

## Section A Personal Protective Gear

Protective gear has several purposes, including providing comfort, increasing visibility, and offering protection. Motorcycle protective gear helps you stay comfortable and provides improved visibility if it is brightly colored and reflective. Also, protective gear can provide protection against the elements in all kinds of riding conditions and, in the event of a crash, it may prevent or reduce injuries.

Most recreational activities and sports have their own protective clothing and equipment. Motorcycling is no exception. Every rider and passenger should wear sturdy over-the-ankle footwear with non-slip soles, long pants, a good jacket, full-fingered gloves and, above all, a helmet manufactured to meet Department of Transportation (DOT) standards with proper eye protection.

**Helmets** Helmets work well in accomplishing their intended function to protect the head and brain from injury. Some myths about helmets are that they cause neck injury, block vision, or impair hearing. However, helmet effectiveness has been confirmed by research. So, be safe and always wear a helmet while riding.

### a. Helmet Construction

There are four basic components of a DOT-approved helmet that work together to provide comfort and protection. They are: 1) an outer shell, 2) an impact-absorbing liner, 3) comfort padding, and 4) a retention system.

The outer shell, often made of fiberglass, molded plastic, or polycarbonate composites, is a tough substance designed to keep sharp or hard objects from penetrating into the head, and to absorb impact energy by deforming. Impact damage may be invisible to the eye. So if a helmet takes an impact, it should be inspected and replaced as necessary.

The liner is usually made of impact-absorbing polystyrene. It is a dense layer that cushions and absorbs shock. It works in unison with the outer shell, and together they offer significant protection. They spread the forces of impact throughout the helmet's materials. The more impact energy that is deflected or absorbed, the less there is of it to reach the head and brain.



Cross-Section

**(Basic Rider Course Rider Handbook – used as the reference source for all motorcycle rider training in California)**