

# Layers of Protection To Help Protect Pool, Spa, and Hot Tub Users, Especially Children Under Five Years of Age

The Association of Pool & Spa Professionals (APSP) believes that the home pool, spa, or hot tub provides a healthy, relaxing recreational opportunity for families in their own backyard. The APSP has worked with nationally recognized safety groups to provide information to assist pool, spa, and hot tub owners in meeting their safety needs.

While the number of pools, spas, and hot tubs grows significantly each year, child drownings have been declining. Nevertheless, parents should be aware that any body of water poses a risk, especially for children under five years of age.

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***Parents should know that adult supervision is the primary way to prevent accidents. They should maintain constant visual contact with children whenever they are near, or could get near, any body of water. Unfortunately, most accidents occur when there is a lapse in supervision, even for a short time.***

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Recognizing these facts, APSP supports the concept of “Layers of Protection” for pools, spas, and hot tubs—an idea that is widely embraced by safety experts. “Layers of Protection” means that, in addition to supervision, the pool, spa, or hot tub is equipped with several devices to delay a child’s unsupervised access, or warn of the child’s presence. These layers should be aimed at protecting the area between the house and the pool, since studies show that children are most at risk in their own backyard, when parents believe they are safely inside the house.

The information in this booklet lists a number of options that should be evaluated as possible components



of a layered approach to safety. APSP suggests that all pools, spas, and hot tubs should be protected. A minimum four-foot-high barrier that completely surrounds or encompasses the pool is common, but the barrier may include fencing, a wall of the house, or a safety cover that is installed per manufacturers’ instructions. Owners should always check, and comply with, state and local codes or ordinances requiring fences or other barriers.

This booklet is intended to provide basic information about the range of products available to provide layers of safety. APSP cannot endorse or evaluate the effectiveness of any individual product, but encourages parents to investigate several of the listed options in the context of the type of pool, spa, or hot tub they have, the ages of children likely to be in the area, and neighborhood and topographical factors. Many of the products listed here are new and represent significant technological advances over what was available just a few years ago. For additional information, see *ANSI/IAF-8 2005 Model Barrier Code for Residential Swimming Pools, Spas, and Hot Tubs*.

APSP reminds parents that these options are “backups” to the primary means of accident prevention: ***Responsible Adult Supervision.***



Members of The Association of Pool & Spa Professionals (APSP) are committed to the safe use and enjoyment of pools, spas, and hot tubs and adhere to a code of business ethics. To maximize your enjoyment, deal with an APSP member firm. To locate an APSP member in your area, visit [www.TheAPSP.org](http://www.TheAPSP.org) and consult The Member Locator. Just enter your zip code and you will find a listing of APSP members convenient to you, or call 800.323.3996.



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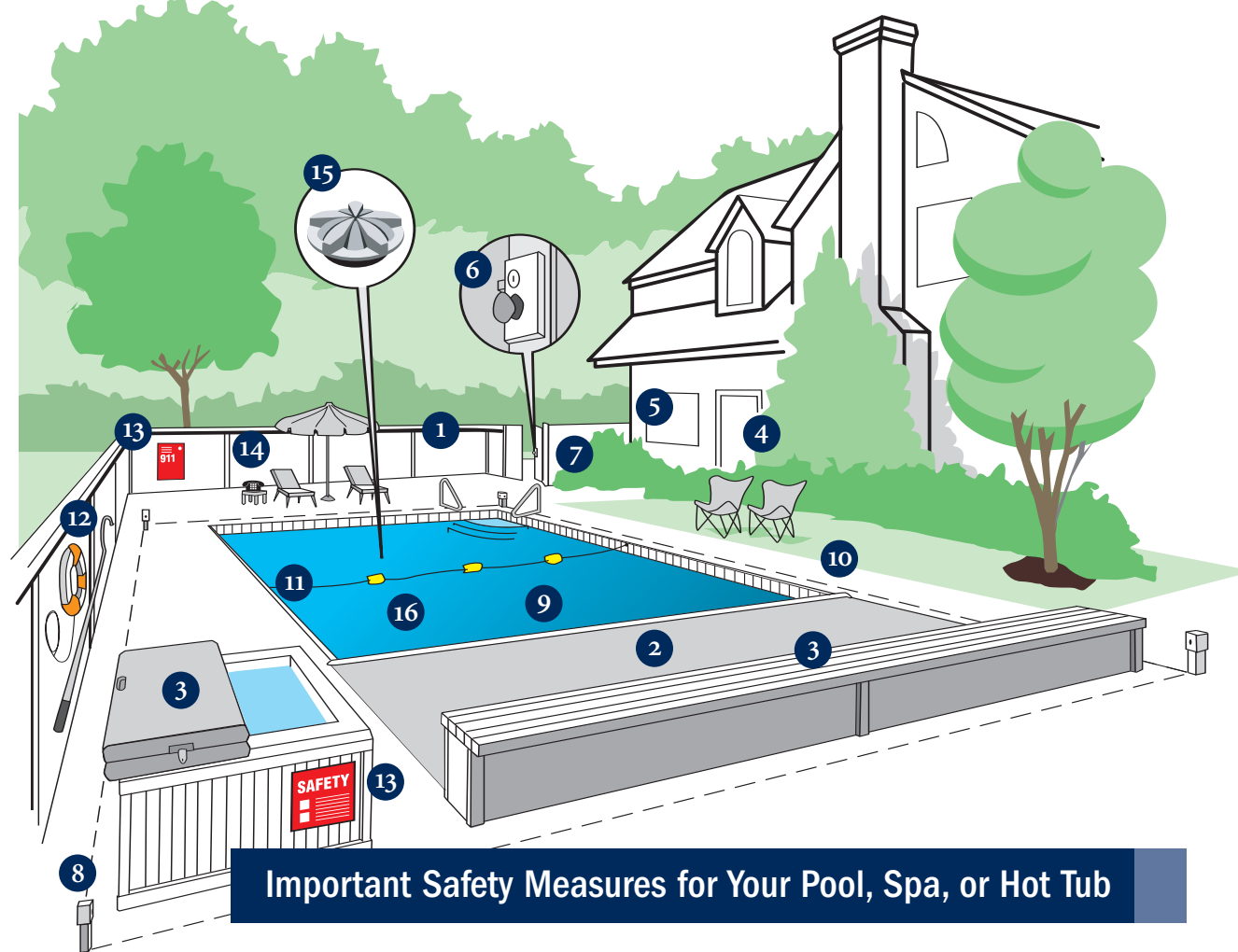
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## Layers of Protection

To Help Protect Pool, Spa, and Hot Tub Users, Especially Children Under Five Years of Age

**APSP reminds parents that these “layers” are backups to the primary means of accident prevention: Responsible Adult Supervision.**



**Important Safety Measures for Your Pool, Spa, or Hot Tub**

**1 Fencing**  
**PURPOSE:** To isolate the swimming pool by way of a minimum four-foot-high enclosure.  
**TYPES:** a. Chain link; b. Wooden picket (if non-climbable); c. Ornamental; d. Portable fencing\*; e. Natural barrier (thick hedge), if permitted by local code  
 \*Purpose: To temporarily isolate a pool, spa, or hot tub when children are visiting.

**2 Automatic, Power Safety Covers**  
**PURPOSE:** An impenetrable covering that completely covers the pool, blocking access to water. Cover is operated electronically or by a key independent of all other pool equipment.  
**TYPES:** Meets ASTM F1346-91 (2003), *Standard performance specification for safety covers and labeling requirements for all covers for swimming pools, spas, and hot tubs*

**3 Manual Safety Covers**  
**PURPOSE:** An impenetrable covering that completely covers the pool, spa, or hot tub, blocking access to water.  
**TYPES:** Meets ASTM F1346 Standard

**4 Door Exit Alarms**  
**PURPOSE:** Warns parent or guardian when a child opens the door.  
**TYPES:** a. Door announcer/chime; b. Home security system

**5 Self-closing/self-latching devices for doors and latching devices for windows**  
**PURPOSE:** Keeps all doors and windows leading to the pool, spa, or hot tub area securely closed, limiting access by children.  
**TYPES:** a. Hinge pin replacement; b. Sliding glass door closer; c. Swing arm

**6 Fence Gate Closer & Latch**  
**PURPOSE:** To close and latch fence gates securely, making a pool, spa, or hot tub inaccessible to a child.  
**TYPES:** Self-latching

**7 Fence Gate Alarms**  
**PURPOSE:** Sounds when fence gate is open.

**8 Infrared Detectors**  
**PURPOSE:** Wireless detection alarm that sounds when the area around the pool perimeter is entered.  
**TYPES:** a. Light-beam; b. Body energy

**9 Pool Alarms**  
**PURPOSE:** An alarm placed in the pool that sounds upon detection of accidental or unauthorized entrance into the water.  
**TYPES:** a. Surface water (wave motion); b. Pressure waves (acoustic); c. Electronic monitoring system

**10 Child Alarms**  
**PURPOSE:** An alarm clipped on the child that sounds when the child exceeds a certain distance or becomes submerged in water.  
**TYPES:** Clip-on transmitter with in-home receiver

**11 Rope & Float Line**  
 A rope & float line should be placed across the pool, alerting swimmers to the separation of the deep end from the shallow end of the pool.

**12 Life Ring, Shepherd's Hook**  
 All rescue equipment should be placed near the pool in an easily accessible spot, and should be kept in good condition. These can be used to pull someone in trouble to safety.

**13 Posted Emergency Information**  
 Post all CPR, other emergency information, and warning signs, as well as the emergency phone number “911” (or other emergency medical service number), near the pool, spa, or hot tub.

**14 Outside Telephone**  
 A cordless or poolside telephone means parents don't have to leave children unattended while they answer the phone. Also, it's a good idea to have one handy to summon help, if needed.

**15 Anti-Entrapment Drain Covers and Fittings**  
 Current grates and covers help prevent body or hair entrapment. Make sure that drain covers meet the ANSI/ASME A112.19.8M standard. Safety doors should be installed in all pool cleaner wall suction lines. *Pools, spas, or hot tubs with drain covers that are broken, missing, or not adequately secured should not be used until the proper replacement has been installed. Never allow children to play on or near drains, suction outlets, or jets.*

**16 Water Clarity**  
 Clear water aids in identifying soakers and swimmers in distress, helps swimmers avoid collisions and is an indicator that the sanitizer, circulation, and filtration systems are functioning. Poor water clarity suggests the presence of bacteria and/or algae or nutrients for their growth, and that the circulation and filtration systems may not be working efficiently to remove the contaminants from the water.