

# Los Angeles Times

## Emergency spine immobilization may do more harm than good, study says

January 11, 2010 | 3:57 pm

When emergency responders reach a gunshot or stabbing victim, they try to immobilize the spine to reduce the danger of paralysis upon movement of the victim. That effort, however, can have a fatal toll.

A study published in the *Journal of Trauma* has found that, among these types of trauma victims, those whose spines are held still are twice as likely to die as those whose spines aren't immobilized.

Time is the crucial factor, said the study's lead author, Elliott R. Haut, an assistant professor of surgery at the Johns Hopkins University School of Medicine. "For someone who was shot in the liver or has a collapsed lung," Haut said, "those extra five minutes might mean life or death for them."

The study cuts to the heart of a debate among trauma surgeons about the roles of paramedics and other first responders, says Dr. Larry J. Baraff, associate director of the UCLA Emergency Medicine Center. Many feel that time spent treating the patient in the field is often better spent on the operating table.

Immobilization is "a tradition that started decades ago," says Dr. Demetrios Demetriades, who directs the Division of Acute Care Surgery at USC. "There was never any scientific evidence that it works."

It can even worsen the situation, he says.

First responders typically fasten a cervical collar tightly around a victim's neck and then strap him or her to a plastic board to secure the spine. This takes time, and it can hide or exacerbate internal injuries.

The likelihood that the spine would be injured by a penetrating wound is pretty low, Baraff added. "Unless the bullet hits the spinal column in exactly the right way, it's extremely unlikely there's going to be an unstable spinal column," Baraff said.

In the new report, out of the more than 45,000 patients studied (about 2,000 of whom underwent spine immobilization), only 30 had some partial damage to the spine that may have benefited from the procedure. First responders would have to immobilize the spines of 1,032 patients before potentially benefiting one person, the study's authors wrote. But it only took 66 patients to potentially contribute to one death.

The best thing to do is get a patient to the hospital as fast as possible, doctors said -- the cervical collar usually serves no purpose other than to get in a surgeon's way.

"We remove it immediately," Demetriades said.

"We say to the paramedics, 'Thank you very much for taking care of them, you did a great job,' and immediately take [the collars] off and throw them away."

-- Amina Khan