

THE SECRET DANGER OF ELECTRICALLY HEATED SEATS



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On Christmas Day, 2005, Jane and her husband John drove their Cadillac Eldorado from Edmond, Okla., to Lake Texhoma to share Christmas dinner with her family. They returned home that evening. The round trip took five hours.

Jane is paraplegic from an injury she sustained 17 years ago. She has no sensation in her lower body and legs. Despite those disabilities, she remained an active, engaging and brave individual. After receiving rehabilitation services to regain her mobility through the use of a wheelchair and a car with hand controls, Jane completed her undergraduate degree and enrolled in Florida State University Col-

lege of Law, graduating *cum laude* in 1996. She is licensed to practice law in Florida, Colorado and Oklahoma.

In 2005, Jane had a successful law practice in Oklahoma. In addition to her work, she had many hobbies, including horses, water skiing, bungee jumping and sky diving. Her passion was riding a fine mare trained to show in Western Pleasure riding competitions. Training and riding provided Jane endless enjoyment until that Christmas Day in 2005.

It was cold driving to Texhoma. Although Jane had never used the electric seat heater in the Eldorado, she turned it on with the casual thought that the warmth might help control spasticity. When she returned home, and she was preparing for bed, Jane performed her daily skin check. She was stunned to see

two large blisters, one on each buttock. These were third degree burns.

Jane had never imagined it possible for anyone to be burned by the seat of a modern automobile. In contrast, General Motors did know it was possible. Jane was not the first person General Motors' seats had burned. Despite that knowledge, GM had made no recall nor provided any warning of that danger.

Any third degree burn is serious, but a third degree burn on the buttock of a paraplegic is an additional layer of disability. Healthy skin on the buttocks is critical to mobility, recreation and activities of daily living. Extensive medical care is usually required, including repeated surgeries and complete bed rest on a specialized mattress, often with the patient lying face down to protect the burned area. After the wounds finally close many months later, the scar tissue that has replaced those three layers of lost skin is thin and fragile compared to normal skin. Even after the healing process is done, the victim must exercise great care to prevent reinjury while making transfers from a wheelchair to a toilet, vehicle, chair or bed. More frequent pressure releases are necessary to prevent the development of pressure ulcers.

Such a serious burn injury is unlikely to happen to a person with normal sensation. That person will simply turn the

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heater off when it gets too hot. However, the sensory deprived person will not know he or she is being burned until the skin sloughs off when the person removes clothing or the wound is seen during a daily skin check.

Jane received excellent care from surgeons and burn experts. She was hospitalized several times and required repeated surgeries. For seven months she had to keep all weight off her buttocks. Most of the time she was required to lie in bed or stand in an upright device. Her medical bills were over \$150,000. Despite the fine care Jane received, she is now limited in the time she can sit and is greatly limited in her ability to participate in the recreational activities she loves.

Jane's case was the sixth that we handled for a paraplegic who suffered burns from an electrically heated automobile seat. Since her case, we have handled and resolved 10 additional cases, a total of 16 to date. We are currently representing and prosecuting claims for four more paraplegics, each of whom sustained third degree burns in a General Motors vehicle.



As in every defective product case, preserving the evidence (the vehicle) is critical. A qualified engineer should test the seat's temperatures as early as possible. Medical literature confirms that 120 degrees Fahrenheit can cause third degree burns on human skin in 10 minutes.¹ Lower temperatures will also cause third degree burns when the exposure duration is sufficient.² The International Organi-

zation for Standardization (ISO)³ and the American Society for Testing and Materials (ASTM)⁴ offer guidance on accepted burn threshold temperatures and contact with human skin. In the cases we have handled, the seat temperatures ranged from 120 to 160 degrees Fahrenheit.

Paralyzed individuals are at a higher risk of thermal skin burns due to physiologic changes. Paralysis alters circulation below the spinal cord injury level with resulting impaired circulation in the buttocks. A person with normal circulation benefits from having a circulatory system that will help carry heat away from the location of an overheating seat, giving some additional protection. Other factors that increase the risk for the sensory deprived are skin density and tissue perfusion.

Reviewing the client's past medical records and consulting with the medical providers to establish causation that the skin wound originated as a burn is key to successful prosecution. Victims and their medical care team will typically be unfamiliar with seat heater burns, which may lead to medical histories that require careful investigation and analysis.

Over the past three decades, nearly 600,000 vehicles have been voluntarily recalled due to defective seat heaters. The National Highway Traffic Safety Administration (NHTSA) conducted fire investigations involving seat heaters in Chrysler, Volkswagen, Mercedes-Benz and Volvo vehicles. GM has, thus far, failed to recall their vehicles with defective seat heaters or to provide suitable warning of the risk to those with loss of sensation.

Vehicle seat heaters have become standard accessories in an estimated 30% of all vehicles in the U.S. Major manufacturers routinely sell their vehicles to sensory impaired customers, often assisting them with the purchase and installation of hand controls. Despite the hundreds of complaints regarding overheating seat heaters sent to NHTSA, there are still no safety standards that apply to

heated seats.

Seat heater burns are preventable and the consequences of these third degree burns are devastating to the victim. Jane's words are representative of all of our clients' comments:

"This injury put me back where I was when I was first paralyzed...I'm completely dependent on others for my personal care, I've lost my physical conditioning after lying on my belly for six months, and I can't afford to risk injury to my buttocks so I've had to sell my beloved horse because I can't ride her any more."

Art Johnson founded the firm that is now Johnson Johnson and Schaller to specialize in litigation with emphasis on accidents and defective products that cause serious personal injury or economic loss. He contributes to the OTLA Guardians of Civil Justice at the Guardians Club level. The firm is located at 975 Oak St Ste 1050, Eugene OR 97401. Johnson can be reached at 541-484-2434 or ajohnson@jjslaw.com.

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¹ Maguifla, P., MD, Palmieri, T., MD, FACS & Greenhalgh, D., MD, FACS. (2003). "Car Seat Heaters: A Potential Hazard for Burns." *Journal of Burn Care & Rehab.*, 24:315-316.

² Suzuki, T., Hirayama, T., Aihara, K. & Hirohata, Y. (1991). "Experimental Studies of Moderate Temperature Burns." *Burns*, 17(6):443-451.

³ ASTM Committee C16 on Thermal Insulation. (2003). "Standard Guide for Heated System Surface Conditions that Produce Contact Burn Injuries." ASTM International.

⁴ International Organization for Standardization. (2006). "Ergonomics of the Thermal Environment—Methods for the Assessment of Human Responses to Contact with Surfaces." ISO 13732-1.