

## Marijuana Aids Nerve Pain Relief

By Nancy A. Melville, HealthSCOUT Reporter

SUNDAY, Aug. 20 (HealthSCOUT) -- Where morphine fails, marijuana may work.

That's the major finding of British research into the pain caused by nerve injuries, a pain known to be somewhat resistant to morphine and similar drugs that are the gold standard for treating just about any other kind of serious pain.

The researchers say they now have evidence that active components of cannabis, which is better known as marijuana, may offer hope.

"It's known that if you injure a nerve, the morphine receptors in the spinal cord disappear and that's probably why morphine isn't a very effective pain killer for such conditions as shingles, people who have had an amputation or perhaps if cancer has invaded the spinal cord," says Dr. Andrew Rice, a senior lecturer in pain research at London's Imperial College.

"But what we've shown is that the cannabinoid receptors do not disappear when you injure a nerve. So this could offer a therapeutic advantage over morphine for treating such pain," he adds.

Cannabinoids are components of cannabis or compounds that mimic cannabis, and discovering the complexities behind how and why they can offer pain relief has been the focus of various areas of research.

Rice says the significance of his team's research is that they mapped the cannabinoid receptors in the spinal cord and showed that they are found specifically in areas concerned with pain processing.

"Other researchers showed that if you inject cannabinoid compounds in small doses in the spinal cord, you get pain relief. And we showed how that effect is mediated," he explains. "In addition, a third group of people showed that nerve cells in the spinal cord that are normally activated by pain are damped down by small doses of cannabinoid in the spinal cord fluid."

The findings were published in a recent issue of the journal *Molecular and Cellular Neuroscience*.

Rice says the task now is to find out how to administer the cannabinoids, but he cautions that the most familiar -- smoking it -- is the last thing researchers would advise.

"Smoking is obviously a big health hazard and we're certainly not going to advocate that people smoke cannabis. So right now we're looking at ways of delivering the drug to the body," he says.

"One problem with cannabinoids is that they are very fat-soluble, so that makes them very difficult to formulate the drugs into pills or injections. So one way that's being looked at by some pharmaceutical companies is using the kind of inhaler that asthma sufferers use."

"It's going to be a tough cookie to crack, however," he adds.

Cannabinoid compounds are among a variety of drugs that have been intensely looked at as researchers look for alternatives to the remarkably few pain relief options.

"Researchers have spent the last 30 years trying to understand the mechanism of pain, particularly in the skin and spinal cord, and the massively complex array of chemicals that are involved in that process," Rice explains.

"While people have generally tried to target each of those chemicals to develop pain killers, very few approaches have been successful, and we're still essentially left with the three very old, basic concepts in drugs: morphine, which has been with us for thousands of years, aspirin or acetaminophen," he adds.

Kenneth Mackie, an associate professor in anesthesiology and physiology at the University of Washington in Seattle, says there is indeed great concern in the medical community about the need to find better pain relief for damaged nerves, but that progress is being made.

"It's obviously a big problem for the people who have that kind of pain and on the basic science side, it's an area of intense investigation. Cannabinoids are just one option that people are looking at."

"Our understanding of the wiring of the spinal cord is evolving very quickly, however, and we should soon be able to choose drugs to work more effectively," he adds.

## **WHAT TO DO**

You can read more about research on cannabinoid components with multiple sclerosis patients in this HealthSCOUT story.

And here's a 1997 report by a panel of National Institutes of Health experts on the need for more research to further explore marijuana's effects.

