



AUTISM SPECTRUM DISORDER & Water Safety

*A guide for caregivers and water safety
professionals to meet the needs of individuals
with autism spectrum disorder*

Understanding Autism Spectrum Disorder

Autism spectrum disorder (ASD) is a lifelong neurological disability that affects a person's ability to communicate, understand language, play, and socially interact with others. The first signs of ASD usually appear as developmental delays before age three.

Every person with ASD is different. However, there are some common characteristics of individuals with ASD that may occur.

- Difficulty in using and understanding **language**
- Difficulty in using **social skills** and navigating social situations
- **Over or under sensitivity** to sound, sight, taste, touch, or smell
- **Repetitive behaviors** such as spinning or lining up objects
- **Difficulty with changes** to surroundings or routines
- **Challenging behaviors** such as aggression or self-injury





What Caregivers & Water Safety Professionals Need to Know About Individuals with ASD

Individuals with ASD appear to be drawn to water. This places them at an increased risk for unintentional death and disability due to drowning¹. Unlike their typically-developing peers, this risk persists regardless of age². Experts are not sure why this fascination exists, but caution caregivers and professionals to be extremely vigilant around any body of water and to proactively minimize certain risk factors for drowning when possible. **Drowning can start to occur in as little as 20 seconds and in less than 2 inches of water³.**



Minimize Risks

Caregivers and professionals should take the time to identify and minimize potential drowning risk factors.

- **Identify and be mindful of the bodies of water** an individual with ASD is closest to (e.g. bath tub, neighbor's pool, ponds, retention ditch).



- Never have items near or in the pool to entice children to grab or reach.
- Insure that individuals with ASD learn how to swim and that their swimming curriculum includes **water safety and self-rescue skills**.





- **Provide swimming rules and directions** in a format that the individual with ASD can easily understand. Pictures; simple, concrete wording; and stories are some of the ways this could be accomplished.
- Provide **water safety barriers**
 - Lock doors and install pool screens and gates.
 - Install “isolation fencing” around pools. This can reduce a child’s mortality risk for drowning by 83%⁴.
 - Install pool and door alarms.
- **Use life jackets** that are a good fit for the individual with ASD given their height and weight. Inflatable arm floaties, pool noodles, etc. cannot be substituted for a life jacket⁵.



Know the Signs

Everyone should be able to identify the **first signs** of drowning.

- **Unable to make noise and call for help**⁶. A child does not have time to exhale, inhale, and shout out because of how short of a time their mouth is above the water before they sink again.
- **Upright in the water with no evidence of kicking**⁶. This may last for only 20 to 60 seconds before they sink below the surface.
- **Unable to bring arms above water to wave for help**⁶. A child who is drowning instinctively places their arms forward or to the sides and pushes down to help get their mouth above the surface.
- **Head fallen forward with mouth at water level or head tilted back with mouth open** (may appear to be staring into the sky)⁶.
- **Glassy, unfocused, or closed eyes**⁶.
- **Hair potentially over eyes and forehead**⁶.

Even if an individual is saved from drowning, a small amount of water trapped in the lungs can still cause **“dry” drowning**. The individual should be monitored closely for the next few days. If any of these signs become present, seek **immediate medical attention**:

- Pain in chest⁷
- Persistent coughing⁷
- Shortness of breath⁷
- Lack of energy or mood changes⁷
- Changes in skin color or sweatiness⁷



Caregivers: You're the Lifeguard

Proper adult supervision is the most effective way of preventing drowning⁸! YOU can help keep an individual with ASD stay safe by following the **3C's**.

1. **C**lose and constant supervision.

- Children should NEVER be allowed to swim unsupervised^{8, 9}. Make sure that each child has a designated adult to watch them (even if they've had swimming lessons). Do not assume that other adults (even a professional lifeguard) are watching your child unless you have directly asked them.
- Practice "reach supervision" where you are only an arm's length away from the child^{9, 10}.



2. Cut out distractions.

- Do not perform other activities such as talking to others, reading, using your phone, or eating while supervising. A person can start drowning in a matter of seconds.



3. CPR certification.

- About 70% of pediatric drowning victims do not receive immediate CPR⁴. Starting CPR can significantly improve a victim's chance of surviving a drowning incident. There are a number of local entities that offer short, basic CPR courses such as the American Red Cross or YMCA.

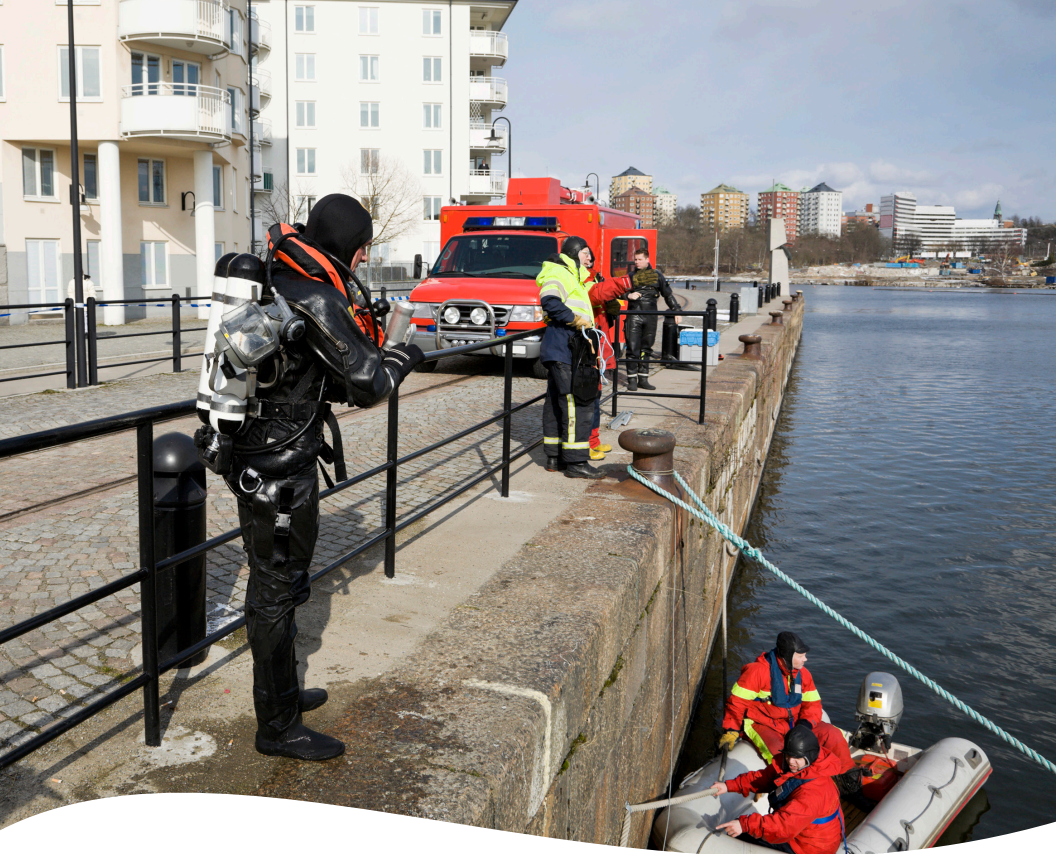




Recreation Personnel

- Always incorporate water safety and self-rescue skills when offering swim instruction.
- Encourage caregivers of children with ASD to start their child's swim instruction as soon as possible.
- Clarify a child's communication and sensory needs with the caregiver.
- Make sure that children with ASD always have adequate adult supervision.
- Have recreational rules, especially those related to swimming, clearly posted; written in simple, concrete language; and include pictures when appropriate. This will clarify the rules for everyone.





First Responders

- Advocate for a wandering search system such as Project Lifesaver or SafetyNet™ to be implemented in your county. If a system is in place, encourage caregivers to sign up for the program.
- In a wandering case, make sure to identify all surrounding bodies of water and search them quickly and thoroughly². An individual with ASD may stay hidden and not respond to their name being called².
- In near-drowning incidences, share information about “dry” drowning with parents.



Additional Resources

www.ndpa.org – National Drowning Prevention Alliance

www.redcross.org/prepare/disaster/water-safety – Red Cross provides safety tips and swim lessons.

www.cdc.gov/healthywater/swimming/protection/index.html – CDC provides information on water safety and water-related issues.

www.safekids.org/watersafety – Safe Kids Worldwide provides water safety resources for families and professionals.

Please visit the Safety page of our website for up-to-date resources on water safety, including information on strategies, social experience stories, available apps and classes:

<https://usf.to/CARDautismsafety>

CARD-USF staff is available to provide technical assistance and training to water safety professionals (e.g. recreation personnel and first responders). CARD-USF also can provide consultation and resources to caregivers of individuals with ASD.

Sources

1. Shavelle, R. M., Strauss, D. J., & Pickett, J. (2001). Causes of death in autism. *Journal of autism and developmental disorders*, 31(6), 569-576.
2. Scott, J. (2014). *Keeping children and youth with asd safe from unintentional injuries: Parents, you are the safety captains*. Paper presented at the 21st Annual Statewide CARD Conference, Orlando, Florida.
3. Berger, E. (2013, June 6). *Drowning: first aid for a child*. Retrieved from <https://www.aboutkidshealth.ca/> on May 2014.
4. Girasek, D. C. (2011). Evaluation of a brief intervention designed to increase CPR training among pregnant pool owners. *Health education research*, 26(4), 689-697.
5. American Red Cross. (2014). *Life Jackets Aren't Just for Boats*. Retrieved from <https://www.redcross.org/> on May 2014.
6. 8 quiet signs of someone drowning. (2011). *Reader's Digest*, Retrieved from <https://www.rd.com/> on May 2014.
7. Jákupsstovu, R. (2011, July 03). How to spot symptoms of dry and delayed drowning. *Swimmer's Daily*, Retrieved from <http://www.swimmersdaily.com/2011/07/03/how-to-spot-symptoms-of-dry-and-delayed-drowning/>
8. Petrass, L. A., Blitvich, J. D., & Finch, C. F. (2011). Observations of caregiver supervision of children at beaches: identification of factors associated with high supervision. *Injury prevention*, 17(4), 244-249.
9. Petrass, L. A., Blitvich, J. D., & Finch, C. F. (2011). Self-Reported Supervisory Behavior and Beliefs vs. Actual Observations of Caregiver Behavior at Beaches. *International Journal of Aquatic Research & Education*, 5(2).
10. American Red Cross. (2014, May 12). *Red cross releases water safety tips*. Retrieved from <https://www.redcross.org/> on May 2014.



Florida's First Choice for Autism Support

The Center for Autism & Related Disabilities (CARD) provides support and assistance with the goal of optimizing the potential of people with autism spectrum disorder and related disabilities.

card-usf.fmhi.usf.edu



CENTER FOR AUTISM &
RELATED DISABILITIES AT USF
College of Behavioral & Community Sciences
University of South Florida
13301 Bruce B. Downs Blvd., MHC 2113A
Tampa, FL 33612

In Florida: 1-800-333-4530 or 813-974-2532

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