



Texas State Child Fatality Review Team Committee Position Statement: Water Safety for Children

The State Child Fatality Review Team Committee (SCFRT) works closely with local Child Fatality Review Teams (CFRT) to promote public awareness to reduce the number of preventable child deaths.

Drowning is the second leading cause of unintentional injury-related death among Texas children. Each year, up to 100 children die from drowning in Texas and an estimated four times that number receive emergency department care for nonfatal submersion injuries. Children ages one to four years have the highest drowning mortality rates and account for 45% of all child drowning deaths. While child drowning mortality decreased by almost half during the 1990s, rates for most age groups have remained relatively unchanged since 2000.

The dangers of drowning reflect the culture and setting in which the event occurs. Young children are at high risk for drowning when they live and play around water. Infants are most at risk of drowning when left unsupervised for even seconds in the bathtub. The greatest risk of drowning for toddlers and young children are residential pools, hot tubs, or water storage areas such as wells, cisterns and stock tanks. Young teens most often drown during water recreation such as swimming and boating.

Observational data shows that children can drown in unusual conditions.

- In as little as one inch of water.
- Very quickly and silently.
- Lose consciousness in two minutes after submersion, with irreversible brain damage occurring within four to six minutes.

RECOMMENDATIONS TO THE STATE OF TEXAS, THE TEXAS LEGISLATURE, PARENTS, AND HEALTHCARE PROVIDERS:

The State Child Fatality Review Team Committee joins the National Drowning Prevention Alliance in recognizing that multiple prevention strategies and devices should be used constantly and simultaneously to reduce childhood drowning. Multiple layers of protection need to be used to reduce child drowning deaths. Along with other leaders in injury prevention such as the Texas Parks and Wildlife Department, the U.S. Coast Guard (USCG), the Army Corps of Engineers (USACE), the American Red Cross, the Y.M.C.A., the American Academy of Pediatrics (AAP), the Centers for Disease Control and Prevention, Center for Unintentional Injuries and Safe Kids Worldwide, the State Child Fatality Review Team Committee makes the following recommendations.

ENVIRONMENT

Statement: Drowning occurs in a variety of environments.

- **POOLS, HOT TUBS AND SPAS**

Home swimming pools are the most common site for drowning to occur for a child between ages one to four years. Most of the victims were being supervised by one or both parents when the drowning occurred. Toddlers are inquisitive and are attracted to water. They move quickly and unpredictably, making swimming pools particularly hazardous for households with young children. Properly installed four-sided isolation fencing that prevents access to pools would reduce 50 to 90 percent of childhood drowning. However, there is no substitute for “eyes and hands-on” supervision.

Recommendations:

Enticements:

- Remove toys from in and around the pool when not in use.

Barriers:

- Properly install and maintain an isolation fence at least four feet high that surrounds all sides of the pool along with a self-closing and self-latching gate.
- Use a gate latch that can be locked with a key and remember to lock the gate when the pool is not in use.
- Place alarms on door and windows with access to pool area.
- Keep a shepherd's hook, life ring, and telephone by the pool for emergencies.

Entrapment Protection:

- Properly install and maintain anti-entrapment drain covers.
- Equip pool and spa pumps with safety vacuum release system (SVRS), an emergency sensor that shuts off the switch automatically if the drain is blocked.
- Replace drain covers immediately if they are broken or damaged.

- **OPEN BODIES OF WATER:** Natural and man-made, which includes lakes, rivers, ponds, and bayous.

There is no substitute for "eyes on" close supervision of children near any open bodies of water. For boating related injuries and deaths, 90 percent of drowning victims were not wearing life jackets. The majority of boating fatalities occurred on boats where the operator had not received safety instructions. In 2006, the US Coast Guard received almost 5000 reports of boating incidents accounting for nearly 3500 people injured and over 700 deaths. Of these incidents, 45% involved an open motor boat and 24% involved a personal watercraft (jet skis, wet bikes, wave runners).

Recommendations:

Boating and Personal Watercrafts (PWC):

- Always have adults and children wear a life jacket (also called personal flotation device or PFD) approved by the U.S. Coast guard while on a boat or PWC. The life jacket should fit snugly and not allow the child's chin or ears to slip through the neck opening.
- Air-filled swimming aids, such as "water wings" and inner tubes, are NOT safety devices and should never be used as a substitute for a PFD or proper supervision.
- Children younger than 16 years should not operate a boat or PWC.
- Adults and adolescents (16 years and older) should not operate a boat or PWC without taking a boating course and safety training education.
- Never drink alcoholic beverages or use any drug while operating a boat or PWC.
- Do not operate boats or PWC where swimmers are in the water.
- Always have a supervisor face the rear of a boat or PWC when there is a person being towed while skiing, knee boarding or in a tube.
- Participate in a vessel safety check program every year offered free by the U.S. Coast Guard Auxiliary or U.S. Power Squadrons (www.uscgboating.org).

Carbon Monoxide Poisoning:

Each year boaters are injured or killed from carbon monoxide poisoning. Many such incidents occur within the cabin or other enclosed areas without sufficient ventilation. Carbon monoxide-related injuries and or drowning can also occur near the rear deck and swimming platform. Prolonged exposure to low doses or short exposure to high concentrations of carbon monoxide can lead to death.

Recommendations:

- Install a carbon monoxide detector in the enclosed areas of your motorboat.
- Avoid motor exhaust vent areas.
- Do not swim near or under the back deck or swim platform of a boat or PWC when the motor or generator is operating.
- Do not “break surf” (holding onto the swim platform while towed by a boat).
- Do not confuse carbon monoxide poisoning with sea sickness or intoxication if someone onboard complains of headaches, dizziness, nausea, confusion and fatigue.

- **HOMES:**

Many household areas and items can cause water-related fatalities. Children can drown in only a few inches of water and should be supervised closely in and around areas of the home where water can accumulate. Both the Centers for Disease Control and the American Academy of Pediatrics (AAP) identify the following as potential sites where young children can be injured by accumulated water.

- Bathtubs
- Buckets/Pails
- Ice Chests
- Toilets
- Fountains

Recommendations:

- Never leave a child unattended, alone or cared for by another child in a bathtub.
- Never leave a child in a bathtub to answer the phone or doorbell.
- Empty all buckets/pails, ice chests and bathtubs completely after they are used.
- Keep bathroom and laundry room doors closed. Install door knob covers and/or hook-and-eye latches to keep closed doors secured.
- Keep toilet seats and covers down. Install toilet seat locks.
- Keep your family safe from hot water burns: Set water heater thermostats to 120° F.
- Showers are preferred for bathing when children and adolescents have a seizure disorder.
- Parents and caregivers should learn CPR to provide immediate resuscitation if needed for drowning or other water related injury.

SUPERVISION

Statement: Parents, guardians and caregivers need to understand the dangers of drowning and know the proper steps to take to protect children. Children are especially vulnerable to water hazards. Never leave a young child unsupervised in or around water, even for a moment.

Recommendations:

- Never allow children to swim without adult supervision. An adult should be present in the water with children less than five years of age.
- Always designate a responsible adult to serve as the “water watcher” – a supervisor whose sole responsibility is to constantly observe children in or near the water.
- Supervisors should maintain continuous visual and auditory contact with children in or near the water, and should stay in close proximity (waterside) so that they can effectively intervene if an emergency should arise.
- Supervisors should not engage in distracting behaviors such as talking on the phone, cooking or reading.
- Supervisors should keep children who cannot swim within arm's reach at all times.
- Supervisors should learn infant and child CPR and rescue safety tips.

- Teach children not to dive into unknown water. Check for depth and obstructions before diving and then go in feet first the first time.
- While there is no specific recommended ratio of supervisors to child swimmers, the number of supervisors should increase when many children are swimming, younger or inexperienced swimmers are present, or the swimming area is large.
- Instruct babysitters about potential pool hazards and emphasize the need for constant supervision.

EDUCATION

Statement: Over the years, decreased drowning rates can be attributed to many factors. Injury prevention initiatives raise the awareness of water safety as an important social issue. The delivery of targeted educational and public outreach initiatives has also improved with advances in technology to reach more families and children. Yet, far too many children continue to lose their lives in drowning situations that are frequently preventable circumstances.

Recommendations

- **Swimming Instruction**

Children by age 8 and adolescents should learn how to swim and receive instruction from a certified instructor. However, the SCFRT along with other safety advocates do not recommend swimming and/or other aquatic programs as the only methods to decrease or prevent drowning and other water related injuries. The AAP does not recommend formal swimming lessons until a child reaches their fourth birthday.

The SCFRT recommends the following for swimming instruction, aquatic programs and general safety for children and adolescents in and around water:

- Swimming instruction and aquatic programs should not be considered or promoted as the sole methods to prevent drowning and other water-related injuries.
- Swimming instruction and aquatic programs should provide education on the developmental limitations of young children, strategies for prevention of water related injuries and the importance of proper supervision of children and adolescents in and around water.

Educate children about the rules of water safety such as swimming with a buddy and always have an adult present. Instruct children how to recognize someone is in trouble in the water and to call for help and throw something that floats to the victim. A child should never enter the water to try to save someone.

Along with the above recommendations, parents often ask about water safety for children with disabilities or special needs. Children with disabilities are at increased risk for injuries, including drowning. It is important to know that local communities can provide water skills and safety programs that teach children with disabilities to be safe and have fun in and around the water. Be sure to connect with qualified aquatic facilities that are appropriately certified to instruct special needs children and their families.

Recommendations:

- **Always Swim With a Buddy:** It is important to remind children that it is dangerous to swim alone and under adult supervision.
- **No Running, No Pushing:** Reminds children how to behave in and around water.
- **STOP, LOOK, LISTEN:** Children must learn to do this when the Lifeguard blows the whistle. This explains the importance of the lifeguard and what they should do.
- **Learn to blow bubbles when under the water:** Many children are unfamiliar with water and may panic if water is over their heads. This teaches children to stay calm and to blow bubbles out when underwater.
- **Put Feet Down/Stand Up When In Trouble:** Children may lose their sense of spatial awareness. This teaches children to put their feet down and helps to keep their head above water.

REFERENCES

- American Academy of Pediatrics, Committee on Injury and Poison Prevention. Personal Watercraft Use by Children and Adolescents. *Pediatrics* 105(2):452-453. February 2000.
- American Academy of Pediatrics, Committee on Injury and Poison Prevention. Prevention of Drowning in Infants and Adolescents. *Pediatrics* 112(2):437-439. August 2003.
- American Academy of Pediatrics, Committee on Sports Medicine and Committee on Injury and Poison Prevention. Swimming Programs for Infants and Toddlers. *Pediatrics* 105(4):868-870. April 2000.
- American Academy of Pediatrics. The Injury Prevention Program: Home Water Hazards for Young Children [online]. <http://www.aap.org/family/homewatr>
- American Academy of Pediatrics. The Injury Prevention Program: Water Safety for your School aged Child [on-line]. <http://aap.org/healthtopics/watersafety>
- Brenner RA. American Academy of Pediatrics, Committee on Injury, Violence and Poison Prevention Technical Report. Prevention of Drowning in Infants and Adolescents. *Pediatrics* 112(2):440-445. August 2003.
- Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online] (2009). Available from URL: www.cdc.gov/ncipc/wisqars.
- Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. CDC Quick Tips. Strategies for drowning prevention in recreation water settings. Available from URL www.cdc.gov/healthyswimming/pdf/cc qt_drowning.pdf
- Centers for Disease Control and Prevention, Swimming and Recreational Water Safety In: Health Information for International Travel 2005-2006. Atlanta: US Department of Health and Human Services, Public Health Service, 2005. Date updated: June 22, 2007. Content provided by the Centers for Disease Control. Available from URL: <http://www.revolutionhealth.com/conditions/first-aid-safety/safety-preparedness/beach-pool/water-safety>
- Double Angel Foundation. "Boaters Protect Yourself from this Silent Killer: Carbon Monoxide." Available from URL: www.doubleangel.org/documents/DoubleAngelCObro.pdf
- Gilchrist J, Gotsch K, Ryan GW. Nonfatal and Fatal Drownings in Recreational Water Settings—United States, 2001 and 2002. *MMWR* 2004; 53(21):447–52. Available from URL: <http://jama.ama-assn.org/cgi/content/full/292/2/164>
- Harborview Injury Prevention Center. "Best Practices: Swimming Lessons." Available from URL <http://depts.washington.edu/hiprc/practices/topic/drowning/swimminglessons.html>
- Harborview Injury Prevention Center. "Best Practices: Drowning Interventions. Pool Fencing." Available from URL <http://depts.washington.edu/hiprc/practices/topic/drowning/fencing.html>
- Present P. Child drowning study. A report on the epidemiology of drowning in residential pools to children under age five, Washington (DC): Consumer Product Safety Commission (US); 1987.
- Quan L, Bennett E, Branche C. Interventions to prevent drowning. In Doll L, Bonzo S, Mercy J, Sleet D (Eds). Handbook of injury and violence prevention, New York: Springer, 2007. Literature Update 2005: Preventing Drowning in the United States. Available from URL: <http://www.springerlink.com/content/978-0-387-85769-5>
- Safe Kids USA, Clear Danger: A National Study of Childhood Drowning and Related attitudes and Behavior, 2004. Available from URL: <http://www.usa.safekids.org/NSKW.cfm>
- Texas EMS/Trauma Registry [online]. Available from URL: www.dshs.state.tx.us/injury
- Texas Child Fatality Review 2000-2008 Reports [online]. Available from URL: http://www.dshs.state.tx.us/mch/Child_Fatality_Review.shtm

U. S. Consumer Product Safety Commission. Safety barrier guidelines for home pools [online], Available from URL: www.cpsc.gov/cpsc/pub/pubs/pool.pdf

U.S. Coast Guard, Department of Homeland Security (US). Boating Statistics – 2006 [online] 2009. Available from URL: www.uscgboating.org/statistics/Boating_Statistics_2006.pdf

U.S. coast Guard. "Carbon Monoxide: THAT Silent Killer"; August 2, 2001. Available from URL: www.uscgboating.org/articles/boatingview.aspx?id=22

DROWNING PREVENTION ONLINE RESOURCES

General Resources

- [National Center for Injury Prevention and Control \(Centers for Disease Control and Prevention\)](#)
- [North American 2004 Boating Campaign Information](#)
- [Harborview Injury Prevention and Research Center](#)
- [SAFE KIDS](#)
- [Clear Danger: A National Study of Childhood Drowning and Related Attitudes and Behaviors](#)
- [Washington State Drowning Prevention Campaign](#)
- [World Congress on Drowning Proceedings](#)
- [American Academy of Pediatrics](#)
- [American Red Cross - King and Kitsap County](#)
- [American Red Cross - Swimming and Lifeguarding](#)
- [Centers for Disease Control National Center for Injury Prevention and Control - Drowning Prevention Fact Sheet](#)
- [Public Health Seattle & King County](#)
- [SAFE KIDS - Water Safety Tips](#)
- [SAFE KIDS - Drowning Injury Facts](#)
- [The Joey Pizzano Memorial Fund Inc](#)
- [Swim Kids](#)

The Home (pools and spas)

- [Above Ground Pools and Spas \(PDF\)](#)
- [Consumer Product Safety Commission - Pool and Spa Safety](#)
- [Consumer Product Safety Commission - Prevent Child In-Home Drowning Deaths](#)
- [Consumer Product Safety Commission - Preventing Child Drownings](#)
- [Drowning Facts and Prevention Tips for Homeowners \(PDF\)](#)
- [Private Residential Pools and Spas-Tips for Homeowners \(PDF\)](#)

Open Water (Playing or Swimming)

- [Rip Currents Awareness](#)
- [Farm Pond Safety](#)
- [National Children's Center - Rural Youth Drowning: Fact Sheet](#)
- [U.S. Army Corps of Engineers - National Water Safety Program](#)
- [Washington State Department of Health - Water Safety Fact Sheet](#)

Boating

- [National Safe Boating Council](#)
- [U.S. Coast Guard - Office of Boating Safety](#)

The SCFRT Position Statement on Water Safety for Children is a product of the SCFRT Workgroup on Water Safety (Dr. Kim Cheung, Dr. Juan Parra, John Hellsten, PhD, Kristene Brown and Dr. Eric Levy). The Position Paper on Water Safety for Children will be reviewed annually and updated as new validated information indicates.
July 2009