



Weekly Safety Tip

SCI Safety Slogan

Stop and take the call!
Keeping our roads safe!

James Lehrke-SCI

Of the Week

New Health Information Regarding Cell Phones, Cell May Cause Hearing Loss

Cell phone use causes high frequency hearing loss, study finds

Published on 09/20/2007

Could cell phone use be associated with hearing loss? The answer is "yes," according to a study presented at the American Academy of Otolaryngology-Head and Neck Surgery Foundation's Annual Meeting & OTO EXPO in Washington, D.C. The study found that 100 people who had used mobile phones for over a year suffered increases in the degree of hearing loss over the span of 12 months. Furthermore, the study also discovered that people who used their phones for more than 60 minutes a day had a worse hearing threshold than those with less use.

High frequency hearing loss is characterized by the loss of ability to hear consonants such as s, f, t, and z, even though vowels can be heard normally. Consequently, people hear sounds but cannot make out what is being said.

The authors warn users of cell phones to look out for ear symptoms such as ear warmth, ear fullness, and ringing in the ears (tinnitus) as early warning signs that they may have an auditory abnormality. They also suggest the use of earphones, which they found to be safer than holding a mobile phone up to the ears.

"Cell phone" is the common name for a wireless telephone, a hand-held phone with built-in antenna, often called cell, mobile, or PCS phone. Cell phones have three primary hazards which have been associated with their use:

- Causing explosions or fires;
- Radiation from transmitting the signals; and
- Driver distraction.

The Federal Communications Commission (FCC) and the Food and Drug Administration (FDA) each regulate wireless telephones. FCC ensures that all wireless phones sold in the United States follow safety guidelines that limit radiofrequency (RF) energy. FDA monitors the health effects of wireless telephones. Each agency has the authority to take action if a wireless phone produces hazardous levels of RF energy.

Explosion/fire hazard

There have been many stories and rumor going around about cell phones starting fires at gas stations or in flammable atmospheres.

While there appears to be no evidence that cell phones have caused such explosions, many large oil companies are posting warning signs which warn against the possibility of an explosion when fueling a vehicle while using a cell phone. Likewise manufacturers of cell phones include warnings to users to turn off the phones in explosive atmospheres. Employers may wish to make this a policy for employees who refuel vehicles.

Also the Mine Safety and Health Administration has published a set of "Best Practices" with the following recommendations for cell phone users:

- Read your instruction book. Mobile phone makers print cautions in their user handbooks that warn against mobile phones in gas stations, fuel storage sites, and chemical factories.
- Turn off your mobile phone before entering any area with a potentially explosive atmosphere (For example: areas around degas wells; coal storage areas; fueling areas, such as gas stations;

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Source:www.kelleronline

below deck on boats; fuel transfer storage facilities; chemical transfer and storage facilities; and areas where the air contains chemicals or particles, such as coal dust, grain, dust, or metal powders).

- Do not transport or store flammable gas, liquid, or explosives in the same compartment of your vehicle that contains your mobile phone and its accessories.

Employers who have explosive atmospheres in the workplace may wish to institute a “No cell phone” policy in those areas, as indicated by the manufacturer’s literature.

Radiation hazard (RF energy)

All cell phones sold in the U.S. must meet FCC’s guidelines for RF emissions. The FDA’s Center for Devices and Radiological Health stated in 1993 that it did have enough information at that time to rule out the possibility of risk, but that if such a risk exists, that it would probably be small. Currently, according to the FDA, scientific evidence does not show any negative health effects from the low levels of electromagnetic energy emitted by mobile phones.

A Finnish study suggests that radiation from cellular phones may affect the biochemistry of cells in mobile phone users, but the research doesn’t show whether or not cell phones are a health risk. A molecular biologist at Finland’s Radiation and Nuclear Safety Authority said that, based on the study, there was not enough information to determine whether cell phones are a safety problem.

While studies generally have found no link between cell phones and brain cancer, according to the FDA, there is some conflicting scientific evidence that may be worth additional study the agency states.

The FDA does suggest some ways to reduce the amount of RF exposure are to:

- Limit conversations;
- Use roof mounted antennas to put greater separation between the user and the radiation source; and
- Avoid using the phone when the signal is poor.

The British government recommends that children’s use of cell phones be limited to essential calls as a precaution to protect a vulnerable population with still-developing nervous systems.

Cancer researchers also do not recommend the use of so-called RF shielding devices, which claim to reduce exposure from electromagnetic emissions while not interfering with the communication signal. According to the FTC, shields that block only a small area of the phone, such as the earpiece, are ineffective because the entire phone emits radiation. And because these shields tend to interfere with the phone’s signal, they cause the phone to draw more power to try to make contact with the tower, which could actually increase the amount of radiation emitted.

Driver Distraction

Much media attention has been given to stories of cell phones and their distractive effects upon the operators of motor vehicles. A recent study has shown that:

- Cellular phone use of any type leads to significant increases in non-response to traffic situations and an increase in response time.
- The more intense and complex the conversation, the greater the likelihood that the operator will overlook traffic conditions, and show an increase in response time. The distracting effect is similar to that of a driver turning on and tuning a radio. And while any calling tends to retard driver response to road conditions, placing calls or more casual conversations are less of a distracter.
- For drivers over age 50, the distracting effect of cell phone use is two- to three-times as great as that of younger drivers for all aspects of cell phone use.
- Familiarity and experience with using the cell phone appears to bear no relation to the distracting effects of using the phone on driving safety.

The use of head-sets has not impacted the safety issues. A study published by the National Safety Council has shown that driver distraction is the same with either a hand-held or hands-free phone. A University of Utah study showed that using either device slowed driver reactions time to road conditions anywhere from 10 to 30%.

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Drive without distractions, stop and make the call to keep the roads safe.

Emission Standards for Non-road Diesel Engines and Tier 3 Technical Relief Provision

SUMMARY: In this rulemaking, EPA is making certain technical corrections to the rules establishing emission standards for non-road diesel engines. In addition, EPA is amending those rules to provide non-road diesel equipment manufacturers with a production technical relief provision for Tier 3 equipment which is similar to the technical relief provision already available for Tier 4 equipment. Like the Tier 4 provisions, the new Tier 3 technical relief provision deals with a situation where an equipment manufacturer which is not vertically integrated with its engine supplier is unable to complete redesign of the equipment within the time required by rule (here, the Tier 3 rule). To be eligible, the equipment manufacturer must show both that its inability to furnish a compliant equipment design is due to the engine supplier, and that the equipment manufacturer has exhausted other flexibilities already provided by the Tier 3 rule. The amount of relief under the Tier 3 technical relief provision is somewhat less than is available under the parallel Tier 4 provision, however. The Tier 3 Technical flexibility will apply up to a maximum of an additional 50% of production beyond the original 80% provided by the Tier 3 production flexibility provision. In addition, each grant of Tier 3 technical relief is associated with the likelihood of earlier use of Tier 4 non-road diesel engines. The rule thus provides that for each one percent of use of Tier 3 technical relief, some percentage of the automatic Tier 4 production flexibility for the same engine power category, and some percentage of potential Tier 4 technical relief, is no longer available. The percentage varies based on the type of engine for which Tier 3 technical relief is granted, the largest Tier 4 "penalty" being associated with use of the higher emitting earlier tier engines.

DATES: This direct final rule is effective on November 19, 2007, published in the *Federal Register* September 18, 2007, page 53126 Source:www.kelleronline

OSHA Offers Guidance on Thermoforming Safety

Published on 09/14/2007

OSHA has released a new thermoforming module for the Plastics Machinery section of the Agency's Machine Guarding eTool. The module reviews potential hazards associated with thermoforming, a manufacturing process using a thermoplastic sheet or film that is fed into an oven, and then heated, formed, and trimmed.

The new module goes into detail about the various stages of the thermoforming process, including loading a roll of plastic onto a roll-fed thermoformer machine and threading the plastic into it through end-feed rollers. It also examines the forming, trimming, and stacking process and how employers and employees can avoid the hazards associated with these processes.

The thermoforming module was developed with input from the Society of the Plastics Industry (SPI) Inc. as part of the OSHA and SPI Alliance. Source:www.kelleronline

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