Special Issue

Hughston Health Alert

6262 Veterans Parkway P.O. Box 9517 Columbus GA 31908-9517

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Inside This Special Issue:
The Games are here!

Welcome to our second of two special issues celebrating the 1996 Olympic Games in Atlanta, Georgia. Once again we have asked medical professionals who are providing medical care to the Olympic athletes to write about the sports with which they will be involved. The authors share information on the Olympic sports and athletes, and they discuss the recreational athlete's involvement in these sports.

In this issue, we present Olympic baseball, weightlifting, beach volleyball, swimming, and cycling. Rounding out the issue is an article on a local hero who will bear the Olympic torch, suggested reading about the Olympic Games, and a summary of how Atlanta became the host city for the Centennial Olympic Games.

We hope you have made plans to attend the Centennial Olympic Games in Atlanta, Georgia, or one of the outlying venues.

Todd A. Schmidt, M.D.
Editor, Atlanta, GA

Atlanta's Quest for Olympic Gold
What it took to host the Centennial Games

In 1987, Atlanta attorney Billy Payne founded the Georgia Amateur Athletic Foundation (GAAF), enlisted the support of Mayor Andrew Young, and began laying the groundwork for the city of Atlanta to host the Games of the XXVIth Olympiad. Some people laughed, but Payne persevered. He recruited a team of determined Atlantans to serve on the GAAF Board and continued working toward his dream.

In September 1987, the city of Atlanta, along with 13 other cities submitted a bid to the United States Olympic Committee (USOC) to

become the U.S. candidate city for the 1996 Olympic Games. The USOC site selection committee visited Atlanta in February of 1988. Atlanta made its final presentation to the Executive Board of the USOC in Washington, D.C. in April of 1988 and was selected as the U.S. city-designate to host the 1996 Olympic games. The selection by the USOC was based on organizing ability, quality of venues, hotels, airport, rapid transit, and proven ability to handle large numbers of people. Atlanta began preparing for the international competition against Athens, Greece; Belgrade, Yugoslavia; Manchester, England; Melbourne, Australia; and Toronto, Canada.

In the fall of 1988, the GAAF formalized the Atlanta Organizing Committee (AOC) Board of Directors, an advisory council and eight standing committees to carry out the activities necessary to complete the bid process as dictated by the International Olympic Committee (IOC). The city began hosting events, public awareness campaigns, and volunteer sign-ups. IOC members began visiting Atlanta to evaluate the city on areas such as transportation, sports facilities, telecommunications systems, and hotel networks. By January of 1990, volunteer sign-ups passed the 100,000 mark. Sixty-eight of 88 IOC voting members were hosted by the city of Atlanta — an unprecedented number.

According to the IOC, an Olympic host city has the following responsibilities: to finance the construction of all athletic venues, facilities, and the Olympic Village; to provide accommodations for the media, referees, and judges; to provide housing and meeting facilities for the IOC and International Sport Federations; to design and strike medals and awards; to provide an electronic signal for national TV networks; and to organize a program of cultural events.

On February 1, 1990, Atlanta's official five-volume bid document was delivered to the IOC office in Lausanne, Switzerland. The Olympic Bid Logo sums up the city's bid beautifully. The logo united three basic symbols: the letter "A," the star, and the circle. The "A" represents the city of Atlanta and when repeated five times forms a star. The crossbar of the "A" is interwoven through the star, forming a circle about to be joined. Each "A" (one in each of the colors of the Olympic Rings) represents the following: Access — superior access worldwide, air travel, and telecommunications; Accommodations — world class hotels, housing, and hospitality; Athletic facilities — modern sports facilities for all participants; Attitude — friendly, confident, harmonious, multicultural community; Ability — experienced, capable, qualified host city for major events.

The IOC's 96th General Session was held in Tokyo, Japan, in September 1990. It was at this session on September 18th that IOC President Juan Antonio Samaranch made the following announcement: "The International Olympic Committee has awarded the 1996 Olympic Games to the city of . . . Atlanta." By a vote of 51-35 Atlanta was triumphant. Atlanta's dream of Olympic Gold was now a reality.

***Cholly Minton** is the medical administrator for the Olympic softball venue. She is a sports medicine and orthopaedic research assistant in Columbus, GA.*

Olympic Baseball

July 20 - August 2, 1996

When the torch is lit and the 1996 Olympic Games begin, the world will have a front row seat for some of the most exciting sports action to be witnessed anywhere. Olympic baseball will take place in Atlanta-Fulton County Stadium — home of the Atlanta Braves. The Braves will be out of town during the Games, but Olympic baseball will be just as exciting.

Olympic baseball, which is sanctioned by the International Baseball Association, is played by many of the same rules as college baseball. The designated hitter may be used, and the same rules apply for substitution of players. Olympic baseball differs from college baseball because there is a 10-run rule in effect after seven innings, which means if one team is ahead by 10 runs after seven innings of play, it will be declared the winner of the game. Eight teams from around the world, representing Nicaragua, the United States, Australia, the Netherlands, Japan, Italy, Korea, and defending world champion Cuba, will compete in Atlanta for the gold medal, which will be awarded on August 2.

Leading the U.S. team is Skip Bertman, who is the baseball coach for Louisiana State University. The U.S. baseball team was strong during a recent summer tour, with an overall record of 36-6, including a 21-game winning streak and a sweep of a four-game series against Cuba. The U.S. team finished fourth in Barcelona in the 1992 Olympic Games with a record of 5-4, behind Cuba, Chinese Taipei (Taiwan), and Japan.

The elite baseball players expected to compete in Atlanta during the Olympics will be training hard before the Games and will probably bring a variety of sprains and strains with

them. A sprain is a partial or complete tear of a ligament, which connects two bones. A strain is a stretch or tear of a tendon, which attaches muscle to bone. Typical injuries expected during the Olympic baseball competition include rotator cuff strains and tendinitis (inflammation of the tendons), ankle sprains, and knee ligament sprains. Players can strain their rotator cuff (a group of four muscle-tendon units that wrap around the shoulder joint) by throwing a baseball over and over during practice and games. Over time, this repetitive high-velocity movement, which continuously strains the muscles, causes microtrauma. Eventually, the rotator cuff muscles begin to weaken and hurt. The pain signals that the muscles are beginning to tear. Although most rotator cuff problems occur from throwing, swinging a bat can aggravate shoulder problems in some athletes.

Most ankle sprains occur when baseball players hit a base as they are running, causing them to twist their ankle and tear the lateral (outer side) ligaments. Recreational athletes may sprain their ankle when they step in a hole on an uneven field. However, because the Olympic baseball games will be played on the well-groomed field of Atlanta-Fulton County Stadium, we hope that no player will suffer this injury.

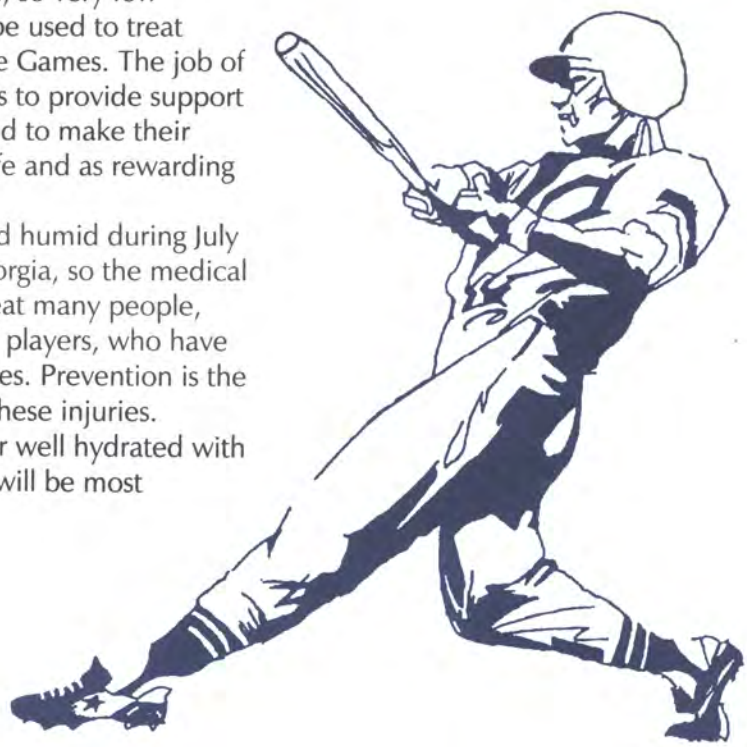
Knee ligament sprains usually occur when the athlete runs bases, twists while hitting, slides into a base, or tries to avoid a tag. Baseball players have also injured their knees when diving for a ball while trying to make a difficult catch.

The medical staff at the Athlete Care stations located at each venue will treat these injuries to help relieve symptoms so that the baseball players can continue to compete. Using heat along with massage and stretching before competition and using ice on the injured area after competition are the essential tools used to help keep the injured athletes comfortable and able to play. The International Olympic Committee enforces very strict drug policies, so very few medications can be used to treat athletes during the Games. The job of the medical staff is to provide support for the athletes and to make their competition as safe and as rewarding as possible.

It will be hot and humid during July and August in Georgia, so the medical staff expects to treat many people, including baseball players, who have heat-related injuries. Prevention is the key to managing these injuries. Keeping the player well hydrated with a variety of fluids will be most important. If a player does suffer a heat-related injury, he will immediately be taken to a cool place and treated with fluids and ice. When necessary, an injured athlete will be transported to one of the local hospitals or to the polyclinic in the Olympic village, which is like a small hospital. All the athletes will receive the best available medical care.

Baseball is baseball, whether it is played in the backyard or on the immaculately kept green of the Olympic baseball field. It is the player who tries to give his best effort — that 110% — who often ends up with a sprain or strain. This is when the sports medicine professionals begin to give their 110%. Although we hope we can simply watch some mighty good baseball, we will be ready just in case.

***Barney Poole, M.Ed., P.T., A.T.,C.**, is chief athletic trainer for the Olympic baseball competition. He is a physical therapist and athletic trainer in Atlanta, GA.*



Swimming in the Olympic Games

July 20 - August 2, 1996

Olympic swimming has undergone many changes in the last 100 years and is now considered one of the major sports of the summer Games. In the 1896 Olympics, there were only four swimming events: 100-meter freestyle for sailors only and 100-meter, 500-meter, and 1200-meter freestyle. Two Olympic swim events held in the early 1900s that you will not see this year in Atlanta are the 200-meter obstacle course and the underwater swim. When women received their first invitation to participate in the Games in 1912, they competed in 100-meter freestyle, 4 x 100-meter relay, and high diving. Currently, there are 32 medal events for men and women.

Speeding to the finish

Changes in competitive swimming have led to faster performances. In 1896, the 100-meter freestyle was won with a time of 1 minute 22 seconds; in 1992, the winning time was 49 seconds. Improved training techniques have played an important role in increasing swimming speed and endurance. In addition to hours of practice in the pool each day, swimmers devote more time than ever before to weight training to build strength and endurance.

Changes in swim suits have enabled swimmers to increase their speed. In 1912, the women actually wore wool "swim dresses" for competition. Swimmers now wear suits made of special materials and shave all exposed body hair to reduce water resistance.

Designers have even created faster swimming pools by finding ways to reduce the turbulence during competition. These modern pools are deeper, have wider lanes for each swimmer, have larger gutters on the poolsides, and have rotating disks on lanelines to dampen waves. The new Olympic swimming pool in Atlanta uses these designs, and many people consider it to be the fastest pool in the world.

The importance of quick and efficient turns is unique to swimming. In the sprinting events (such as the 50-meter and 100-meter events) where the difference between first and third place is often less than 1 second, the importance of the turn is obvious. In the longer events, the turns become particularly critical as fatigue sets in. During the Olympics, watch for races to be won or lost at the turn.

Swimming for gold

The greatest individual achievement in swimming took place at the 1972 Olympic Games in Munich when Mark Spitz won seven gold medals — all in world-record times. Two less accomplished but equally well known gold medal winners include Clarence "Buster" Crabbe and Johnny Weissmuller, who are better known for their roles as Tarzan.

This summer watch for two-time Olympian and gold medalist Janet Evans and for 1992 Olympian and gold medalist Jenny Thompson.

Common injuries

Swimmers rarely incur the contact injuries common to many of the other premier Olympic sports. They are, however, prone to overuse injuries. The most frequently treated injury involves overuse of the shoulder. When you swim, you rotate the shoulder joint over and over as you pull your arm in, through, and out of the water during a stroke. Competitive swimmers make this motion so many times at each practice and competition that they often irritate their rotator cuff (four muscle-tendon units that wrap around the shoulder joint). As with most overuse injuries, rest generally is an effective treatment. Sometimes, temporarily switching to another stroke relieves the irritation while allowing the swimmer continue training.

Whether you're spectating at the Georgia Tech Aquatic Center or from home, watch these athletes race through the water with lightning speed.

***Michael Behr, M.D.**, is providing medical care for athletes at the 1996 Olympic swimming competition. He is an orthopaedic surgeon who specializes in sports medicine in Atlanta, GA.*

Olympic Weightlifting

July 20 - 30, 1996

Man's innate fascination with physical prowess can be traced to the beginning of recorded history. References to weightlifting are found in numerous ancient writings. A 5000-year-old Chinese text describes prospective soldiers having to pass lifting tests. Weightlifting was also a part of training for athletes in ancient Greece.

The first weights used generally were stones, which were lifted with one hand. These weights later became dumbbells, or weights mounted on each end of a pole.

As sportsmen strove to organize athletes for competitions in the 1800s, weightlifters were on the cutting edge. European immigrants to America, particularly Scots, had brought with them a strong competitive heritage that included weightlifting.

Weightlifting was included as an official sport of the 1896 Olympic Games, and it became a regular Olympic event in 1920. Three lifts were standard by 1932: the press (subsequently eliminated after the 1968 Games), the snatch (taking the bar from the floor over the head in one movement), and the clean-and-jerk (taking the bar from the floor over the head in two movements). In 1932, there were five weight classes; today, there are 10 (Table).

Although they reigned as world and Olympic champions through the 1930s, 1940s, and 1950s, the U.S. men's weightlifting team is currently ranked 31st in the world due to their below-average showing at the 1995 World Championships. The Russians hold the team title, followed by the Chinese and Bulgarians. The U.S. men's team does have talented members who are sure to be medal contenders this summer in Atlanta. Team members to watch are Bryan Jacob, 59 kg class; Pete Kelly, 99 kg class; Wes Barnett, 108 kg class; and Mark Henry, 108 + kg class. Unfortunately, the United States will not be fielding a full team in July because of their low world ranking.

Women also participate in weightlifting in nine weight classes. Although not yet an Olympic sport, women's weightlifting has been a part of the Women's World Championships since 1987. The U.S. women's weightlifting team is ranked fourth in the world behind China, Bulgaria, and Chinese Taipei (Taiwan). We hope to have the women's sport recognized as an Olympic event by the 2000 Games in Sidney, Australia.

If you live in Georgia or plan to visit the state before the Olympics, tour one of the state weightlifting team training centers, such as Coffee's Gym in Marietta, Georgia, and Team Savannah in Savannah, Georgia. Team Savannah has been named the Olympic training site for weightlifting in the United States by the International Olympic Committee. Team Savannah is known for having the largest Olympic lifting facility in the world and for having the largest competitive team in the United States.

Keep America strong; keep lifting!

Michael G. Popson, A.T.,C., C.S.C.S., C.P.T.*, is an assistant athletic trainer for the 1996 Olympic weightlifting competition. He is the director of sports medicine at Candler Hospital in Savannah, GA.*

Men's Weight Classes	Women's Weight Classes
54 kg (up to 119 lbs)	46 kg (up to 101¼ lbs)
59 kg (up to 130 lbs)	50 kg (up to 110 lbs)
64 kg (up to 141 lbs)	54 kg (up to 119 lbs)
70 kg (up to 154¼ lbs)	59 kg (up to 130 lbs)
76 kg (up to 167½ lbs)	64 kg (up to 141 lbs)
83 kg (up to 182¾ lbs)	70 kg (up to 154¼ lbs)
91 kg (up to 200½ lbs)	76 kg (up to 167½ lbs)
99 kg (up to 218¼ lbs)	83 kg (up to 182¾ lbs)
108 kg (up to 238 lbs)	83 + kg (more than 182¾ lbs)
108 + kg (more than 238 lbs)	

Table.

Olympic Beach Volleyball

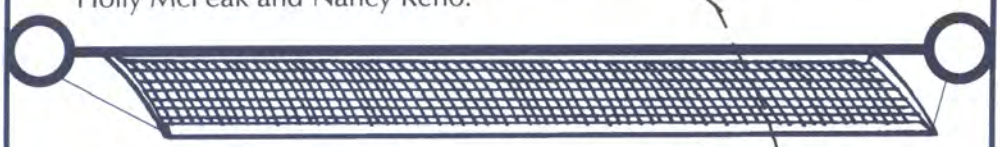
July 23 - 28, 1996

Beach volleyball was played as a demonstration sport in the 1992 Olympic Games in Barcelona, but it will be played for medals at the 1996 Centennial Olympic Games in Atlanta, Georgia. The high level of skill and athleticism required, combined with the tremendous growth and interest in the sport, has made tickets to this event some of the most sought after of the upcoming Games.

The sport developed on the beaches of California in the 1920s, becoming popular in the 1950s and 1960s. The 1980s saw the sport explode onto the beaches of Brazil, France, Italy, and Japan, with the first World Championship held in 1987 in Rio de Janeiro, Brazil.

The beach volleyball court is the same as the hard indoor court except the surface is sand. The game itself requires power and finesse, as well as strategy, because each team has only two players instead of six and it is harder to move quickly and to jump in the sand. Many of the U.S. athletes are former collegiate volleyball stars who have transferred their skills to the sand court.

Names to watch for on the U.S. men's team include the long-time King of the Beach, Sinjin Smith, and the current number 1 player, Karch Kiraly. In the women's competition, watch for the team of Holly McPeak and Nancy Reno.



Serious injuries, such as fractures and severe sprains, in beach volleyball are not common. A sprain is a partial or complete tear of a ligament, which is tissue that connects bones. However, minor ankle sprains occur often and sometimes must be treated aggressively so the athlete can remain in a tournament.

Overuse injuries outstrip traumatic (sudden) injuries. Shoulder problems may develop from repetitive strain on the nerves and the rotator cuff (four muscle-tendon units that wrap around the shoulder joint). Back pain can be caused by the repetitive extension required to place or hit the ball.

Minor eye injuries sometimes occur when athletes get sand in their eyes. Sun and heat are always potential threats because they can cause sunburn and heat stroke. The athletes are usually educated about heat-related injuries and are well conditioned. It is the spectators who may be at the greater risk. Remember to wear sunblock and a hat and to drink fluids constantly to fight the effects of this summer's sun and heat.

***Todd A. Schmidt, M.D.**, is the chief medical officer for the 1996 Olympic beach volleyball competition. He is an orthopaedic surgeon who specializes in sports medicine in Atlanta, GA.*

Olympic Road Cycling

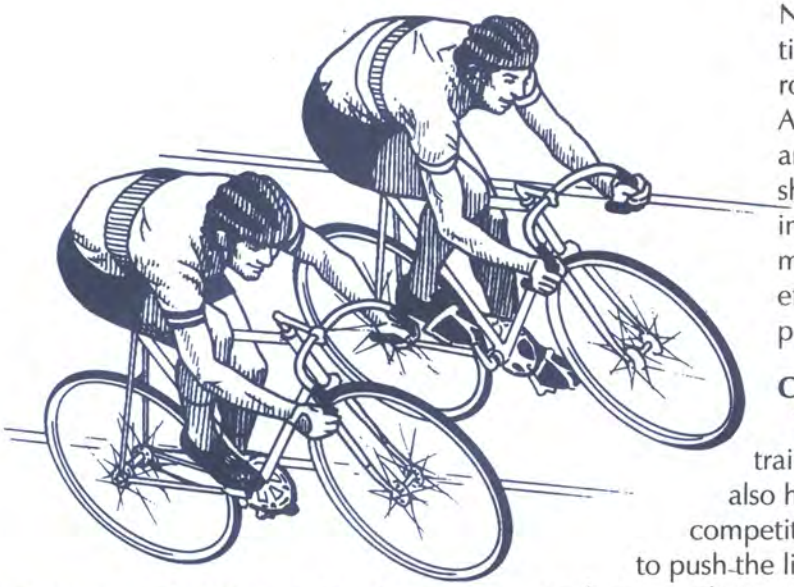
July 21, July 31, and August 3, 1996

Road cycling is one of the fastest paced competitions in the Olympics, with racers reaching speeds as high as 75 kilometers (47 miles) per hour. High speed makes cycling exciting for the spectators but dangerous for the racers. The 1996 Olympic road cycling competition includes three races: the women's road race on July 21, the men's road race on July 31, and the men's and women's time trials on August 3. All races will be held on a closed loop circuit on the streets of Atlanta, Georgia.

Road races and time trials

In the road race, all racers start at the same time and try to be the first to complete a specified number of laps. The men race 210 to 240 kilometers (130 to 150 miles), and the women race 90 to 110 kilometers (55 to 68 miles). The large group typically splits into small clusters of racers in the lead (called the break and chase) followed by the main group comprising most of the racers (called the peleton). Any racer who drops back more than 15 minutes behind the main group is removed from the race. In each cluster, racers frequently and purposely take turns leading so the other racers can "draft," or follow the leader closely. Although this technique saves energy for the drafting racer, it increases the risk of crashing because the bikes often are only 6 to 12 inches apart.

The object of the time trials is to finish with the fastest time. Each racer in a group of 10 to 15 is released from a start house at 90-second intervals. Generally, one group is allowed to finish before the next group starts. The men race 40 to 50 kilometers (25 to 31 miles) and the women race 25 to 30 kilometers (15 to 19 miles).



Narrow racing tires minimize rolling resistance. A toe clip or cleat anchoring the shoe to the pedal improves mechanical efficiency of pedalling.

Success at the Olympic level

Several factors influence the success of each cyclist. A racer must be in peak physical and mental condition. Eating a balanced diet that is high in carbohydrate and protein and low in fat is a must for training. On race day a male cyclist may consume 4500 calories and a female may consume 3000 calories, with both drinking 3 to 5 quarts of fluids. Racers develop strength and stamina through a rigorous program of weight training and of sprint and distance training on their bikes. Successful racers may owe some of their success to the presence of a greater percentage of slow twitch muscle fibers (which improve stamina) in their quadriceps muscles than the percentage present in average people.

Technique is another important element of success. Years of competition and observation of successful racers teach the athletes when to lead, when to draft, how to turn corners rapidly, how to ride to conserve energy, and how to minimize risk of collision.

The bike itself is optimized for performance. Using a light weight alloy frame and only necessary equipment minimize the weight. Proper shape and certain handlebar styles help decrease wind resistance.

Common injuries

These highly trained athletes are also highly competitive and inclined to push the limits of their endurance. Their competitiveness on race courses inevitably leads to crashes and injuries. Fortunately, many crashes just produce abrasions, or "road rash." Sometimes, however, severe injuries occur. Fractures of the wrist, elbow, and collarbone can result from falling on the outstretched hand or the point of the shoulder. Serious fractures of the femur (thigh bone) or tibia (shin bone) are far less common. Chest trauma, while rare, can result from impact at high speeds with a stationary object, such as a pole. Head and neck injuries can severely injure or kill a cyclist.

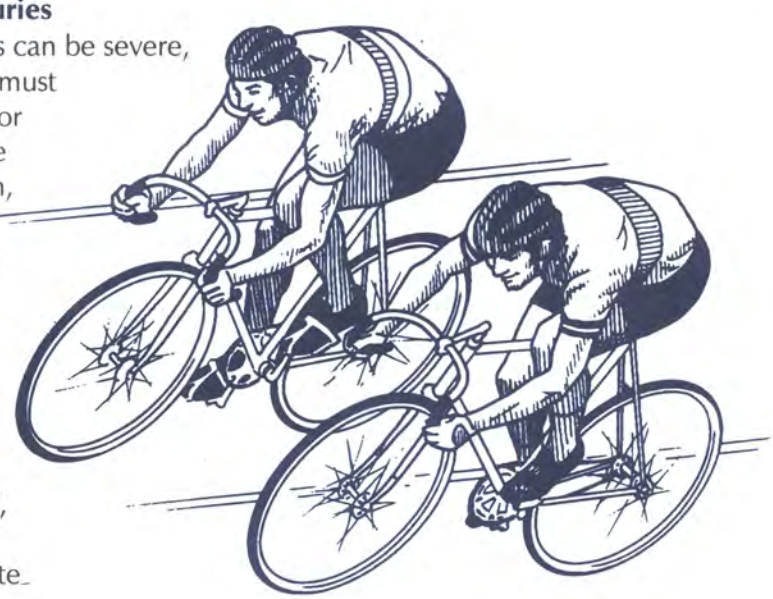
Treatment and prevention of injuries

Because injuries can be severe, the medical team must respond quickly. For racers who resume racing after a crash, first aid can be administered from the back of a motorcycle by a medical practitioner who is familiar with cycling. If a racer is seriously injured, the medical team stabilizes the athlete until the ambulance arrives.

Prevention of serious injuries is important in any race. Carefully selecting highly skilled racers decreases the chance of crashes, which are often caused by inexperienced racers. Course preparation and the use of marshals to line the circuit minimize the risk of collision with fixed objects and with spectators. People are also assigned to control the flow of the race and to help racers pass crash sites safely. Racers are careful to keep their equipment in good repair, and they always wear helmets to prevent head injury.

Olympic cycling is a fast-paced, exciting event. Highly trained racers in peak physical condition assure the races will be very competitive. Because of the high speeds involved, this sport is potentially dangerous. However, careful course preparation and medical coverage minimize these dangers so racers can compete safely at the Centennial Olympic Games.

***Alan Davis, M.D.**, is the venue medical officer for the 1996 Olympic road cycling competition. He is an orthopaedic surgeon who specializes in sports medicine in Atlanta, GA.*



Community Hero Bears Olympic Torch

Billy Reeves, a resident of Griffin, Georgia, since 1939, is one of 5,500 community heroes in the United States chosen to the bear the Olympic torch as it makes its way from Athens, Greece, to Atlanta, Georgia. On either July 17 or 18, Reeves plans to run the half mile while holding the torch high. What's so special about that? At 71 years of age, Reeves has had both of his knees totally replaced. Instead of slowing him down, the surgery he had at The Hughston Clinic has enabled him to be as active as he wants in the community, raising money for various civic and community organizations and serving in leadership positions.

Reeves says he wants "to set an example for people." And set an example he has. Among the leadership positions he has held are president of the Rotary Club, treasurer and member of the board of directors of the Griffin Chamber of Commerce, chairman of fundraising for the United Way, and chairman of the Relay for Life. He was named Man of the Year in 1993 and General Griffin in 1994. This is the type of person Billy Payne, president and C.E.O. of the Atlanta Committee for the Olympic Games, hoped to have carry the torch — a person chosen not for physical ability but for community service. Billy Reeves will carry the torch because of his outstanding service in the community, and two artificial knees will carry him the distance.

The Hughston Health Alert is a quarterly publication of the Hughston Sports Medicine Foundation, Inc. The Foundation's mission is to help people of all ages attain the highest possible standards of musculoskeletal health, fitness, and athletic prowess. Information in the Hughston Health Alert reflects the experience and training of physicians at The Hughston Clinic, P.C., of physical therapists and trainers at Rehabilitation Services of Columbus, Inc., of physicians who trained as residents and fellows under the auspices of the Hughston Sports Medicine Foundation, Inc., and of research scientists and other professional staff at the Foundation. The information in the Hughston Health Alert is intended to supplement the advice of your personal physician and should not be relied on for the treatment of an individual's specific medical problems.

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Suggested Reading on the Olympic Games

★Nelson R, MacNee MJ: The Olympic factbook: A spectator's guide to the summer games. Detroit: Visible Ink, 1996. $17.95

★Wheeler E: From games of god to Bubba's field: A century of the modern Olympic games, 1896-1996. Atlanta: HeathRow, 1995. $14.95

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