

# Safety Corner



BY: Jerry Coney

This month's safety article is based upon a sometimes controversial topic involving safe riding and that is always wearing a helmet when you ride your motorcycle. I know that there are some who resist

wearing one unless forced to by virtue of riding in GA or some other state that has mandatory helmet laws, however, wearing a helmet can save your life and prevent or minimize head injuries.

In 2012, 18 states have universal helmet laws, 29 have partial laws and three have no helmet laws whatsoever. Whether you like it or not the statistics prove that helmets can and do save lives, and I will provide you some statistics to backup the point. Also, please understand that I am not advocating mandatory helmet laws, but rather, self compliance based on statistics that show DOT approved helmets save lives, and minimize or prevent head trauma. According to the National Transportation Safety Board in 2010, there are more than 12 motorcyclist fatalities in the United States each day, or over 4380 annually, and the leading cause of death in those fatalities is head injuries. Will wearing a helmet absolutely save your life, no, but will it improve your odds of surviving, absolutely! Motorcycles comprise just 3% of vehicles on the nation's road yet are involved in 13% of fatalities.

The National Highway Transportation Safety Administration (NHTSA) estimates that helmets saved 1,784 motorcyclists from death in 2007, and if all motorcyclists had worn helmets, an additional 800 lives could have been saved. According to NHTSA, DOT approved helmets are considered to be effective in 37% of the cases in preventing fatal injuries to motorcyclists. Essentially, this means that for every 100 motorcyclists

killed in crashes while not wearing a helmet, 37 of them could have survived if all were wearing helmets.

I am not going to belabor the point, but study after study in State after State; the documented results remain the same, helmets save lives and prevent fatal injuries. An example closer to home is Kevin Dady's accident last year where his helmet bore evidence of substantial damage from contact with the road and at the same time, Kevin did not sustain any head injury whatsoever. I'm not suggesting that Kevin would not have survived the accident, but the lack of head trauma is irrefutable. While the helmet is no longer available, a photo of it is and it is included to document the damage it absorbed instead of Kevin's head receiving the injuries.

A modern motorcycle helmet is generally considered to be an outgrowth of technology that was developed during WW II, and has remained very much unchanged since then. However, what has changed in helmet manufacture are the materials used to make them. The modern helmet is comprised of four separate components, a hard outer shell, a crushable interior foam lining, followed by a comfort lining and a chin strap.

The outer shell may be made of a very strong plastic, composites, Kevlar or carbon fiber. The purpose of the outer shell is to provide resistance to abrasion and protection from penetration by foreign objects. The foam inner lining is considered the most important ingredient for helmet safety, and most motorcycle helmets use a thick layer of expanded polystyrene foam, which possesses properties which make it ideal for helmet usage. Expanded polystyrene foam is rigid yet lightweight and crushable. The sole purpose of the foam is to absorb kinetic energy from a crash that would otherwise be transferred to the riders head and brain.

The next layer in the helmet is a padded interior lining, designed to ensure a comfortable yet snug fit. Some helmet manufactures incorporate removable components of various sizes within this

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liner to fine tune fit. Also, some manufactures have incorporated liners that are washable. The last component of the helmet is the chin strap, a

relatively simple device but nonetheless important component that ensures the helmet stays put during a crash.

You have probably noticed that I have referenced DOT approved helmets several times during the article, and that is because when choosing a helmet, you want to ensure that the helmet meets either DOT or Snell Memorial Foundation safety requirements. Both of these organizations perform rigid procedures for testing the (1) **Impact** or shock absorbing capacity of the helmet; (2) the **Penetration** resistance of the helmet to a sharp object; (3) **Retention**, or the chin strap's ability to remain fastened absent stretching or breaking and lastly, (4) The field of **Peripheral** vision which must be a 105 degrees on each side exceeding normal field of vision by 15 degrees.

When you purchase a helmet, make sure that it is right for you. Sizes such as XS, S, M, L, and XL and so on are not universal fits. Each manufacture is slightly different, so fit the helmet to your specific needs and make sure it's comfortable, for a tight fitting helmet will become a major source of distraction the longer you wear it. The helmet should be snug and perhaps even a little tight until it is in place and sitting atop your head. It should not tilt like a hat or be too large where it can move around. Too large and it will allow

your head to move inside it, allowing for an increase in wind noise and it could potentially come off when you need it most. With a ¾ or full helmet, the cheek pads should touch your cheeks without being uncomfortable. No gaps should exist between your temple and the brow pads. Fasten the straps and make sure the helmet remains comfortable and secure with out being too tight. With a full helmet and the lower chin protection in place make sure that there is no contact between the helmet and your chin.

Make sure you take proper care of the helmet so that if you ever need it, it will be there to protect you. If you drop your helmet, you should consider replacing it, for it is difficult to impossible to determine if you damaged the integrity of the helmet. Most helmet manufactures recommend that you replace the helmet every two to four years for the materials protective qualities may deteriorate with time and use. Further the chin straps may fray or weaken and the straps attachments points may loosen. From my own personal experience, I do not store the helmet in the hot

environment of a garage, but rather inside my house. My experience with storing the helmet in the garage is that the extreme temperatures of a garage can help breakdown the materials that form the protective and comfort lining of the helmet. Also, guys may prefer to wear a doo rag when using the helmet to keep perspiration and oils off

the interior lining if the helmet. If you are going to wear a doo rag, then my suggestion would be to use it when you fit yourself for a new helmet to ensure proper fit.

As always ride safe, ride with the proper gear and **Always** wear a helmet!

