



GUIDELINES FOR PEDIATRICIANS

WRESTLING

Issue 4

American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

Participation in wrestling has gained significant popularity and interest at the high school and middle school levels throughout the past 10 years. Of all school sports, it currently ranks fourth in participation and second in rate of injury. Because of the high rate of injury, special attention should be paid to physical development and rehabilitation of any injuries. When properly coached and executed, wrestling should emphasize skill and technique rather than physical intimidation.

SAFETY EQUIPMENT should include:

- **Headgear** — protects the head, ears, and face
- **Athletic supporter with cup for males** — protects the groin area
- **Knee and elbow pads** — protects against skin and direct soft tissue injury

COMMON INJURIES

Lower extremities: Injuries to this area account for 40% of wrestling injuries. The most common area is the knee, with prepatellar bursitis. Treatment includes use of protective pads and a neoprene sleeve and nonsteroidal anti-inflammatory drugs (NSAIDs). If pain persists or worsens with medical treatment, aspiration should be considered. Other knee injuries include ligament sprains, especially the lateral collateral ligament, and meniscal tears. Lateral collateral ligament injuries may be treated with a functional brace.

Upper extremities: Injuries to this area account for about 20% of wrestling injuries. Most common are recurrent anterior glenohumeral subluxation from attempting to brace a fall with an extended arm or acromioclavicular sprains from a fall on an unprotected shoulder. Both require joint stability and normal strength for return to competition. The range of motion and strength should equal the uninvolved shoulder. Hand injuries are not uncommon but are usually minor (*Sports Shorts* No. 5 will address hand injuries).

Head and neck injuries: Concussion guidelines should be followed (refer to *Sports Shorts* No. 1, January 2000). Neck injuries should be fully rehabilitated.

Stingers or burners: Brachial plexus neurapraxia (stingers or burners) occur secondary to sudden stretch to the brachial plexus. Symptoms may include temporary paresis, paralysis, or dysesthesia. The injury usually resolves spontaneously. Treatment consists of NSAIDs and rest. For return to play, the athlete must have resolution of symptoms and normal strength. Recurrent episodes require further evaluation.

Auricular hematoma (“cauliflower ear”): This injury is a swelling on the pinna as a result of trauma. Prevention of permanent disability requires aspiration and a compressive dressing. The pediatrician should be certain that a hematoma is present and that it is not just bruising and swelling (not needing aspiration).

SPECIAL CONCERNS

Weight control: Nutrition and appropriate minimal wrestling weight (7% body fat for males and 12% for females) are essential. Weight loss should be limited to 2 to 3 lb or 1.5% of body weight per week. Excessive weight loss by dehydration or use of laxatives or diuretics must be condemned.

Skin infections: Extensive physical contact exposes athletes to transmissible skin diseases, such as impetigo, herpes, and fungal infections. Prevention needs to be stressed. Prompt diagnosis and treatment are essential, because active infection results in inability to participate.

Lacerations and bleeding: Universal precautions should be followed. Immunizations need to be current, especially hepatitis B and tetanus.

Nutrition supplements: These agents are very popular with wrestlers. The physician needs to have a reliable source of scientific information available. Suggested resources include:

- American Academy of Orthopaedic Surgeons and American Academy of Pediatrics. *Care of the Young Athlete*. Sullivan JA, Anderson SJ, eds. Elk Grove Village, IL: American Academy of Pediatrics; 2000:81-104
- Youth athletes playing “Russian roulette” with sport supplements. *AAP News*. October 1999;36-37
- American College of Sports Medicine Web site: <http://www.acsm.org>

Anabolic steroids: The use of steroids should be strongly discouraged. Physicians need to be aware of signs of steroid use, such as excessive acne, gynecomastia, extreme mood changes, and rapid muscle and strength increase.

Doctor: This side of “Sports Shorts” is for your use; flip side is for photocopying and giving to your patient

Image reprinted with permission from American Academy of Orthopaedic Surgeons and American Academy of Pediatrics. *Care of the Young Athlete*. Sullivan JA, Anderson SJ, eds. Elk Grove Village, IL: American Academy of Pediatrics; 2000:129.

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GUIDELINES FOR PARENTS AND ATHLETES WRESTLING

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Participation in wrestling has gained great popularity at the high school and middle school levels throughout the past 10 years. Of all sports, it currently ranks fourth in participation and second in rate of injury. Because of the high rate of injury, special attention should be paid to the physical development of participants and to caring for wrestling injuries. When properly coached and executed, wrestling focuses on skill and technique rather than physical force.

SAFETY EQUIPMENT should include:

- **Headgear** — protects the head, ears, and face
- **Athletic supporter with cup for males** — protects the groin area
- **Knee and elbow pads** — protects against skin and direct soft tissue injury

CONDITIONING

Conditioning is critical to help prevent injuries. Exercise programs should build strength (in the arms, legs, neck, and trunk), flexibility (to allow extreme positions in wrestling), and endurance.

NUTRITION AND WEIGHT CONTROL

In the past, some wrestlers used unhealthy methods of weight loss to “make weight.” Minimum wrestling weight should be determined by body fat measurement (a minimum of 7% body fat for males and 12% for females). Weight loss should not exceed 2 to 3 lb or 1.5% of body weight per week. Eating a healthy diet during the wrestling season is essential. Rapid weight loss methods, such as using laxatives and diuretics, must be avoided. These can lead to eating disorders and decreases in athletic and academic performance. Many states have developed weight control programs for school wrestling. Information about these guidelines is available from the organization governing school sports programs in most states.

COMMON INJURIES

Legs and feet: Injuries to these areas account for 40% of wrestling injuries. Kneecap injuries are the most common, especially prepatellar bursitis (“housemaid’s knee”), which is a swelling over the kneecap. Injuries to ligaments and cartilage of the knee can also occur.

Arms, shoulders, and hands: Injuries to these areas account for 20% of injuries. Usually, these injuries involve the shoulder and are caused by falling on an extended arm or an unprotected shoulder.

Head and neck injuries: Concussion and neck injuries can occur and are rarely catastrophic. Guidelines for returning to the sport after a concussion are rigid at the high school level to protect the athlete.

“Cauliflower ear” (auricular hematoma): Swelling on the ear occurs from trauma and bleeding under the skin. Use of proper headgear will help to prevent this. Your pediatrician can advise you on treatment.

SPECIAL CONCERNS

Skin infections: The great amount of physical contact in wrestling exposes athletes to skin diseases, such as impetigo, herpes, and fungal infections. Any skin rash should be evaluated immediately by a pediatrician before participation.

Cuts and bleeding: Universal precautions (wearing gloves to care for any active bleeding and cleaning all blood spills with a 10% bleach solution) should always be followed. Immunizations need to be current, especially against hepatitis B and tetanus.

Nutrition supplements: These agents are very popular with wrestlers seeking to gain an edge in strength. Advice from a medical professional should be obtained as to the safety and nutritional value of any supplement.

Anabolic steroids: Steroids can produce dramatic changes in strength and muscle size; however, the adverse effects can be very dangerous. The use of steroids should be strongly discouraged. Parents should be aware of the signs of steroid abuse (rapid muscle and strength increase, increased acne, extreme mood changes, and breast development in males).

Components of the American College of Sports Medicine Weight Control Program for Wrestlers

1. Educate coaches and wrestlers about adverse consequences of prolonged fasting and dehydration on physical performance and health.
2. Discourage the use of rubber suits, steam rooms, hot boxes, saunas, laxatives, and diuretics for making weight.
3. Adopt new state or national governing body legislation that schedules weigh-ins immediately prior to competition.
4. Schedule daily weigh-ins before and after practice to monitor weight loss and dehydration.
5. Assess body composition: Boys age 16 years and younger with a body fat of less than 7% or those older than age 16 years with a body fat of less than 5% need medical clearance before being allowed to compete.
6. Emphasize proper nutrition on a daily basis.

Table adapted with permission from Opplinger RA, Case HS, Horswill CA, Landry GL, Shelter AC. American College of Sports Medicine position stand: weight loss in wrestlers. *Med Sci Sports Exerc.* 1996;28:ix-xii; and reprinted with permission from American Academy of Orthopaedic Surgeons and American Academy of Pediatrics. *Care of the Young Athlete.* Sullivan JA, Anderson SJ, eds. Elk Grove Village, IL: American Academy of Pediatrics; 2000:93.

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