



Transdermal Drug Patches and MRI/RF Burns

Skin patches that contain metal can overheat during an MRI, causing burns in the immediate area of the patch. The metal is not always visible and it might cause damage even without being in direct contact with the skin. Conducting material such as metal in skin patches cause burns when placed in the Radiofrequency pulse (RF) field used to create the Magnetic Resonance (MR) signal, resulting in a concentration of electrical currents that generates heat and burns the tissue. There have been more than 30 incidents with a variety of items that have been associated with burns during an MRI. Common MRI guidelines recommend the removal of metal objects before the scan. Product labeling should warn the user about the risk of a burn during an MRI. Unfortunately, this is not always the case with skin patches. The FDA is reviewing the labeling and composition of all medicated patches.

In an update released on March 9, 2009, the FDA announced its effort with the manufacturers of the following patches to include adequate warnings in their labels.

Proprietary Name Generic/Established Name

Catapres TTS	Clonidine
Neupro	Rotigotine
Lidopel	Lidocaine HCl and epinephrine
Synera	Lidocaine/Tetracaine
Transderm-Scop	Scopolamine
Prostep	Nicotine transdermal system
Habitro	Nicotine transdermal system
Nicotrol TD	Nicotine transdermal system
Androderm	Testosterone transdermal system
Fentanyl	Fentanyl
Salonpas Power Plus	Methyl Salicylate/Menthol

Obviously, we are not responsible for preparing a patient for an MRI. However, it is a good idea to be aware of this possible source of injury if a patient complains of pain during the return trip. The manner of dealing with such injury should be formally described by policy.

NHTSA 2007 Deadliest Driving Errors

- Swerving (Running off the road or drifting into the next lane)
- Driving while drowsy
- Drinking and Driving (60% of drivers who died after dark were drunk)
- Overcorrecting – Do it on a curve and you'll rollover
- Speeding (About 1/3 of fatalities occur over 55 mph)
- Failure to yield the right of way- Most common in folks over 70
- Erratic or Reckless Driving
- Running Red Lights

- Not wearing seatbelt (About 1/3 of people who die in crashes are not seat-belted. Three out of four people ejected from a vehicle during a crash die.)
- Inattentive Driving : Tips to Avoid Inattentive Driving Include:
 - Do not Fixate on Non-driving Related Objects
 - Avoid Smoking While Driving
 - Turn Off Your Cell Phone While Driving : Cell phones are visual, auditory, biomechanical and cognitive distracters
 - Minimize Eating and Drinking While Driving

Use these Driving Errors as discussion points. Have any of them contributed to close calls or near misses?