

Prevention of Sports Injuries

Cycling

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PERSONAL FITNESS:

- Prior to cycling, participate in a gradual conditioning program with emphasis on stretching and strengthening exercises. A continued maintenance program throughout the season is beneficial.
- Remember to warm-up and stretch at least 5 – 10 minutes before cycling.
- Contact a local MWR Trainer for additional information on cycling conditioning. Many MWR Facilities provide safety/injury prevention information regarding preparation, conditioning, and training proper cycling techniques.

EQUIPMENT:

- **The biggest preventable risk factor for bicycle head injury is failure to wear a bicycle helmet!** Studies show that helmets were found to be 85% protective against head injury and 88% protective against brain injury. WEAR A HELMET!
- Proper fit of the bicycle is essential to maximize rider performance and to prevent overuse injuries. At the knee joint, allow approximately a 15 degree angle on full extension. When cycling, the knee should not be placed in full extension or hyperextension.
- Bicycle safety equipment such as lights and reflectors, should be required on all bicycles used for training, recreation, and transportation.
- An “emergency” safety bag is recommended to carry a cell phone or money for a pay phone, insurance card, personal ID card, an emergency contact card, animal protection devices (such as pepper-spray).
- Other beneficial cycling equipment includes wear of brightly colored clothing / safety vest, padded gloves on handlebars, and well-fitted and padded bicycle pants.

TRAINING / TECHNIQUE:

- Be aware of primary risk factors for bicycle injury, and practice safe training techniques to assist in preventing injury occurrence: excessive speed, motor vehicle traffic, fatigue, poor road conditions.
- Heavily loaded bicycles may decrease the ability of the cyclist to respond quickly to the avoidance of potholes, broken pavement, rider fatigue, and excessive speed on downhill portions.
- Increased risk taking behavior (such as high speeds on downhills) may contribute to injury.
- Be cautious at road intersections; know and use bicycle signage for turns.
- Use all senses, especially hearing and seeing, etc. Avoid the use of head radios, and ensure vision is not impaired.

ENVIRONMENT:

- Population based injury rates are the highest during periods when the largest numbers of cyclists are riding: months with good weather, daylight hours, and weekends. Fatal collisions occur most commonly in urban areas. Roads with speed limits of 55 mph or greater produce a higher injury/fatality rate. Weather related injuries can be prevented by the use of appropriate clothing for cold, wet, or hot weather. Racing officials and cyclists should be aware of environmental factors (physical terrain and traffic controls) when selecting cycling courses. Cycle during daylight hours.
- Alcohol consumption should be discouraged during any athletic participation – especially cycling.
- Proper hydration and nutrition during activity is recommended to prevent fatigue and heat illness.

REFERENCE: Caine, J., Caine, C., and Lindner, K. *Epidemiology of Sports Injuries*. Human Kinetics Publishers, Inc., 1996.