

Promoting Safety and Injury Prevention

Ensuring a child remains safe from harm or injury during the long journey from infancy through adolescence is a task that requires the participation of parents and the many other adults who care for and help raise children. It also, of course, requires the participation of the children themselves. Health care professionals have long recognized the importance of safety and injury prevention counseling as a tool to help educate and motivate

parents in keeping their children safe. Many professional societies have bolstered these efforts by recommending guidance to prevent injuries.¹⁻³

Safety and injury prevention is a topic area that covers a wide array of issues for infants, children, and adolescents. These issues can be grouped into 2 general categories.

- **Unintentional injury** continues to be the leading cause of death and morbidity among children older than 1 year, adolescents, and young adults. Serious unintentional injuries result from myriad causes, including motor vehicle crashes, falls, burns, poisoning, drowning, firearms, recreational activities, prescription or other drug overdose, and sports. Unintentional injuries take an enormous financial, emotional, and social toll on children and adolescents, their families, and society as a whole. Although the word *accident* is familiar, the word *injury* is preferred because it connotes the medical consequences of events that are both predictable and preventable. The causes of unintentional injury–related illness and death vary according to a child’s age, sex, race, environment, geographic region, and socioeconomic status and depend on developmental abilities, exposure to potential hazards, and parental perceptions of a child’s abilities and the injury risk. Younger children, boys, Native Americans and Alaska Natives, adolescents, and children who live in poverty are affected at disproportionately higher rates than are other children and adolescents.^{4,5}
- **Intentional injury**, which results from behaviors that are designed to hurt oneself or others, is a multifaceted social problem and a major health hazard for children and youth. Homicide and suicide are particularly important for the health





care professional to consider because their frequency increases as children grow older. In addition, in infants and very young children, intentional injury is a leading cause of morbidity and mortality. Intentional injuries cover a wide array of mechanisms, and the effect on children is great, no matter whether the violence is directly experienced or is witnessed. The association of early childhood exposure to violence and subsequent violent behaviors has been established.⁶⁻⁹ The prevention of violence in all its forms therefore follows a developmental trajectory, beginning with infancy. To provide appropriate guidance and counseling, health care professionals need to be alert to the possible presence of violence in a family or to the effects of a violent environment on a child, which may include seemingly unrelated physical concerns.

Guidance on interventions and strategies to ensure safety and prevent injuries target 3 domains:

(1) the development and age of the child, (2) the environment in which the safety concern or injury takes place, and (3) the circumstances surrounding the event. The health supervision visit provides a venue to assess the parents' and the child's current safety strategies, encourage and praise their positive behaviors, provide guidance about potential risks, and recommend community interventions that promote safety.¹⁰

The health supervision visit also is a good venue in which to review emergency and disaster preparedness measures (Box 1). Information on handling emergencies, how to access local emergency care systems, and CPR and first aid can be made available to all parents. Information on disaster preparedness includes knowing the risks and hazards in the area, making a plan, preparing a kit of emergency supplies, and getting involved in community readiness efforts.¹¹

Box 1

Emergency Preparedness Suggestions for Parents

Health care professionals can suggest that parents

- Complete an American Heart Association or American Red Cross first aid and CPR program.
- Have a first aid kit and know local emergency telephone numbers and Web sites. The number for the **national Poison Help line** is **800-222-1222**. The FEMA preparedness planning Web site is www.ready.gov/make-a-plan.
- Know when to call a health care professional (counsel parents to call whenever they are not sure what to do).
- Know when to go to the emergency department (counsel parents on when to call **911**).

Abbreviation: FEMA, Federal Emergency Management Agency.

Child Development and Safety

Ensuring safety and preventing injuries must be an ongoing priority for parents as their children progress from infancy through adolescence. However, the nature of their efforts evolves over time. Safety issues in infancy relate primarily to the infant's environment and interactions with parents. Parents must modify the environment to prevent suffocation, motor vehicle–related injuries, falls, burns, choking, drowning, poisoning, violence, and other hazards. They also must maintain active supervision, which means focused attention and intentional observation of children at all times. As a young child's independence emerges and mobility rapidly increases, new safety and injury prevention challenges arise and necessitate further environmental modifications, or childproofing. Parents of young children often underestimate the level of the child's motor skill development (eg, age of ability to climb) and overestimate their cognitive and sensory skills (eg, assessing the speed of an oncoming car or being able to learn from past mistakes). Integrating injury prevention counseling with



developmental and behavioral discussions when talking with the family can be an effective method of delivering this important information.

The middle childhood years are a period during which safety challenges at home begin to be augmented by those outside the home (eg, at school, in sports, and with friends). During middle childhood, increasing independence allows the child to broaden his world beyond that of the immediate family. This requires good decision-making skills to stay safe and reduce the risk of injury. During adolescence, decision-making about safety shifts to choices the adolescent makes about his activities, behavior, and environment.

Parents have an important role to play in keeping their children and adolescents safe through maintaining open lines of communication, balancing strong support with clear limits, and monitoring closely. Strong support and close monitoring by parents have been linked with positive outcomes in children regardless of race, ethnicity, family structure, education, income, or sex.^{12,13} Health care professionals can help parents foster openness, encourage communication with their child, and address concerns when they arise.

When a risky behavior is identified, counseling can be directed toward helping the parent and child with strategies to reduce or avoid the risk, such as using appropriate protective gear (eg, seat belts, helmets, hearing protection, and sports equipment), not riding in a car or boat with someone who has been drinking alcohol, locking up prescription drugs, and ensuring that firearms are inaccessible to children and adolescents, especially those with suspected depression or other mental health concerns. Parents should be alert to unusual changes in behavior, such as sleep disturbances, withdrawal, aggression, sudden isolation from peer groups, or the need for unusual or extreme privacy, which can indicate mental or behavioral health problems that need to be addressed. (*For more*

information on this topic, see the Promoting Mental Health theme.) Risk-reduction counseling is most likely to be effective when it is used in a repetitive, multi-setting approach, rather than being isolated in the medical office.¹⁴ Partnering with the parent and sharing strategies for how to promote positive youth development, address strengths, and reduce risk-taking behaviors is an important collaborative approach as parents gradually decrease their supervisory responsibilities and help their child transition to young adulthood.² (*For more information on this topic, see the Promoting Lifelong Health for Families and Communities theme.*)

Families and Culture in Safety and Injury Prevention

Parents often feel challenged as they try to set priorities among the many health and safety messages that are given to them by the medical community. For some families, these messages may conflict with their cultural or personal beliefs and may result in parents disregarding the health and safety recommendations on topics such as safe infant sleep or the safe storage of firearms. In addition, certain culturally derived medical or alternative health practices may place children at risk of injury. Cultural or gender roles, in which women are not able to tell men in the household what to do, may limit women's ability to enact a safety measure. In some communities, cultural beliefs dictate that the mother or parents are not the primary decision-makers or caregivers for their young children. Acknowledging the influential roles that older women (eg, grandmothers or mothers-in-law) and other elders and spiritual leaders play in guiding child care practices is key to the effective delivery of safety, injury prevention, and health promotion messages. Health care professionals should be sensitive to these cultural perspectives and alert to any potential health and safety issues that may influence the child and family.



The health care professional has the dual role of helping families set priorities among health and safety messages in the context of the child's health, developmental age, and family circumstances, as well as helping families carry out these recommendations within their own cultural framework. The health care professional also should recognize when health and safety information is ineffective because of cultural differences in beliefs about the care of the child. A familiarity with local community public health services and state and local resources is critical to tailoring information and care recommendations to best suit the needs of the child and family. Rather than giving a parent or child an absolute requirement, the health care professional might consider where an appropriate adaptation or modification can be made to accommodate cultural and family circumstances.

Economic realities often affect parents' ability to alter their home to create a safer environment for their child. Children who live in poverty often live in substandard, crowded homes in unsafe neighborhoods. They may be homeless and may be exposed to environmental pollution, such as lead and carbon monoxide. Their parents often experience poor health, economic stresses, and discrimination. These families are least able to make the changes they want and need in their homes and communities. (*For more information on this topic, see the Promoting Family Support theme.*) Health care professionals should be aware of housing codes that govern safety issues (eg, hot water, window guards, carbon monoxide and smoke alarms, and lead paint) and of tenant codes, which require landlords to install or allow the installation of safety devices, require certain upkeep, and protect the tenants from injury. Access to legal services for families who live in poverty has brought improvements to child health and safety. Low-income families, who are least likely to be able to afford injury prevention devices, may require assistance to overcome cost barriers. Community-based

injury prevention interventions are effective and are models of community partnership.^{15,16} These programs can address cultural beliefs, income barriers, and community norms to help families implement safety interventions, especially those that have been shown to reduce injuries (eg, car safety seats, bike helmets, firearm locks, smoke alarms, and window guards). Community-based interventions are more likely to be successful at reducing injuries if they are integrated into and tailored to the community and involve community stakeholders.^{17,18} Trials of community programs that involve home visits to distribute free smoke alarms have reported large increases in smoke alarm ownership and decreases in fire-related injuries.¹⁹

Safety Considerations for Children and Youth With Special Health Care Needs

Children with special health care needs may have unique needs for safety and injury prevention. Parental supervision must be focused on the developmental level and physical capabilities of the child. To ensure a safe environment, parents of children with special health care needs may have to seek alternative safety equipment, such as specially designed car safety seats or additional door locks to protect children who may wander at night, such as children with autism spectrum disorder. Providing information or resources may improve the quality of life for families, as in the case, for example, of a family that may not be able to travel together without such equipment.²⁰ Increasing parents' awareness of the potential added complexity of creating a safe environment for their child with special health care needs and guiding parents toward local and national resources are ways that the health care professional can help parents provide a safe environment.

Many children with special health care needs encounter new safety challenges as they enter school and begin to deal with the community at large. They often are vulnerable and at risk of being



bullied or abused. They also may have an increased risk of maltreatment, including child neglect and physical or sexual abuse, including by professionals in schools and other institutions. Because they may rely heavily on caregivers for their physical needs and hygiene, their mental or physical limitation may impair their ability to defend themselves. Health care professionals can discuss appropriate caregiving, highlight risks for abuse, discuss the potential of bullying, and encourage parents to establish monitoring systems at home, in the community, and at school to protect their child. Planning for children with special health care needs requires understanding and anticipating the child's limitations and needs, with designated roles for family members and referral to additional community resources to ensure safety.

Parents of children with special health care needs may want to consider developing a disaster plan that includes lists of medications, food and supplies, equipment, and contact information for health care professionals that are part of their care team.²¹ The plan also can include the use of an Emergency Information Form,²² advanced registration for special needs shelters and evacuation plans, and extra medications and supplies.

Safety and Injury Prevention Counseling in the Bright Futures Health Supervision Visit

Anticipatory guidance for safety is an integral part of the medical care of all children. Counseling needs to be directed to the parent as the role model for the child's behavior and as the person who is most capable of modifying the child's environment. Counseling about some of the more effective safety and injury prevention interventions, such as using car safety seats and seat belts, spans infancy through adolescence, while other issues, such as bicycle safety, are developmentally and age specific.

Evidence from several systematic reviews confirms that injury prevention guidance is effective and beneficial. Because families seek the trusted opinion of pediatric health care professionals, these professionals can deliver important preventive messages that are intended to alter risky behaviors.^{23,24} Bass et al²⁵ found that positive effects from injury prevention counseling included improved knowledge, improved safety behaviors, and decreased numbers of injuries involving motor vehicles and nonmotorized vehicles. However, Barkin et al found that parents can retain only a limited number of topics.²⁶ Thus, Bright Futures injury prevention topics are distributed across visits so that each visit has no more than 4 to 5 safety-related topics for the health care professional to discuss.

DiGuseppi and Roberts²⁷ systematically reviewed 22 randomized controlled trials to examine the effect on child safety practices and unintentional injuries of interventions delivered in the clinical setting. The results indicate that some, but not all, safety practices are increased after counseling or other interventions in this setting. Specifically, guidance about car safety seats for young children, smoke alarms, and maintenance of a safe hot water temperature was more likely to be followed after interventions in the clinical setting than was guidance on other issues. Clinical interventions were most effective when they combined an array of health education materials and behavior change strategies, such as counseling, demonstrations, the provision of subsidized safety devices, and reinforcement.

The effectiveness of counseling can be improved if a health care professional knows the risks specific to the local population. For example, if the major cause of morbidity in the local population is drowning, counseling about active supervision around water is appropriate. In a farming community, counseling about the risk of agricultural



injury and farming equipment safety can be especially pertinent. This advice also applies to counseling regarding the common recreational activities in a professional's geographic area (eg, all-terrain vehicle riding, snowmobiling, personal watercraft). Particularly for adolescents, common occupational hazards should be discussed and use of protective equipment (eg, safety glasses, protective ear covers) should be encouraged. Local injury data can be obtained from state or local departments of health, and statewide fatality data are available online.²⁸ It is therefore expected that the health care professional will adapt the safety anticipatory guidance to meet the needs of the child, family, and community on the basis of a sound knowledge of the local causes, risks of injury in the child's environment, and the assessed and expressed needs of the child and family.

TIPP (The Injury Prevention Program³), developed by the American Academy of Pediatrics (AAP), is a developmentally based, multifaceted counseling program that allows the health care professional to use safety surveys at strategic visits and counsel parents on unintentional injury prevention topics delineated as areas of specific risk. Parents can complete TIPP surveys, which are distributed by office staff, in a few minutes. According to information from the surveys, health care professionals can use different parts of TIPP to individualize and supplement their anticipatory guidance with counseling and handouts that are appropriate for the child's age and community. In an effort to better tailor anticipatory guidance, primary care practices have used kiosk systems to help delineate specific injury risks that families might have in the home.

Four safety topics that deal with ways to reduce or prevent violence have particularly strong research evidence and lend themselves to pediatric anticipatory guidance.

- Using constructive disciplining techniques and alternatives to corporal punishment²⁹⁻³¹ (For more information on this topic, see the *Promoting Family Support and Promoting Healthy Development* themes.)
- Promoting factors associated with psychological resilience among adolescents³²⁻³⁵ (For more information on this topic, see the *Promoting Mental Health and Promoting Lifelong Health for Families and Communities* themes.)
- Preventing bullying³⁶⁻⁴⁰ (For more information on this topic, see the *Promoting Mental Health* theme.)
- Preventing firearm injury⁴¹⁻⁴³ (For more information on this topic, see the *Safety priority in selected visits*.)

Since its peak in the mid-1990s, the epidemic of fatal youth violence has steadily declined. Many segments of society, in addition to the health care system, have contributed to this reduction.^{44,45} Programs with proven effectiveness are described by the University of Colorado Center for the Study and Prevention of Violence (www.blueprintsprograms.com).⁴⁶ Information about a wide variety of violence prevention programs, ranging from public service announcements to school curricula, also is available through the Centers for Disease Control and Prevention (CDC) program STRYVE (Striving To Reduce Youth Violence Everywhere).⁴⁷

Surveys and focus groups have demonstrated that parents want to discuss community violence with their child's health care professional.⁴⁸ Pediatricians also have expressed enduring interest in violence prevention counseling, although many feel inadequately trained to do so.⁴⁹ Few published studies directly address the effectiveness of health care professional counseling in violence prevention. However, the strong supporting research evidence provides a rationale for incorporating violence prevention into routine clinical practice.¹



Connected Kids: Safe, Strong, Secure, also developed by the AAP, takes an asset-based approach to violence prevention anticipatory guidance.² Recommended counseling topics for each health supervision visit discuss the child's development, the parent's feelings and reactions to the child's development and behavior, and specific practical suggestions on how to encourage healthy social, emotional, and physical growth in an environment of support and open communication. Counseling can be supplemented by the use of Connected Kids brochures for parents and their children.

Each Bright Futures Visit has established safety priorities for discussion, and sample questions are provided in the Anticipatory Guidance sections. The priorities and sample questions in each visit that are relevant to safety are specifically linked to the counseling guidelines in TIPP (for Infancy, Early Childhood, and Middle Childhood Visits) and Connected Kids (for all visits), making it easy for the health care professional to incorporate these tools in a Bright Futures practice. In addition, the *Bright Futures Tool and Resource Kit* includes many other resources that may assist the health care professional.

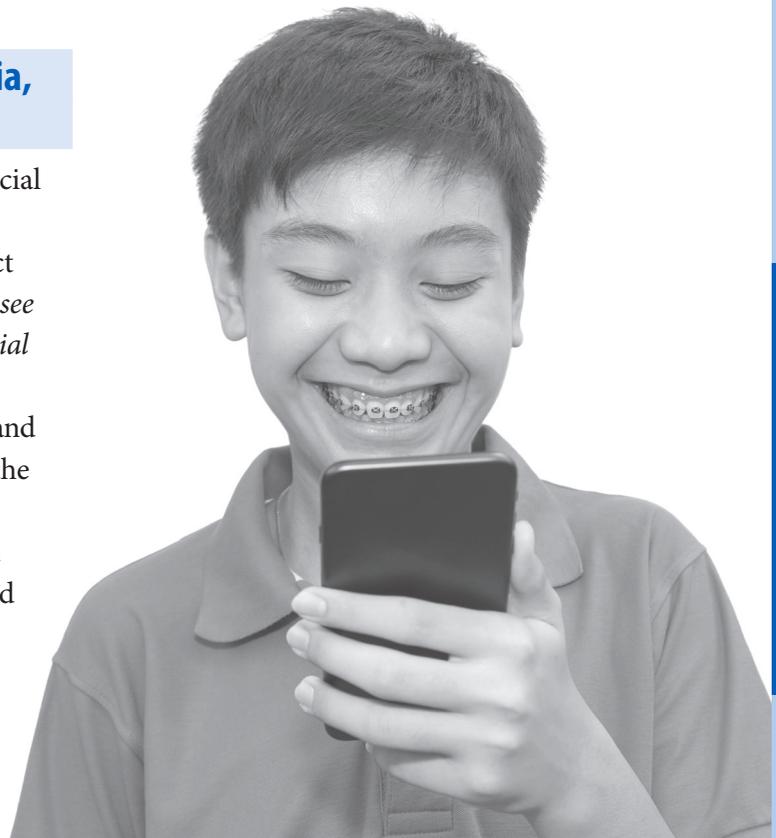
Safe Use of the Internet, Social Media, and Texting

Many children and youth use the Internet, social media, and mobile devices in their daily lives to chat, text message, play games, and conduct searches. (*For more information on this topic, see the Promoting the Healthy and Safe Use of Social Media theme.*) Internet safety and etiquette is important to discuss to help prevent children and youth from being involved with or becoming the victim of bullying, abuse, scams, or stalking. Families should be aware that all information and actions taken online should be considered

permanent and can be traced. For example, commercial companies trace actions of online users for research and design to improve their products and services marketed to the public, but others trace this same information for harmful purposes.

Information in the form of public or private postings on social media or online communication through texting or chatting, whether sent or received, can be categorized into online safety issues, including (1) sexual solicitation, (2) harassment, (3) exposure to inappropriate content, and (4) youth-generated problematic content.^{50,51} Surveys of youth have demonstrated that the proportion of youth Internet users aged 10 to 17 years who reported being harassed online almost doubled between 2000 and 2010, from 6% to 11%.⁵² Rates of unwanted exposure, as in being harassed or solicited online or abused off-line, appear to be higher among youth who are older or who have depression.³⁸

Although, at present, no information is available about the effectiveness of Internet safety programs, these programs can offer parents and institutions some guard against the harms of using the





Internet. Parents and health care professionals should have frank discussions on the safety, benefits, and harms of using the Internet and social media. Although data are lacking to support specific policies, basic interventions that promote safe use of the Internet are recommended. Schools can employ programs that teach skills in negotiating peer conflict and managing anger issues online and off-line. These anti-bullying and social and emotional learning programs target relational and verbal harassment behaviors and may involve role-playing and discussion exercises to assist identifying and practicing pro-social skills relevant to their youth peer culture. Schools also can ensure that their bullying and harassment policies address online harassment and cyberbullying incidents. Children and youth should be encouraged to disclose to an adult, including parents, school staff, and other adults, if they are bullied or abused on the Internet.

The Health Care Professional as a Community Advocate for Safety

The clinical setting may not be suitable for carrying out the entire range of information, modeling, resources, and reinforcement that are required to change safety practices. For some families, the effectiveness of clinical interventions can be boosted if they are delivered in concert with efforts that involve representatives from the community to overcome language and cultural differences. For example, community-based educational interventions that have included clinical counseling as one component of a broader effort have shown positive effects on childhood bicycle helmet ownership and use.⁵³ Bicycle helmet education campaigns, legislation, and improvements in helmet design have contributed to a reduction of fatalities.⁵⁴

Health care professionals can consider participating in fun, community-based safety activities and can work with community partners to increase

public awareness about safety issues and provide prevention education. In most communities, it is possible to partner with agencies such as fire departments and Emergency Medical Services for Children departments, state and local Safe Kids coalitions (www.safekids.org),⁵⁵ and public health programs that work directly with families of young children. In addition, health care professionals often provide leadership for effective safety and injury prevention programs and legislation through advocacy activities and testimony at public hearings. On an individual patient level, health care professionals always should be aware of their role as mandated reporters for suspected child abuse and neglect and risk of harm, including health and safety risks.

Promoting Safety and Injury Prevention: The Prenatal Period

Safety and injury prevention begins in the prenatal period. Preparing for the arrival of an infant should include the purchase of an approved car safety seat and working with a Child Passenger Safety Technician to learn how to install it, as well as purchasing a crib that meets current safety standards. Car seat loaner programs are available in many communities. Prospective parents also can be encouraged to take an infant CPR and first aid class, get a first aid kit, check or install smoke alarms, and place the national Poison Help line telephone number (**800-222-1222**) on all their telephones and in their mobile phone contact lists.

Promoting Safety and Injury Prevention: Infancy—Birth Through 11 Months

Promoting safety and preventing injuries is a continuing task for parents during the first year of their child's life. Injury prevention for the infant requires careful integration of awareness of developmental skills, as they are rapidly acquired, and the active supervision and interventions necessary



to ensure the infant's safety. Parents commonly underestimate their infant's motor skills while overestimating their infant's cognitive skills and judgment. Counseling in the primary care setting is important to help parents understand the correct timing of the development of these skills so that they can focus their safety interventions most appropriately.

Although suffocation and motor vehicle crashes are the most common causes of unintentional injury and death during this age, the infant also is at risk of other injuries, including falls, fires and burns, poisoning, choking, animal bites, and drowning. Each of these tragedies is preventable, and appropriate counseling can provide parents with the knowledge and strategies for reducing the likelihood that these injuries will occur. Vulnerable infants who are exposed to maternal substance use, secondhand smoke, malnutrition, lack of caregiver supervision, or caregiver neglect also are at increased risk of morbidity or death. The importance of establishing good habits begins in infancy, and parents can be counseled about the positive value of their own behavior as a role model for their child.

Sudden Infant Death

Sudden unexpected infant death (SUID) describes certain types of infant mortality, including sudden infant death syndrome (SIDS). After autopsy, case review, and death scene investigation, a SUID may be determined to be caused by asphyxiation, suffocation, parental overlie, infection, or other medical causes. The diagnosis of SIDS is reserved for unexpected and unexplained deaths that occur in infants younger than 1 year.⁵⁶ Although SIDS is the leading cause of death in infancy beyond the neonatal period, rates of sleep-related infant deaths, such as accidental suffocation and strangulation in bed (known as ASSB), are on the rise. Leading causes of this form of sudden infant death include suffocation by soft bedding, overlay (when another person rolls on top of or against the infant), wedging

or entrapment (when an infant gets trapped between 2 objects, such as the mattress and a wall), and strangulation (when something presses on or wraps around the infant's head and neck, blocking the airway).

A robust body of evidence indicates that the risk of SIDS and other sleep-related infant deaths is reduced when infants sleep on their backs and in their parents' room but not in their parents' bed.⁵⁶ Pacifiers have been linked with a lower risk of SIDS. It is recommended that infants be placed for sleep with a pacifier. For breastfed infants, this can be started after breastfeeding is well established (usually by 3–4 weeks of age). A pacifier can be started in formula-fed infants soon after birth. It should not be forced if the infant refuses. It also should not be reinserted once the infant is asleep.

The following independent risk factors for SUID, including SIDS, have been identified:

- Young maternal age
- Maternal smoking during pregnancy
- Inadequate prenatal care
- Exposure to secondhand cigarette smoke
- Low birth weight or premature birth
- Male gender
- An overheated infant
- Prone sleep position for infant
- Infant sleeping on a soft surface
- Bedding (eg, pillows, blankets, bumper pads, stuffed toys) in the infant sleep area
- Infant sleeping on a couch, a sofa, or other cushioned surface
- Bed sharing (infant sleeping with parent or other adult)

Other sleep-related infant deaths, such as those caused by unintentional suffocation or asphyxia, have similar risk factors. Several of these risk factors are under parental control during infancy. Personal experience and beliefs significantly influence a family's acceptance of specific messages regarding infant sleep position and sleep location.



The health care professional should learn the family's views about infant sleep, room sharing, and bed sharing to appropriately tailor sleep-related death prevention and risk reduction counseling. (See Box 2.)

Room Sharing and No Bed Sharing

Parent and infant sleeping practices are influenced by custom and family traditions.⁵⁸ It is important to work with families to ensure safe sleep practices while still being culturally sensitive.

Room sharing, defined as an infant sleeping in the parents' room in a separate sleep space, is a common practice in many cultures worldwide. In many cultures, sharing a room is viewed as a part of the parents' overall commitment to their children's well-being. *Evidence shows that room sharing is associated with a reduced risk of sudden infant death, and it is recommended that babies sleep in their parents' room for at least the first 6 months of life but not in their parents' bed.*⁵⁷ It should be noted that the case-control studies

Box 2

Reducing Sudden Unexpected Infant Death Risks

In 2016, the AAP Task Force on Sudden Infant Death Syndrome reviewed the evidence and compiled the following recommendations to reduce the risk of sleep-related infant deaths⁵⁷:

- Do not smoke during pregnancy. Avoid alcohol and drugs during and after pregnancy.
- Breastfeeding is recommended and is associated with a reduced risk of SIDS. If breastfeeding occurs in the mother's bed, the infant should be returned to her separate sleep place when the mother is drowsy or ready for sleep.
- Supine sleep position is safest for every sleep; side sleeping is associated with increased risk and is not advised.
- A separate but nearby sleep environment is safest for the infant ("in your room but not in your bed"). The infant's crib or bassinet can be placed immediately next to the parents' bed.
- Parents or other caregivers should not share a bed with their infant; accumulating evidence reveals increased risk of SUID for infants who share a bed with others.
 - The risk is further increased if parents smoke, use drugs or alcohol, or take medications that cause drowsiness or fatigue or induce a deep sleep.
 - Parents should never sleep with their infants on a sofa or couch.
 - There is no evidence that devices claiming to make bed sharing "safe" reduce the risk of SIDS. They are not to be recommended.
 - Provide separate sleep areas for twins and other multiples.
- A pacifier should be offered for naps and night sleep.
- Use a firm sleep surface. Avoid placing soft objects and loose bedding in cribs, bassinets, and playpens. Bumper pads are not recommended.
- Do not allow smoking in the child's environment.
- Avoid overheating the infant; do not over-bundle the infant or set the room temperature too high.
- Do not use home cardiorespiratory monitors as a strategy to reduce the risk of SIDS.
- No evidence is available to recommend swaddling as a strategy to reduce SIDS risk. (*For more information on swaddling, see the Prenatal, First Week, and 1 Month Visits.*)
- Infants should be fully immunized according to AAP and CDC recommended immunization schedules. No evidence exists that links immunizations to SIDS.
- Health care providers, staff in newborn nurseries and NICUs, and child care providers should endorse and model the SIDS risk reduction recommendations from birth.
- Media and manufacturers should follow safe sleep guidelines in their messaging and advertising.

Abbreviations: AAP, American Academy of Pediatrics; CDC, Centers for Disease Control and Prevention; NICU, neonatal intensive care unit; SIDS, sudden infant death syndrome; SUID, sudden unexpected infant death.



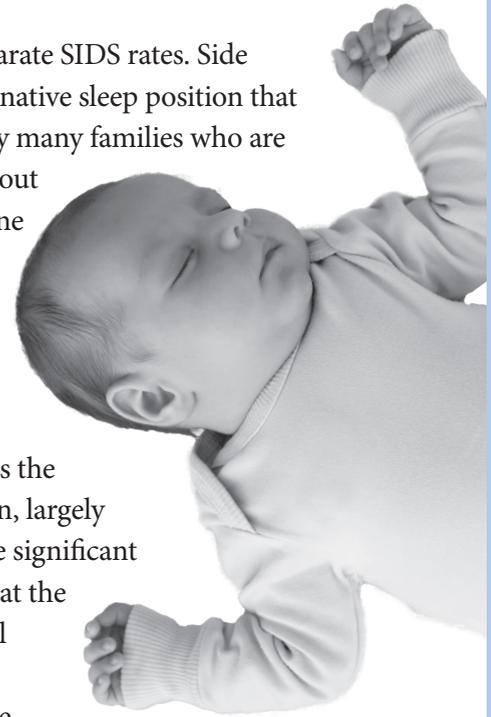
regarding room sharing do not provide data or information regarding when it is safe for infants to move out of their parents' room. Previous recommendations used the 6 month recommendation, and other considerations led to the *at least 6 months* recommendation: 90% of SIDS occurs during the first 6 months of life,⁵⁶ the highest risk of death with bed sharing is in the first 3 months of life, and it may be difficult to establish good sleep habits in older infants if they are sleeping in the parents' bedroom.⁵⁷

Sleep practices in which parents and infants share a bed also are common in many cultures. Bed sharing can take the form of mother, father, and infant together in the same bed, to mother and infant together with father sleeping elsewhere, to all family members in the same bed. Advocates of this practice claim that bed sharing facilitates breastfeeding, promotes parent-infant attachment, and allows parents to quickly comfort a fussy infant. *However, bed sharing is to be discouraged.* It is associated with a higher frequency of infant death that can be caused by overlying by a parent, sibling, or other adult sharing the bed; wedging or entrapment of the infant between the mattress and another object; head entrapment in bed railings; and suffocation on water beds or because of clothing or bedding causing oral-nasal obstruction.⁵⁹ Parent movement also may push the infant out of the bed.

Sleep Position

Despite more than 20 years of recommendations, at least 25% of infants,⁶⁰ overall, continue to be placed in the prone or side position for sleep, and 23% of white⁶¹ and 43% of black infants⁶² still sleep on their side or in the prone position. These percentages have become stable over the past 10 years as the progress made by the Back to Sleep campaign has plateaued.⁶³ The prone sleep position used more often by African American families²⁴ and in friend and family care settings is a contributing

factor to disparate SIDS rates. Side lying, an alternative sleep position that is practiced by many families who are concerned about using the prone position, statistically carries the same degree of increased risk of SIDS as the prone position, largely because of the significant probability that the infant will roll from the side position to the prone position during sleep.⁵⁶ The risk of death caused by SIDS is approximately 8 times higher for infants who are placed for sleep on their side or in the prone position.⁵⁶



Promoting Safety and Injury Prevention: Early Childhood—1 Through 4 Years

Young children are especially vulnerable to many of the preventable injuries because their physical abilities exceed their capacities to understand the consequences of their actions. They are extraordinary mimics, but their understanding of cause and effect is not as developed as their motor skills. Gradually, between the ages of 1 and 4 years, children develop a sense of themselves as people who can make things happen. However, at this age, young children are likely to see only their part in the action. A 2-year-old whose ball rolls into the road will think only about retrieving the ball, not about the danger of being hit by a motor vehicle. Parents and other caregivers of young children must provide active supervision. They should establish and consistently enforce safety rules, recognizing that this is done to establish a foundation



for following rules because young children do not have the cognitive capacity to understand the rule, take action, and avoid the hazard. Water safety is critical at these ages, when the ability to swim safely is not developed. Parents and other caregivers should be aware of potential hazards in their home, including common household chemicals (eg, dishwasher detergent, pesticides), medications, heavy objects (eg, televisions [TVs]), furniture tip-overs, and family or neighborhood pets, and should create a safe environment that will allow the young child to have the freedom he needs to explore. Creating a safe environment involves storing potentially harmful items out of sight and out of reach of children. Medicines in purses, cupboards, and on shelves are common sources of potentially harmful items. Choking hazards include small toy parts, plastic bags, and certain foods, such as peanuts, popcorn, raw carrots, uncut hotdogs or grapes, and hard candy. Educational materials are available as part of the PROTECT initiative in partnership with the CDC (www.cdc.gov/MedicationSafety/protect/protect_Initiative.html).⁶⁴

Parents can teach their child about personal safety at an early age. Parents should train their child how to approach authority figures (eg, teachers, police, and salesclerks) and ask them for help in the event he becomes lost or temporarily separated from his parents. Health care professionals also can play an important role in preventing and identifying child sexual abuse, particularly because they are mandated reporters. It is important to have discussions with families and caregivers about healthy sexual development and sexuality to assess for any problems and concerns. Providers should be able to talk with parents and caregivers about concerns and should be aware of problems signs. (*For more information on this topic, see the Promoting Healthy Sexuality and Sexual Development theme.*)

A child aged 1 to 4 years also does not fully understand that his actions can have harmful consequences for himself or for others, and parental guidance is therefore necessary to shape aggressive behaviors. Longitudinal observations have suggested that childhood aggression peaks around age 17 months and, with adult guidance, most children learn to regulate these tendencies before school age.⁶⁵

Promoting Safety and Injury Prevention: Middle Childhood—5 Through 10 Years

Middle childhood is a time of intellectual and physical growth and development, when children become more independent. The controls and monitoring that parents provided during the early childhood years change as children get older. As children go to school, participate in activities away from home, and engage in more complex and potentially dangerous physical and social activities, they need to develop good judgment and other skills to function safely in their expanding environment. Safety promotion and injury prevention are central aspects of the child's education.

Preventing or lessening the effects of violence also is an ongoing concern for many children during the middle childhood years, especially those living in families or communities in which violence is prevalent. Television and other media violence⁶⁶ also may have serious effects during this period, as children spend increasing amounts of time away from home or out of the active supervision of a parent and have increased opportunities to watch TV.

School and Community Safety

During this time, children begin transitioning from complete dependence on their parents to developing their own strategies and decision-making skills for ensuring their own safety. Nowhere is this more apparent than when children



are out of the home and functioning independently in their community. The process of going to school, on errands, to a friend's house, or to a music lesson, scout meeting, or team practice can present challenges to the young child who is negotiating her environment. Walking or taking the bus, going with groups of other children, and meeting new adults all have the potential to increase social skills and respect for others, as well as the potential to place the child in danger. This developmental stage is the time when children acquire essential interpersonal skills, including conflict resolution. School-based conflict resolution and skill-building programs have been shown to be effective.⁶⁷

The health care professional should encourage parents to know their child's activities, daily whereabouts, and friends. Good communication between parent and child is essential to the child's safety. Lessons that were introduced in early childhood, such as pedestrian safety (eg, retrieving a ball from the street), pet safety, dealing with authority figures, and appropriate touching by others, should continue as needed. This information does not need to be communicated specifically as a safeguard against abduction or abuse but can be taught as developmental achievements in the growing child.⁶⁸ The message to parents is that they should actively teach their children about safe behaviors but not generate unnecessary fear or overly restrict freedom and independence.

Children this age should never be left at home alone but increasingly will be spending time away from home at school, friends' homes, or organized activities. Parents should make sure the child has information about her home, including address, telephone number, parents' cell phone numbers, and keys to the home, and a backup contact person if the parents are not available. Parents should insist that the child check in with her family. Health care professionals also can partner with child care centers, schools, after-school programs, and municipalities to enhance public awareness

and modify physical environments. Speed bumps, crosswalks, the passage and enforcement of school zone speed limits, and school bus safety laws can create a safer environment for child pedestrians.

Peer pressure also emerges during this period. Children need to be encouraged to develop a sense of their own identity and locus of control and be taught strategies for dealing with inappropriate peer pressure or behavior. Health care professionals can use anticipatory guidance to address these issues with parents and encourage them to discuss these issues with their child. By discussing these issues openly, the health care professional is modeling safe behavior and is encouraging the parent and child to communicate.

Bullying

Bullying is a social phenomenon in which a larger or more powerful child repeatedly attacks (physically or emotionally) a smaller or weaker child.^{37,69,70} Cyberbullying is bullying that uses the Internet or electronic devices to spread written or photographic mean-spirited messages about a person. (*For more information on this topic, see the Promoting Mental Health theme.*) Children can be identified as bullies, being bullied, or bystanders; they may both be a bully and be bullied. In some cases, they may be all three. Effective bullying prevention programs have been demonstrated for use in the schools, and all rely on direct measures by school administration and the mobilization of bystanders to protect the children being bullied and identify bullying behavior as socially intolerable. Physician counseling of individual patients begins with the recognition of bullying as a potential cause of psychosomatic concerns and may include both individual counseling and referral of parents to effective bullying prevention resources. It is important to recognize that bullying behavior is often rooted in stressful or traumatic experiences.⁷¹ Bullies, themselves, are at high risk of long-term adverse consequences and often need



behavioral counseling and other interventions to help them interact more positively with their peers.

Play, Sports, and Physical Activity

Physical activities play an important role in a child's life during this age, and participation in team and individual sports can consume considerable amounts of time. Although the overall health effect is usually positive, children need to learn and follow safety rules for their protection and the protection of others. *(For more information on this topic, see the Promoting Physical Activity theme.)* Parents also should be encouraged to model safe behaviors, such as wearing bicycle helmets and sports protective gear. Children should follow traffic rules and safety guides concerning bicycle riding, skating, skiing, and other similar activities. The use of protective gear, such as helmets, eye protection, mouth and wrist guards, and personal floatation devices or personal protective devices, is not negotiable and should be used at all times by everyone.

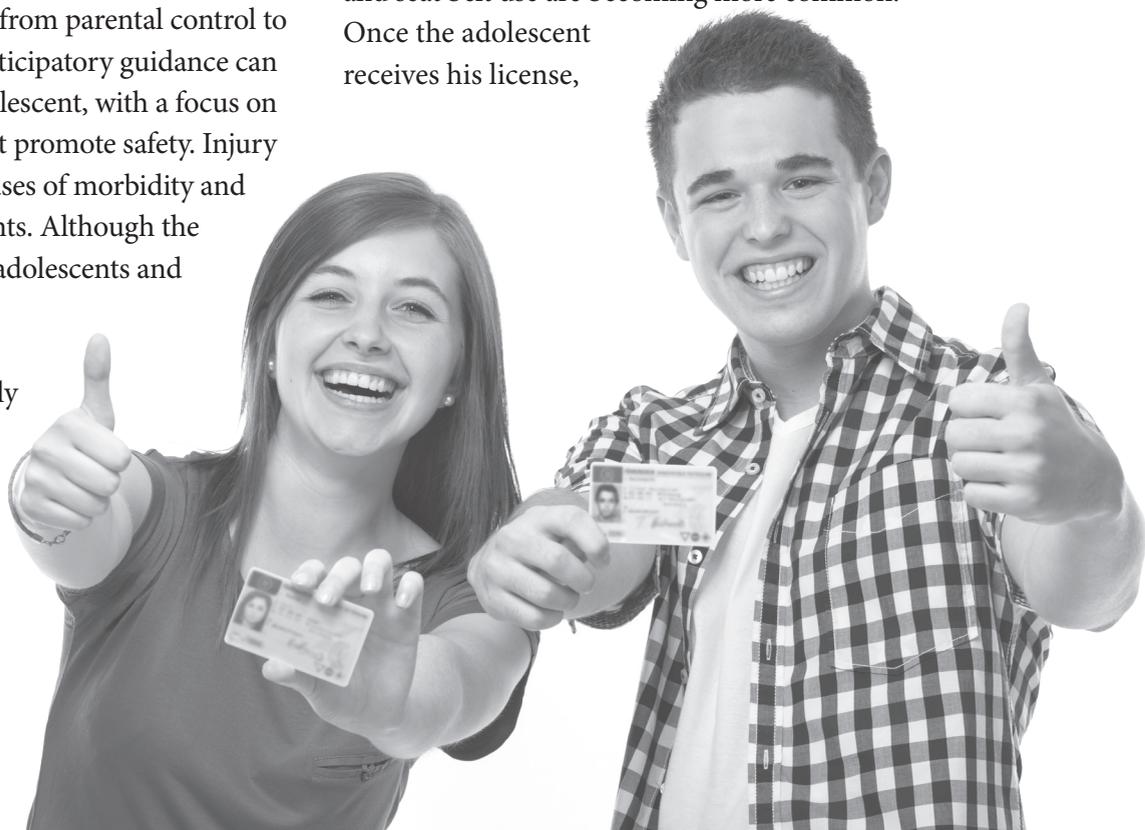
Promoting Safety and Injury Prevention: Adolescence—11 Through 21 Years

In caring for the adolescent patient, the approach to injury prevention shifts from parental control to the adolescent himself. Anticipatory guidance can now be directed to the adolescent, with a focus on encouraging behaviors that promote safety. Injury and violence are major causes of morbidity and mortality among adolescents. Although the leading causes of death of adolescents and young adults aged 11 to 21 years vary by race and age, the top 3 causes consistently are motor vehicle crash injury, homicide, and suicide.⁷² Although serious injuries and death are more common among boys, reports of violence among girls are

increasing.⁷³ Dropping out of school, using drugs, and getting in physical fights place adolescents at increased risk of severe injury or death. Protective factors, such as connectedness with school and adults, are associated with reduced violence in youth.⁴⁴ Health care professionals can recognize and encourage protective factors in youth as a strategy to promote safety and reduce injuries.

Driving

Learning to drive is a privilege and considered a rite of passage for many adolescents. It is a reflection of their growing independence and maturity. Adapted equipment and special driving techniques make it possible for many youth with special health care needs to drive. Health care professionals can encourage parents to be initially involved with their adolescent's driver's education by doing practice driving sessions together and by establishing rules that foster safe, responsible driving behaviors. Parents should enforce and model safe driving habits, including wearing seat belts at all times, not using cell phones or texting while driving, and not driving under the influence of drugs or alcohol. State laws regarding mobile device and seat belt use are becoming more common. Once the adolescent receives his license,





parents should continue to monitor his driving skills and habits to ensure that safe behaviors persist. Current research suggests that severe motor vehicle crashes involving inexperienced drivers are associated with (1) other teens in the car, (2) driving at night, and (3) distractions, such as using a cell phone, texting, e-mailing, using the Internet, or adjusting devices such as a radio, mapping device, music player, or mobile phone. Comprehensive graduated driver licensing (GDL) programs enacted in many states have been shown to reduce fatal crashes.⁷⁴ Parents should familiarize themselves with the provisions of the GDL law in their state and require their adolescent to adhere to the law, whether as a driver or as a passenger of a newly licensed teen driver. However, parents should know that state GDL laws do not include all the provisions recommended by the AAP. Health care professionals can support parents in setting rules and limits that reflect best practice, which is likely stricter than state GDL requirements. This can be accomplished with the use of a parent-teen driving agreement tool; such tools are available on HealthyChildren.org,⁷⁵ through the CDC,⁷⁶ and from motor vehicle insurance companies.

Preventing Distracted Driving

In 2013, the National Safety Council estimated that 21% (1.2 million) of all motor vehicle crashes involved the use of cell phones, with 6% caused by texting while driving.⁷⁷ At a speed of 55 mph, a driver who turns his eyes to a phone for 5 seconds will travel more than the length of a football field without looking at the road.⁷⁸ Adolescents are more likely than older drivers to talk or text on a cell phone while driving.⁷⁸

Other potential distractions posed by mobile devices include viewing or posting to social media platforms, interacting with a GPS mapping application, playing electronic games, and reading electronic books or Web sites. Although the increased risk associated with such activities is not yet well

described, any manipulation of a mobile device while driving is a distraction and likely increases the risk of a crash.

Though little data exist to demonstrate efficacy, strategies to decrease distracted driving include legislation, enforcement, pledges, and the use of technology to block mobile device functionality while in a moving vehicle. States and municipalities increasingly are enacting bans on the use of mobile devices by drivers. Use of technology, such as in-car cameras and anti-texting applications for smartphones, may help prevent texting and driving. Given that teens are more likely to use safety belts and helmets if their parents do, it is reasonable to deduce that teens may be positively influenced by parents who demonstrate undistracted driving behaviors. Parents and adolescents can be encouraged to discuss the topic of distracted driving and to use a text-free-driving pledge. Resources available to prevent distracted driving are available at www.distraction.gov.⁷⁹

Violence

Violence and exposure to violence increase the risk of homicide, aggressive behavior, and psychological sequelae, including post-traumatic stress disorders.^{6,80-85} It has been estimated that each year approximately 8.2 million children have been exposed to intimate partner violence (IPV).⁸³ Childhood exposure to IPV seems to increase the likelihood of risky behaviors later in adolescence and adulthood.⁸⁶ Additionally, children who witness IPV are at increased risk of adverse behavioral and mental health issues.^{80,83}

Sexual and dating assaults are a leading cause of violence-related injury in adolescence.^{28,87} In the 2013 Youth Risk Behavior Survey, among high school students reporting having dated in the prior 12 months, 10.3% report physical dating violence and 10.4% report sexual dating violence, with a higher prevalence among girls.⁸⁷ Adolescents who report a history of experiencing dating violence



are more likely to experience negative health consequences and engage in serious risk behaviors.⁸⁸ Comprehensive IPV interventions conducted by teachers in schools in combination with community activities have been effective in preventing IPV perpetration and abuse among adolescents.⁸⁹ Screening for violence exposure can identify those who need further intervention.

Certain youth subcultures may experience comparatively greater violence, including injury, abuse, and rape. Teens who use drugs, report having been in more than 4 fights in the past year, are failing in school, or have dropped out of school are at substantially increased risk of serious violence-related injury.^{90,91} Studies have found abuse, substance use, and sexual risk behaviors among gay youth to be significantly higher than among their heterosexual peers.⁹² Homicide is consistently the leading cause of death for male African American adolescents.⁹³

Suicide

Suicide is the third leading cause of death for adolescents, and a 2013 survey found that suicidal ideation is reported by more than one-sixth of high school students.⁸⁷ Medications, knives, automobiles, and firearms are all readily available to most adolescents, representing ubiquitous opportunities for depressed youth to harm themselves. (*For more information on these topics, see the Promoting Mental Health theme.*)

Gangs

The 2012 National Youth Gang Survey (NYGS) estimates there are 30,000 active gangs and 850,000 gang members throughout 3,100 jurisdictions in the United States.⁹⁴ The 2012 NYGS results reveal that more than one-third of the jurisdictions that city (populations of $\geq 2,500$) and county law enforcement agencies serve experienced gang problems between 2005 and 2012.⁹⁵ This number translates to an estimated 3,100 jurisdictions with gang problems across the United States. The prevalence of

youth gang membership varies according to the city but is higher in larger cities and those with a history of gang activity. Risk factors for gang involvement include prior and early involvement in delinquency, especially violence involvement; poor parental supervision and monitoring; low academic achievement and attachment to school; association with peers who are delinquent; and criminogenic neighborhoods with drug use and youth who are in trouble.⁹⁶ (*For more information on this topic, see the Promoting Lifelong Health for Families and Communities theme.*) Health care professionals should be alert to these risk factors and should screen for gang exposure. The National Youth Gang Center has resources for gang prevention, intervention, and suppression.⁹⁷

Sports

Pre-participation sports physical examinations, which are directed at identifying the few adolescents for whom a sport would be dangerous, provide a unique opportunity for health care professionals to counsel adolescents and their parents on preventing sports injury and violence (eg, intentional fouls during contact sports, hazing, brawling) and promoting general health. Generally, sports participation should be encouraged because of the physical, emotional, and social benefits. (*For more information on this topic, see the Promoting Physical Activity theme.*)

Some medical conditions warrant a limitation in sports or require further evaluation before participating. An AAP policy statement from the Council on Sports Medicine and Fitness provides a detailed review of medical issues that limit participation.⁹⁸ Some youth with special health care needs may have condition-specific restrictions on their activity and may require alternative or adapted activities that are safe and appropriate. If a heart murmur is innocent (eg, it does not indicate heart disease), full participation is permitted,⁹⁸ but other cardiac disorders may require further evaluation. The



presence of significant hypertension without heart disease or organ damage should not limit participation, but the adolescent's blood pressure should be measured at the health care professional's office every 2 months. Adolescents with severe hypertension should be restricted from isometric activities (eg, weight lifting) and competitive sports until their hypertension is under control and they have no end-organ damage.⁹⁹ Any temporary suspension from sports participation because of a medical condition (eg, concussion or surgery) should be reinforced by the health care professional, and adolescents and parents should be made aware of the importance in adhering to all recommendations as to when to resume sport activities.

Health care professionals should advise adolescents to use appropriate protective gear (eg, helmets, eye protection, knee and elbow pads, personal flotation devices or personal protective devices, mouth and wrist guards, and athletic supporter with cup) during recreational and organized sports activities and focus on overall strengthening and conditioning as well as training for their specific sport as key ways to prevent injury and maintain fitness.

Performance-enhancing substances, including anabolic steroids, are an important topic for discussion, and adolescents should not use them. Health care professionals also can encourage parents to be cautious about allowing their adolescents to participate in highly competitive sports until they are physically and emotionally mature enough and to ensure that such programs are properly certified and staffed by qualified trainers and coaches.

The use of sports and energy drinks by adolescents is another issue that health care professionals can address during a pre-participation examination. As stated in an AAP policy statement, these drinks "...are a large and growing beverage industry now marketed to children and adolescents for a variety of uses.... Sports drinks are different products than energy drinks...[they] are flavored beverages

that often contain carbohydrates, minerals, electrolytes (eg, sodium, potassium, calcium, magnesium), and sometimes vitamins or other nutrients. Although the term 'energy' can be perceived to imply calories, energy drinks typically contain stimulants, such as caffeine and guarana, with varying amounts of carbohydrate, protein, amino acids, vitamins, sodium, and other minerals.⁹⁹ Energy drinks pose potential health risks primarily because of stimulant content. They are not appropriate for children and adolescents and should never be consumed. "Sports drinks are appropriate when there is a need for rapid replenishment of carbohydrates and/or electrolytes in combination with water during periods of prolonged, vigorous sports participation or intense physical activity."¹⁰⁰ (For more information on this topic, see the *Promoting Physical Activity* theme.)

Recent new knowledge on sports injuries has focused greater attention on 2 issues: concussions and the injuries resulting from cheerleading. Clinicians should be aware of recommendations from the AAP and should address these issues during pre-participation sports examinations.

- **Concussion.** Although the collision sports of football and boys' lacrosse have the highest number of concussions and football the highest concussion rate (0.6 per 1,000), concussion occurs in all other sports and has been observed in girls' sports at rates similar to or higher than those of boys' sports. Girls' soccer produces the most concussions among girl athletes and has the second highest incidence rate (0.35 per 1,000) of all sports.¹⁰¹ As of 2014, all 50 states had enacted laws on concussion awareness and management of young athletes.¹⁰² Parents, coaches, and athletic trainers can ensure that return-to-play guidelines are followed and that the student-athlete is provided sufficient time for recovery from any injury before resuming the sport.¹⁰³



- **Cheerleading.** Over the past 30 years, cheerleading has increased dramatically in popularity and has evolved from leading the crowd in cheers at sporting events into a competitive, year-round sport involving complex acrobatic stunts and tumbling. Consequently, cheerleading injuries have steadily increased over the years in both number and severity. Sprains and strains to the lower extremities are the most

common injuries. Although the overall injury rate remains relatively low, cheerleading has accounted for approximately 66% of all catastrophic injuries in high school girl athletes over the past 25 years. Cheerleaders should have a pre-participation physical examination before participating in a cheerleading program and should have access to appropriate strength and conditioning programs.¹⁰⁴



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