

# Tequesta Family Practice

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## Prevention of Childhood Injuries

Injuries are the leading cause of death in children and teens in the US. The leading causes vary by age and sex but include drowning, poisoning, suffocation, fires, burns, falls and motor vehicle, bicycle and pedestrian related crashes. Many of these injuries can be prevented by attention to detail in modifying the child's environment and safety practices. There are a variety of age-specific recommendations that can be made: Childproof caps on medications & household poisons, age-appropriate restraints in motor vehicles, bicycle helmets, fenced-in swimming areas. Many simple common-sense approaches can help keep the kids safe.

During the holidays we're more likely to be distracted by visitors, festivities and changes in family routines. Folks who ordinarily are able to watch their younger ones more carefully may be more easily distracted. The use of passive systems that don't involve immediate direct supervision can be a good backup, if not primary injury prevention strategy. Active interventions require action to provide protection; Eg. Fastening a seatbelt, where passive prevention is automatic Eg. Automatic airbags.

Although the parents are the front-line protection for the children's safety, most of them can't identify much other than "be careful". There are specific things that can be done to help keep children safe, most of these are based on specific age ranges.

TABLE 1

### Evidence-Based Prevention Strategies for Childhood Injuries

<i>Cause of injury</i>	<i>High-risk groups</i>	<i>Prevention strategies</i>
Bicycle crashes	School-age children	Approved bicycle helmet to reduce the risk of head injury after crashing  Educational programs to increase helmet use
Drowning	Toddlers and school-age children	Fencing that completely surrounds pool and does not allow direct access from house. Fence should be made of material that is difficult to climb and have self-latching gates.  Personal flotation devices around water

Falls	Infants and toddlers	Vigilant adult supervision
		Cardiopulmonary resuscitation training
Fires and burns	Toddlers and school-age children	Avoiding the use of infant walkers
		Gates for stairways
		Releasable window guards or window stops above first floor
Motor vehicle crashes	All children	Clinical counseling for parents to prevent falls
		Properly installed and maintained smoke detectors
Poisoning	Toddlers	Clinical counseling to increase smoke detector use
		Water heater temperature preset to less than 130° F (54.4° C)
Suffocation	Infants	Correct use of age-appropriate child restraints
		Clinical counseling to encourage correct use of child restraints
Suffocation	Infants	Child-resistant packaging
		Smoking cessation during pregnancy
		Recommending safe sleeping practices
		Place infants on their backs to sleep
		Use a firm mattress that meets currently mandated safety standards
		Remove quilts, loose bedding, stuffed toys, and other soft objects from crib
		Keep infant's head uncovered
		Do not allow infant to share a bed with adults or other children
		Do not allow infant to sleep with adults on a sofa or recliner
		Consider offering a pacifier during sleep
Avoid overheating		
		Avoid commercial devices marketed to reduce the incidence of sudden infant death syndrome (e.g., monitors, wedges to maintain sleeping position)

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### **Infants:**

Suffocation is the cause of about 66% of deaths in this age range. Usually this happens when the child gets wedged between a mattress and bedframe or all or facial obstruction by bedding or overlaying by another person. Sudden Infant Death Syndrome SIDS is a good descriptive term for this condition. The “Back to Sleep” promoted by the American Academy of Pediatrics is a good reminder to keep children on their back or side while sleeping.

Falls are a leading cause of non-fatal injury in children of all ages. Parental counseling and window guards are effective in preventing falls in the very young. Infant walkers should be avoided as they are linked with many serious falls especially down stairs etc.

### **Toddlers;**

About a third of injury-related deaths to toddlers come from MVA crashes, a fourth from drowning. Falls and poisonings are the leading causes of nonfatal injuries requiring hospitalization in this age group. Burns and scald injuries are also frequent sources of problems in this age range.

Appropriate restraints in vehicles, pool and swim area barriers and supervision are all helpful. Remember also that children of this small size can easily drown in a bucket of water or bathtub.. Water heaters should be set at <130°F to help prevent burns. Children should be taught to avoid matches, lighters & fires. Smoke alarms are also vital, remember to change the batteries every year when the clocks are set forward as well.

Poisoning continues to be a leading cause of injury related hospitalization among toddlers. Syrup of ipecac is no longer recommended after ingestion of toxins as it incompletely removes poisons and can interfere with the use of specific antidotes and activated charcoal and acetylcysteine.

### **School-Age Children**

Motor-Vehicle Crashes are the cause of nearly 60% of deaths in this age range, drownings cause about 10%, fire and burns 8%. Most nonfatal injuries are due to falls and bicycle & pedestrian related crashes. These children should not travel in cargo areas of pickup trucks. Children less than 16 yrs of age should be discouraged from using off-road vehicles and riding lawn mowers.

Bicycle helmets are very effective in preventing serious injuries and death. Protective gear for skateboard and roller blade use is also highly encouraged.

### **Adolescents**

As expected, Motor vehicle crashes are the leading cause of injuries and all-cause mortality in adolescents.<sup>1,13</sup> Teenage drivers have high crash rates, primarily because of

inexperience and risky driving behaviors (e.g., speeding, tailgating). Nighttime driving is risky for teenagers, as is driving with teenage passengers.<sup>37</sup>

Wearing a seat belt effectively reduces or prevents injury in the event of a crash.<sup>38</sup> Parental management of teenage driving is a promising component of an effective injury prevention strategy.<sup>39</sup> Driver's education courses are not effective in preventing crashes, and some evidence suggests that these courses actually may increase teenagers' crash risk if participation results in earlier licensure.<sup>40</sup>

### **Counseling Recommendations**

Priority topics for office-based injury prevention counseling include the use of motor vehicle restraints, smoke detectors, and pool fencing; reducing residential hot water temperature; the hazards of infant walkers; the safe storage of poisons and medications; and parental supervision.<sup>41</sup> The AAP has created the Injury Prevention Program for parents of children 12 years and younger. It can be accessed at <http://www.aap.org/family/tippmain.htm>. The program includes injury prevention counseling guidelines and schedules for providers, safety surveys designed to assess parents' specific educational needs, and age-specific parent education handouts for use in providing anticipatory guidance in primary care offices.<sup>19</sup> This program has been shown to be cost-effective.<sup>42</sup>

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