When preparing to ride in cold weather, several layers of clothing are necessary, usually starting with thermal underwear. Extra layers of pants, shirts and jackets should be worn to aid body heat in forming a warm insulation. Topping your clothing with a windproof outer layer will prevent the cold wind from reaching your body.

Another alternative when riding in cold weather is to wear a winter riding suit. These lightweight, insulated suits worn over your street clothes provide the warmth needed to prevent hypothermia. Another option available to motorcyclists is an electrically warmed suit or vest. These items can be quite effective.

Regardless of temperature, wearing protective riding gear, including a long-sleeved top and long pants, will reduce your chances of becoming dehydrated.

The gear you wear when riding can also serve to make you more visible in traffic. Choose brightly colored gear when possible. Only two riders of the 900 crash cases studied by "The Hurt Report" were wearing brightly colored clothing. If you wear dark clothing, retroreflective vests may be worn over your jacket. Also, it is a good idea to affix reflectorized tape striping to the gear you wear regularly when riding. Jackets made with retroreflective material also will help make you more visible at night.

Finally, there are gear enhancements available for even more crash protection such as body armor, spine protectors and kidney belts. These may be single items you wear under your gear, or they may be built into the protective gear you buy.

**Rain Suits**

For the avid motorcycle rider, a rain suit or waterproof riding suit is a must. A dry motorcyclist will be much more comfortable and alert than a rider who is wet and cold.

One-or two-piece styles are available in a variety of materials and colors, the most common being polyvinyl chloride (PVC) and nylons. High-visibility orange or yellow are good color choices.

There are usually only small differences in rain suit styles. The pants should have elastic at the waist and stirrups (or tie-strings) on the legs to wrap around the rider's boots. The jacket should have a high collar that is held closed by a snap or adjustable hook and loop fastener. The front zips up and a wide flap fastens across the opening. The wrist openings fit snugly with more elastic.

Also consider purchasing glove and boot covers. Most glove covers are large enough to fit over gauntlet type gloves without interfering with hand flexibility. The boot covers have tie-strings on top and should be worn under the pants.

**Hearing Protection**

Long-term exposure to engine and wind noise can cause permanent hearing damage, even if you have a quiet motorcycle and wear a full-face helmet. Whether you choose disposable foam plugs or reusable custom-molded devices, properly worn hearing protection reduces noise, while allowing you to hear important sounds like car horns and sirens. Make sure you follow your state's laws when using hearing protection.

For more information on the importance of protective gear and for answers to other motorcycle safety-related questions, visit msf-usa.org.
Helmets help protect your head in four ways. First and second, the outer shell resists penetration and abrasion. Third, inside the shell is the equally important impact-absorbing liner that absorbs more of the shock by slowly collapsing under impact. Fourth, the soft foam-and-cloth liner next to your head keeps you comfortable and the helmet fitting snugly. The retention system, or chinstrap, is the one piece that keeps the helmet on your head in the event of a crash. Both shell and liner spread the forces of impact throughout the helmet material. That’s why, in most cases, if a helmet has been damaged in a crash, it will not be protective in another mishap and should be replaced.

Consider how a full-face helmet makes riding more comfortable. It cuts down on wind noise in your ears and windblast on your face and eyes. It deflects bugs and other objects that fly through the air. A helmet even adds protection from inclement weather and reduces rider fatigue.

For more information on helmets, download the Motorcycle Safety Foundation’s Cycle Safety Information publication, “What You Should Know About Motorcycle Helmets.” It outlines helmet standards, construction, care and other important information.

Face Protection
Any motorcyclist who has been hit in the face by a stone or an insect can tell you about the benefits of face protection. Windshields and most prescription eyeglasses simply do not provide adequate protection. Wind, insects and pebbles may be blown behind a windshield Eyeglasses with shatterproof lenses may protect the eyes, but most don’t seal out wind which makes your eyes water.

The Hurt Report” states that motorcyclists with shields covering their faces suffered fewer facial injuries than those without it. It also reports that helmets providing full-face coverage with strong thin pieces and energy-absorbing liners are especially effective in reducing face injuries.

Face Shields
Face shields come in a variety of designs to fit most any helmet. Some flip up for convenience. There are non-flip types, such as the flat shield, that snap directly to the helmet. If you select a bubble shield (either a flip-up or a snap-on style) make sure that its compound curves do not distort your vision.

When using a face shield, be sure it is securely fastened to the helmet. It should be impact-resistant and free from scratches. Scratches can refract light and blur vision.

Tinted shields help avoid eye fatigue during daylight hours, but always wear a clear one at night. Make sure the shield you choose is designed for your helmet and does not interfere with any eyeglasses you may wear.

Face shields may be cleaned with a mild solution of soap and warm water or a quality plastic cleaner.

Goggles
Riders wearing goggles receive eye protection, but they are not protected from possible injury to other parts of the face. As has been emphasized before, full-face helmets and face shields provide better protection for the entire face.

Goggles should be securely fastened over the helmet so they do not blow off. Most frames have a rubber/cotton-fiber strap that resists tearing and stretching.

Maintain your goggles properly: dirty goggles can impede safe sight. Whether you wear a face shield or goggles, tinted lenses may be used during the day, but you should use clear lenses at night.

Footwear
Sturdy, over-the-ankle boots can protect you from a variety of riding hazards. They protect against burns from hot exhaust pipes and impacts from flying road debris. Boots with oil-resistant, rubber-based composite soles will give you a strong grip on the pavement and help keep your feet off the pegs. If the boots have heels, they should be low and wide. In case of a crash, boots help provide valuable protection against foot and ankle injuries.

Motorcyclists often wear leather because it is durable and abrasion-resistant, giving good protections against injury. Many modern fabrics, such as Cordura® and ballistic nylon, are also abrasion- and wind-resistant, waterproof or have high-visibility properties. Many motorcycle dealers carry a varied line of riding jackets and suits. Your riding habits, budget and local weather conditions will influence your choice of purchase. Shop wisely, making sure your purchase fits properly and is specifically made for motorcycling.

Your gear should fit comfortably without binding. However, wide-flared pants, flowing scarves and similar items should be avoided because they could become entangled in the motorcycle. A jacket with a zippered front will be more wind resistant than a jacket with buttons or snaps. A flap of material over the zipper of a jacket gives additional protection against the wind. Jackets with sleeves tapering to fitted cuffs and waists are recommended to help keep wind from blowing into the garment. Be careful about collar style—a large, loose collar will flap when riding and may irritate your skin or distract you.

Remember that even in relatively warm weather, moving air is cooler and constant exposure to wind when riding may cause a chilling effect that leads to hypothermia. Hypothermia is a condition of subnormal body temperature that can cause loss of concentration, slowed reactions, and loss of smooth, precise muscle movement. You may lose your ability to concentrate and react to changing traffic conditions. Proper riding gear, such as a windproof jacket and insulated layers of clothing, is essential.

Riding gear that is just right for cold-weather riding may be too hot once you stop. Dress in layers so that the outer clothing may be removed as necessary.