

Chapter 36

Cheerleading and the Law

Cheerleading should be conducted within the limits of safety.

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The association of injuries and cheerleading is something that has taken place within the last 25 years. As a comparison, football injury data collection began in the late 1800s. Cheerleading actually began around the same time as American football, with young men leading the cheers and school songs at sporting events. According to A. B. Frederick, cheerleading has gone through three distinct periods (Frederick 1990). In the pre-World War II era, cheerleading was a student-organized activity which consisted of yelling cheers and simple tumbling. After World War II, cheerleading spread rapidly across the country, and equipment like the miniature trampoline began to be used in gymnastics maneuvers, which increased the possibility of accidents. During the last period, from approximately 1975 to the present when the numbers of participants has grown to hundreds of thousands, stunts have become increasingly complex, competitions have been organized for a national championship, and summer training camps have become popular. It has been during this last period that cheerleading also became associated with injuries, both catastrophic and minor.

The Consumer Product Safety Commission (CPSC) reported an estimated 4,954 hospital emergency room visits in 1980 caused by cheerleading injuries (CPSC 1995). By 1986 that number had increased to 6,911 and was continuing to grow. The 1995 CPSC data showed an estimate of 16,982 cheerleading injuries that involved an individual going to a hospital emergency room. The 2002 CPSC injury data for cheerleading shows 24,675 emergency room injuries. There is no doubt that the number of participants has also increased during this time; but the problem is that the number of cheerleaders was not known in the early years, and that participation figures have been collected at the high school level only within the last five years. The latest participation numbers from the National Federation of State High School Associations (NFHS 2002), which calls the activity **competitive spirit**, show the following:

| | Boys | Girls | Total |
|--------------------|-------------|--------------|--------------|
| Competitive Spirit | 3,207 | 111,191 | 114,398 |

These numbers are for competitive spirit only, and do not include participation numbers for drill, pom-pom, or cheerleading. These numbers do not include a wide variety of other cheerleading groups, which could increase these numbers dramatically.

Table I
High School Cheerleading Direct Catastrophic Injuries
1982–83 to 2001–02

| Year | Fatalities | Disability | Serious |
|-----------|------------|------------|---------|
| 1982–1983 | 0 | 0 | 0 |
| 1983–1984 | 0 | 0 | 0 |
| 1984–1985 | 0 | 1 | 0 |
| 1985–1986 | 0 | 1 | 0 |
| 1986–1987 | 0 | 0 | 0 |
| 1987–1988 | 0 | 2 | 1 |
| 1988–1989 | 0 | 0 | 1 |
| 1989–1990 | 0 | 1 | 1 |
| 1990–1991 | 0 | 0 | 1 |
| 1991–1992 | 1 | 0 | 0 |
| 1992–1993 | 0 | 0 | 1 |
| 1993–1994 | 0 | 0 | 2 |
| 1994–1995 | 0 | 1 | 2 |
| 1995–1996 | 0 | 0 | 0 |
| 1996–1997 | 0 | 1 | 1 |
| 1997–1998 | 0 | 0 | 0 |
| 1998–1999 | 0 | 0 | 3 |
| 1999–2000 | 0 | 0 | 3 |
| 2000–2001 | 0 | 0 | 0 |
| 2001–2002 | 0 | 1 | 2 |
| TOTAL | 1 | 9 | 18 |

National Center for Catastrophic Sports Injury Research

The National Center for Catastrophic Sports Injury Research began collecting cheerleading data when a number of cases were reported at the college level in 1982–1983. Following are the results of twenty years of data collection.

Direct Cheerleading Fatalities (1982–83 to 2001–02)

There have been two cheerleading direct fatalities during the twenty year period from 1982–2002 (see Tables I and II). High school and college cheerleading each accounted for one fatality. The high school cheerleader was injured and died a week after the accident in which she fell from a double-level cheerleading stunt during practice and struck her head on the gym floor. She suffered massive head injuries. The college cheerleader also died from injuries suffered during a cheerleading stunt. Her injuries included multiple skull fractures and massive brain damage. The athlete fell from the top level of a pyramid-type stunt and struck her head on the gym floor. The direct fatality injury rate, if one used the estimates provided (approximately 200,000 high school cheerleaders and 10,000 college cheerleaders per year) would be 0.03 per 100,000 participants at the high school level and 0.5 per 100,000 participants at the college level.

Table II
College Cheerleading Direct Catastrophic Injuries
1982-83 to 2001-02

| Year | Fatalities | Disability | Serious |
|--------------|-------------------|-------------------|----------------|
| 1982-1983 | 0 | 1 | 1 |
| 1983-1984 | 0 | 0 | 2 |
| 1984-1985 | 0 | 1 | 0 |
| 1985-1986 | 1 | 1 | 0 |
| 1986-1987 | 0 | 0 | 1 |
| 1987-1988 | 0 | 0 | 0 |
| 1988-1989 | 0 | 0 | 0 |
| 1989-1990 | 0 | 0 | 1 |
| 1990-1991 | 0 | 0 | 0 |
| 1991-1992 | 0 | 0 | 1 |
| 1992-1993 | 0 | 0 | 0 |
| 1993-1994 | 0 | 0 | 2 |
| 1994-1995 | 0 | 1 | 1 |
| 1995-1996 | 0 | 0 | 0 |
| 1996-1997 | 0 | 1 | 1 |
| 1997-1998 | 0 | 0 | 0 |
| 1998-1999 | 0 | 0 | 0 |
| 1999-2000 | 0 | 0 | 1 |
| 2000-2001 | 0 | 0 | 0 |
| 2001-2002 | 0 | 0 | 1 |
| TOTAL | 1 | 5 | 12 |

Disability Injuries in Cheerleading (1982-83 to 2001-02)

There have been nine permanent disability injuries at the high school level for the twenty-year period mentioned above. A majority of the injuries happened when the athlete fell from a pyramid stunt or when she/he was dropped during a basket catch or dropped during another activity that involved being caught during a cheerleading stunt. Following are a sample of the cases involving high school cheerleading:

- 1) A high school cheerleader was injured during a practice after falling from the top of a pyramid. She struck her head and neck on a hard surface and was partially paralyzed.
- 2) A high school cheerleader was attempting to complete a back flip off the shoulders of another cheerleader. She landed on her head and neck, fractured a cervical vertebra, and was diagnosed as quadriplegic.
- 3) A high school cheerleader fell from a pyramid in practice. She was six feet off the floor when she fell and was not using spotters. Her injuries included a fractured collarbone, a damaged ear drum, and a basal skull fracture. She has suffered a partial hearing loss and has to wear special glasses for reading.

- 4) A high school cheerleader was tossed into the air by two of her teammates and was supposed to flip backwards and land feet first on the shoulders of two other cheerleaders. She fell on a hard surface during the stunt and was paralyzed from the waist down.
- 5) A high school cheerleader fractured a cervical vertebra during practice. She was doing a series of back flips during a tumbling run, slipped on the wet grass, and landed on her neck. She is a quadriplegic.
- 6) A high school cheerleader was injured during a stunt when a fellow cheerleader fell on her head. She has had permanent medical problems since the accident.

Disability injury rates for high school cheerleading are 0.23 per 100,000 participants. This rate is very low, but there are concerns that there should not be any catastrophic injuries in cheerleading.

Disability injuries at the college level numbered five from 1982–2002. The etiology of college injuries is no different than that of the high school injuries—a cheerleader falling from a pyramid stunt and striking a hard surface or being dropped during another stunt. Following are sample cases involving college disability injuries:

- 1) A cheerleader was injured while cheering at a basketball game when he performed a dive from a mini-trampoline over several cheerleaders into a forward roll. He fractured and dislocated several cervical vertebrae and had permanent paralysis.
- 2) A college cheerleader fractured her skull in practice after falling from the top level of a three-high pyramid. She struck her head on the wood floor in the gym. She was in critical condition for a period of time, but was released from the hospital and is involved in occupational therapy. She has permanent disabilities.
- 3) A cheerleader was paralyzed after a fall in practice. He was attempting a front flip from a mini-trampoline. He dislocated several cervical vertebrae and is now a quadriplegic.
- 4) A college cheerleader was paralyzed after attempting a double flip during a basket toss. At the present time she is a quadriplegic.

The disability injury rate at the college level is 2.50 per 100,000 participants. When compared to other college sports this rate is fairly high.

Serious Injuries in Cheerleading (1982–83 to 2001–02)

From 1982 through 2002 there were 18 high school serious cheerleading injuries. The etiology is exactly the same as the disability injuries and in most cases can be prevented. The serious injury rate is 0.45 per 100,000 participants in high school cheerleading. There were also 12 serious injuries in college cheerleading during the same time period. The case of the college cheerleader who suffered a head injury during practice is a good example of how many of the serious injuries could have been disability injuries or fatalities if there had not been proper med-

Table III
Cheerleading Injuries Consumer Product Safety Commission
by Age and Sex
Calendar Year 2002

| Age | Male | Female | Total |
|--------------|--------------|---------------|---------------|
| 5-14 | 305 | 10,624 | 10,929 |
| 15-24 | 871 | 12,405 | 13,276 |
| 25-44 | 282 | 145 | 427 |
| TOTAL | 1,485 | 23,174 | 24,632 |

ical care or medical facilities available to the individual. The cheerleader was thrown into the air, but was not caught by her teammates and struck her head on the gym floor. She was in critical condition, was downgraded to serious and is expected to recover. The serious injury rate is 6.00 per 100,000 participants for college cheerleading and this rate is high when compared with other college sports.

Consumer Product Safety Commission Data

As previously mentioned in this chapter, the Consumer Product Safety Commission collects injury data on product-related injuries and sport is one of those areas in the data collection. The CPSC's most recent figures on cheerleading revealed an estimate of 24,674 injuries in 2002. These estimates were calculated using data from a sample of hospitals which are statistically representative of institutions with emergency treatment departments located within the United States and its territories.

As shown in Table III, females are injured at much greater numbers than males, but if one looks at participation numbers there are many more female cheerleaders. This table also shows that there is not much of a difference between the 5 to 14 and the 15 to 24 age groups. It is not surprising that the numbers are low for the 25 to 44 age group since participation levels are very low for this group. It is impossible to estimate injury rates since the number of participants is unknown, and it is not known how many of these participants were high school or college cheerleaders.

Table IV shows the types of injuries that cheerleaders are receiving, and it is not surprising that sprains and strains lead the list, followed by fractures, and contusions and abrasions. This would be true for most sports, and cheerleading is a sport. What may be surprising is the percentage of fractures, dislocations, lacerations, and concussions.

In most athletic injury studies the knee and ankle are the body parts most injured, but as shown in Table V the arms-wrists-hands-fingers lead the list in the CPSC data, followed by the head-neck-face. The arms-wrists-hands-fingers are at the top of the list since many of the stunts performed involve either tumbling or catching or throwing a partner. The head-neck-face are also close to the top due to the type of stunts being performed. Falling from pyramids or shoulders onto a hard surface or onto another athlete accounts for most of these injuries.

Table IV
Cheerleading Injuries Consumer Product Safety Commission
Injury Type
Calendar Year 2002

| Injury Type | Frequency | Percentage |
|--------------------|------------------|-------------------|
| Sprain-Strain | 11,353 | 46.0 |
| Fracture | 4,126 | 16.7 |
| Contusion-Abrasion | 3,952 | 16.0 |
| Internal Injury | 1,057 | 4.3 |
| Laceration | 779 | 3.2 |
| Dislocation | 348 | 1.4 |
| Concussion | 351 | 1.4 |
| Dental Injury | 82 | 0.3 |
| Hematoma | 68 | 0.3 |
| Avulsion | 67 | 0.3 |
| Other | 2,491 | 10.1 |
| TOTAL | 24,674 | 100.0 |

A high percentage of these injuries are not severe as shown in Table VI. Ninety-eight percent of the injured participants were treated and released, with only one percent being hospitalized.

Table VII reveals the fact the cheerleading injuries are happening most during the football season and the winter basketball season. The months of June, July, and August involve the cheerleaders preparing for the football season and participating in camps. Preparation during the summer months is as intense for the cheerleading squad as it is for the football team.

The incidence of catastrophic injuries in sports at the high school and college levels is low, but even one is too many. Permanent paralysis, brain damage, and

Table V
Cheerleading Injuries Consumer Product Safety Commission
Injuries by Body Part
Calendar Year 2002

| Body Part | Frequency | Percentage |
|----------------------------|------------------|-------------------|
| Arms, Wrist, Hand, Fingers | 6,854 | 27.8 |
| Head, Neck, Face | 5,497 | 22.3 |
| Knee, Ankle | 5,235 | 21.2 |
| Upper Trunk, Shoulders | 2,440 | 9.9 |
| Lower Trunk | 2,052 | 8.3 |
| Lower Leg, Foot, Toes | 1,879 | 7.6 |
| Upper Leg | 331 | 1.3 |
| Other | 226 | 0.9 |
| Unknown | 160 | 0.7 |
| TOTAL | 24,674 | 100.0 |

Table VI
Cheerleading Injuries Consumer Product Safety Commission
Disposition
Calendar Year 2002

| Disposition | Frequency | Percentage |
|----------------------|-----------|------------|
| Treated & Released | 24,205 | 98.1 |
| Hospitalized | 257 | 1.0 |
| Held for Observation | 212 | 0.9 |
| TOTAL | 24,674 | 100.0 |

death should not be associated with teenagers and young adults participating in high school and college athletics. One catastrophic injury is not only devastating to the injured athlete, but also to the athlete's family, school, and community.

Injury Prevention

With proper medical care and safety precautions, a number of these injuries can be prevented. It is possible to reduce the number of catastrophic injuries with a good data collection system, the implementation of participation rules, proper medical care, and good coaching. Following are a number of recommendations for injury prevention.

Pre-participation Exams

A mandatory medical examinations and a medical history should be taken before allowing a cheerleader to participate. The National Collegiate Athletic Association (NCAA) recommends a comprehensive medical examination when an athlete first enters a college athletic program and an annual health history update with use of referral exams when warranted. This initial evaluation should include a comprehensive health history, an immunization history as defined by the current Centers for Disease Control (CDC) guidelines, and a relevant physical exam, part

Table VII
Cheerleading Injuries Consumer Product Safety Commission
Injuries by Month
Calendar Year 2002

| Months | Frequency | Percentage |
|------------------------------|-----------|------------|
| December, January, February | 6,243 | 25.3 |
| March, April, May | 2,780 | 11.3 |
| June, July, August | 4,055 | 16.4 |
| September, October, November | 11,596 | 47.0 |
| TOTAL | 24,674 | 100.0 |

of which should include an orthopedic evaluation. High schools should follow the recommendations set by their state high school athletic associations. If there are no set recommendations, the National Federation of State High School Associations in Indianapolis, IN should be contacted. If the physician or coach has any questions about the readiness of the athlete, the athlete should not be allowed to participate.

Proper Conditioning

All personnel concerned with training cheerleaders should emphasize proper, gradual, and complete physical conditioning. Adequate conditioning would include cardiovascular conditioning, muscular strength, muscular endurance, and flexibility.

Medical Care

Medical coverage of both practice and game situations is important. Certified athletic trainers can provide good medical coverage, but a physician should be on call for practices and possibly present at games. A physician on-site is preferred, but if this is not possible, written emergency procedures should be prepared in advance. Emergency plans for a possible catastrophic injury should be written and distributed to all personnel involved with the program. Personnel will include, but not be limited to, the head coach, assistant coaches, managers, athletic trainers, and physicians. Cheerleaders should be made aware of emergency procedures. If everyone understands his/her responsibility in the event of a catastrophic injury, the chances of permanent disability or death may be reduced.

When a cheerleader has experienced or shown signs of head trauma (loss of consciousness, visual disturbances, headache, inability to walk correctly, obvious disorientation, memory loss) she/he should receive immediate medical attention and should not be allowed to practice or cheer without permission from the proper medical authorities.

Each institution should strive to have a team athletic trainer who is a regular member of the faculty and is adequately prepared and qualified. Trainers certified by the National Athletic Trainers Association (NATA) are preferred. Coaches should never be involved in making medical decisions concerning their cheerleaders and only medical personnel should decide when she/he returns to cheer after an injury or illness.

Proper Training of Coaches

Hiring coaches with the ability and expertise to teach the fundamental skills of cheerleading is most important. Competent coaching in cheerleading is a major cause of concern. High schools are having a difficult time employing coaches who are full-time faculty members and in many cases have to hire part-time coaches. This is not a problem if these coaches know the fundamental skills of the sport and have the ability to teach these skills to the participants. Improper teaching of sport skills can be a direct cause of injuries—both catastrophic and other. Cheerleaders should be trained by qualified coaches with training in gymnastics. This

person should also be trained in the proper methods for spotting and other safety procedures. Coaches should supervise all practice sessions in a safe facility and should also keep up to date on new safety procedures and safety equipment. The days of hiring coaches with no knowledge of cheerleading skills should end. In addition, cheerleading coaches should place an emphasis on providing excellent facilities and securing the safest and best equipment possible.

Cheerleaders should receive proper training and instruction before attempting gymnastic-type stunts and should not attempt stunts they are not capable of completing. A qualification system demonstrating mastery of stunts in progression is recommended (George 1985). Mini-trampolines and flips off pyramids and shoulders are prohibited and should never be attempted. Pyramid and partner stunts higher than shoulder level should not be performed without mats and spotters.

In My Opinion

Finally, there should be continued research concerning safety in cheerleading. There is no excuse for the number of participants being injured. Cheerleading should be conducted within the limits of safety. The American Association of Cheerleading Coaches and Advisors Safety Certification Program has been implemented and a great number of coaches have participated in safety certification programs. Every attempt should be made to have all cheerleading coaches go through a certification program.

According to the National Federation of State High School Associations (NFHS), the primary purpose of spirit groups (cheerleaders, pom squads, dance/drill teams, flag corps) is to serve as support groups for the interscholastic athletic programs within the school. However, spirit groups have also evolved to include competition as athletes. These participants must condition, practice, and warm up the same as other athletes in preparation for a performance. The NFHS states that competition should be a secondary consideration for spirit groups.

A rule book for spirit groups is published by the NFHS and includes information on both legal and illegal stunts. All of the rules were and are adopted to enhance the safety of the participants. Copies of the spirit group rules book are available from the NFHS office at PO Box 690, Indianapolis, IN 46206.

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