this is not good for you or me, of course, it was perfect for a rat (and maybe a person) with an injured spinal cord. When injected with the blue dye immediately after their injury, the rats recovered and could walk again (with a limp). Those rats not injected with the dye never recovered.

This is big news in the medical field! The first clinical trials should be underway now.

Forty years ago, Dr. Feingold warned that food dyes were similar to drugs and should be tested in the same way that drugs are tested. Now, finally, one of them has been shown to be such a powerful drug that it can bring about the recovery of a damaged spinal cord. Might we hope that at least this dye will find its way out of our food and onto the prescription pad?