

## ALERT: POOL CHEMICALS HAVE CAUSED PREVENTABLE INJURIES IN MICHIGAN

The Michigan Department of Health and Human Services (MDHHS) tracks illnesses and injuries from pesticide exposures. Disinfectants are a class of pesticides that are registered by the EPA. MDHHS identified 290 people from 2006-2014 who were injured by pool disinfectant chemicals. Approximately 15% were injured while working, such as maintenance workers or life guards. Most were injured while enjoying themselves at home, schools, parks, motels, etc. The most common activity at the time of exposure was mixing/applying pool chemicals.

Activity at time of exposure, Work-related and Recreational Cases, 2006-2014				
Activity	Work-related		Recreational	
	N	%	N	%
Mixing and/or applying pool chemicals	21	47.7%	142	57.7%
Emergency response	2	4.5%	0	0.0%
Bystander/other exposure	20	45.5%	0	0.0%
Using pool/hot tub	0	0.0%	100	40.7%
Unknown	1	2.3	4	1.6%
Total	44	100.0%	246	100.0%

**These injuries can be very serious!**

In July 2012, a Wayne County resident mixed calcium hypochlorite with an algaecide and the mixture exploded. He developed 1<sup>st</sup> and 2<sup>nd</sup> degree burns to his face and chest and had many serious pulmonary symptoms, including a collapsed lung. He was hospitalized for 31 days.

In July 2014, a valve was closed while the pump was accidentally left on at a Waterpark, causing the release of a cloud of chlorine. The pools were evacuated and many people were decontaminated on site. Ten lifeguards and 17 members of the public were taken to a hospital with symptoms including shortness of breath, sore throat, skin irritation, eye irritation, headache and/or nausea.

**These injuries are preventable! Turn this page over for pool chemical safety information.**



# Safe Storage and Handling of Swimming Pool Chemicals

## Safe Storage Design

- **Keep chemicals in a locked storage area** to limit access, especially by children and animals.
- Store pool chemicals in a cool and dry location away from heat, direct light, doors, windows, flammable materials, and water.
- Comply with building codes. Store each chemical separately and in the original container, in a location with adequate lighting for reading labels on containers.
- Keep chemicals off the floor. Store chemicals on anchored shelves with lips or on pallets to prevent chemical containers from falling.
- Store only identical chemicals above or below each other. This prevents accidental chemical mixing, in case of a leak.

## Safe Handling

- **Read the product label and directions before each use.** Follow the manufacturer's instructions carefully.
- Use clean and dry Personal Protective Equipment (PPE) and a separate tool for handling each chemical.
- Keep water away from all chemical containers to prevent accidental mixing of water and chemicals.
- Clean-up pool chemical spills immediately. Consult your local fire department for guidance.
- Dispose of deteriorating, unwanted, or unlabeled pool chemicals safely. Contact your local hazardous waste disposal facility for more information.
- Do not mix brands of products.

## Adjusting Chemical Levels

- Always add pool chemicals to water. **Never add water to a pool chemical.**
- Dissolve solid chemicals (tablets, powders, or granules) in water before adding to pool water.
- Know your pool chemical levels before making an adjustment.
- Test pool water and adjust pool chemistry with products that are not expired.
- Follow protective measures such as wearing PPE and using clean and dry tools to make chemical adjustments.

## In Case of Exposure

- **In an emergency, call 911!**
- If victim has difficulty breathing:
  - Move to fresh air.
  - Call poison control at 800-222-1222.
- If chemical gets in eyes:
  - Flush eyes with running water.
  - Call poison control at 800-222-1222.
- If chemical gets on skin:
  - Remove any contaminated clothing.
  - Wash skin with running water.
  - Call poison control at 800-222-1222.

For more information, go to:  
[www.cdc.gov/healthywater/swimming/resources/](http://www.cdc.gov/healthywater/swimming/resources/)  
or contact MDHHS (Abby Schwartz) at [schwartz@mdhhs.michigan.gov](mailto:schwartz@mdhhs.michigan.gov)