The American Trauma Society is a nationwide organization of professional and lay individuals, institutions, and corporations dedicated to the prevention of trauma, or injury, and the improvement of trauma care.

#### The American Trauma Society:

- strives to increase public awareness of the term "trauma" so that it becomes a household word;
- initiates and coordinates national prevention programs aimed at reducing the incidence and severity of trauma; and
- promotes the use of trauma systems throughout the nation. Become a partner in reducing trauma. Join the ATS. For donation or membership information, call (800) 556-7890.



American Trauma Society 8903 Presidential Parkway Upper Marlboro, MD 20772-2656 Myths & Truths About Bicycle Safety

BICYCLE HELMETS

Bicycle riding is recreational and fun, and more and more often it is becoming a valuable alternate means of transportation. As a result, cycling has become an increasingly popular activity for all ages. It is very common to see cyclists cruising around the neighborhoods and bike paths, pedaling on errands, whizzing long distances, and even commuting to work. As bike riding has proliferated in recent years, so has the need for cycling safety.

Despite all the bicycles on the roads, riders have a relatively casual approach to bicycle riding safety and they harbor a number of misconceptions. Whether one is riding just for fun or if cycling provides a more functional purpose, here are some myths and truths about bicycle safety:

Myth:

Bicycle riding is very safe. Few injuries occur.

## Truth:

The Consumer Product Safety Commission labels the bicycle as a dangerous consumer product. Emergency departments treat over 500,000 bicycle injuries each year. In addition, there were 856 cyclist-deaths annually in the U.S. in 1990; 256 of these were children 15 years old or less. However, *PREVENTION* - through training, using proper equipment and taking precautions can greatly reduce injuries.

Myth:

I'll never get hurt just riding in the neighborhood.

## Truth:

Eighty-four percent of bicycle-related injuries occur within 5 blocks of home. Additionally, a large percent of fatal car/bicycle crashes happen on 2-lane streets with speeds under 30 mph.

## Myth:

Helmets are unnecessary because bike riders rarely hit their heads.

### Truth:

The greatest danger of bicycle riding is a head injury and associated brain damage. A fall from a bike at 15 mph with one's head hitting a stone or curb can produce serious or fatal brain damage. Three out of four deaths from bicycle incidents involve head injury and one-third of bicycle injuries are to the head and face. Helmets protect the head from abrasions and reduce likelihood of fracture or penetration. Research shows that helmets reduce risk of head injury by 85% and risk of brain injury by 88%.

Myth:

All helmets offer the same protection, and I can borrow anyone else's helmet, no matter the size or fit.

## Truth:

Helmets are not alike in protection. (See box). The hard outer-shell type helmet with an energy-absorbing liner is one of several that offers an effective form of protection. Buy only a helmet that meets ANSI or the Snell Memorial Foundation standards. A helmet must be properly fitted to each

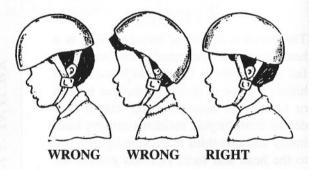
individual for maximum protection, and it must fit snugly but not tightly. It should not rock from side to side or from back to front.

# Myth:

Any way I wear my helmet is okay.

### Truth:

The helmet must sit at the correct angle on the head, and not be tilted over the forehead or on the back of the head. (See diagram.)



# Myth:

I don't need experience or instruction to ride anywhere.

## Truth:

Most bike crashes involving cyclists 12 years old and younger are due to error on the part of the cyclist, including inattention, inexperience and unsafe riding practices.

#### Remember:

- · Practice traffic laws and rules.
  - Stop at the end of the driveway, sidewalk, or alley to check for traffic and proceed only when there is an appropriate gap.

- Ride to the right, in the same direction as motor vehicles
- Act predictably; do not make sudden moves or shifts
- Give hand signals before shifting lanes or changing position
- Obey traffic signals and signs
- Obtain instruction for children on traffic safety rules. Many schools, police departments and even recreation centers teach bike safety or sponsor bike rodeos
- Learn critical bicycle handling skills such as scanning behind while continuing to ride straight. This skill is essential when turning or changing bike position and must be done before signalling to spot the appropriate gap in traffic.
- · Be visible riding at night
  - Use a white headlight and a rear light or reflector
  - Wear light colors, a reflective vest, and reflective tape around the ankles.
    NOTE: Riding in low visibility conditions - dawn, dusk, darkness, fog, or snow - is not recommended for children.
- Allow a child to ride in traffic only when 9 years old or older, depending on child's maturity, judgment, and experience. Studies show that few under nine fully understand traffic concepts like "right of way."
- Refrain from drinking and riding. Alcohol and drugs impair reaction time, judgment, and center of balance.
- Keep bicycle in good mechanical condition

## Myth:

Only children need safety equipment; adults rarely get hurt.

## Truth:

The percent of bicycle deaths in riders 21 years or older has gone up progressively as the use of bicycles in young and middle-aged adults has increased. In 1980, 31% of bicycle deaths were in patients 21 years or older, in 1984 it was 37%, in 1988 it was 44% and in 1990 it was 54%.

### **Types of Helmets**

Most approved helmets have a thick layer of firm polystyrene foam which crushes upon impact.

### A Hard Shell Helmet

has a hard plastic cover on the outside of the polystyrene shell. It offers extra protection from sharp objects such as curbs or rocks.

### A Soft Shell Helmet

is lighter because it does not have the hard cover. It usually has an extra thick layer of polystyrene which may be covered with a cloth cover.

There are some new helmet designs that use expanded polypropylene instead of polystyrene.

## Myth:

Community safety programs targeting bicycle safety are not effective in increasing helmet usage and decreasing bike injuries.

### Truth:

Extensive educational programs in Seattle, WA, boosted helmet usage among children from under 5% to about 40% in 5 years. In addition, the number of head injuries at a Seattle trauma center due to bicycle crashes dropped from an average of 20-25 cases per year to 11 in 1989 and 10 in 1990.

## Myth:

Children are resistant to helmet use.

### Truth:

Children do not mind wearing helmets as long as their peers wear them. They say that they would be more likely to wear helmets if a law was passed, because then no one would be different — everyone would be wearing one.

Bicycle riding offers many recreational and functional benefits for everyone to enjoy, but like any activity, there are risks that can be managed with proper safety precautions. Please adhere to the guidelines laid out here and enjoy safe riding for many years to come. Don't fall victim to one of its myths.

