

**AN EPIDEMIOLOGY PUBLICATION OF THE PUBLIC HEALTH DIVISION
OREGON DEPARTMENT OF HUMAN SERVICES**

WHEN THE WEATHER GETS HOT, BE COOL BUT STAY SAFE

Recently, SAFE KIDS released a report ranking U.S. states in summer child safety, and Oregon ranked 35th.¹ When the weather gets warm, people (and that includes children) like to go in the water. While this may help them stay cool, unfortunately it also sometimes leads to drowning deaths. This *CD Summary* describes drowning deaths among Oregon children, and provides some advice that you can share to help your child patients stay safe.

Injury is the leading cause of death among Oregon children younger than 15, and among injuries in this age group, drowning is the 2nd leading cause of death. Between 2001 and 2005, 41 unintentional drowning deaths occurred among Oregon children less than 15 years of age. While it is shown nationally that minority children are at an increased risk of drowning, minority children in Oregon are not at increased risk based on Oregon data.²

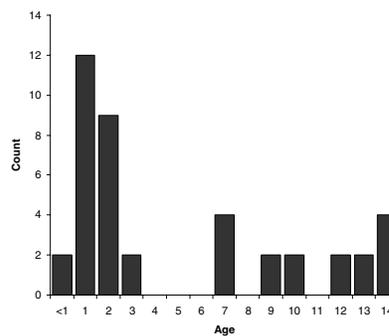
But deaths are only the tip of the iceberg. National data also suggest that for every drowning

death in a child under age 15, approximately five children require emergency department care for submersion injuries.² Nonfatal submersion injury can cause brain damage, leading to long-term disabilities.

Most drowning deaths in Oregon occur in the summer months, with July having the most of any month, as shown in Figure 1. However, unintentional drowning deaths have occurred in all months in the five-year time period, with the exception of January.

The age distribution of drowning deaths (Figure 2) illustrates

Figure 2. Unintentional Drowning Deaths by Age, Oregon Children Under 15 years of Age, 2001-2005.



that the majority of deaths (61%) occur in children 3 years of age or younger—ages where direct and active adult assistance and supervision in or near water sources is vitally important.

Only 34% of drowning deaths occurred in pools; most occurred in other bodies of water. (Figure 3). The body of water in which the drowning occurred, however, varied with age: children under age 3 who died by drowning were six times more likely than

older children to have drowned in a pool.

Since many of Oregon's waterways are fed by melting snow, they are often more than cool; they are downright cold. Although the contribution of this factor is difficult to quantify, temperature undoubtedly plays an important role in many deaths in Oregon waterways.

Cold water has a number of definitions. Some sources say it is water below 70° F (21° C). Others report it is below 60° F (15° C). The important concept to recognize is the colder the water, the higher the risks with cold water immersion. 'Cold shock', which occurs during the first few minutes of sudden cold water submersion, can elicit an involuntary inspiratory gasp (possibly even while submerged), severe hyperventilation, and potentially severe cardiac involvement, all of which can contribute to drowning.³

During summer, the thermometer will register 90°+ on many occasions. Although air temperatures warm up, water temperatures across the state remain hazardingly cold. That fact

Figure 1. Unintentional Drowning Deaths by Month, Oregon Children Under 15 years of Age, 2001-2005.

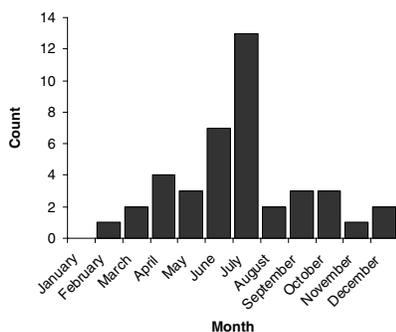
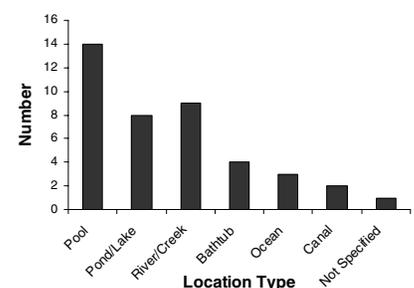


Figure 3. Unintentional Drowning Deaths by Location Type, Oregon Children Under 15 years of Age, 2001-2005.





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should be a major consideration for anyone recreating on or near the water. Be sure to wear appropriate clothing – polypropylene shirts or fleeces can help retain heat even when they are wet. Supervise bathing in cold water and make sure that swimmers get out of the water if shivering begins. Swimming alone is never safe in water, particularly in cold water.

PREVENTION

Particularly for young children around pools, active supervision by caretakers is essential.

While swimming skills can help prevent drowning, teaching young children to swim is not a substitute for active supervision. Personal flotation devices (a.k.a. life vests) should be worn in both motorized and non-motorized water craft, as well as for non-boating recreation in rivers and lakes.

Oregon statute requires boats to carry U.S. Coast Guard readily-accessible personal flotation devices (PFDs) for each person on board.⁴ PFDs must be appropriately sized for each person for whom they are intended. For children 12 and under, a PFD must be worn at all times on a deck or open cockpit of a vessel while underway.^{5*}

Ensuring appropriate barriers around pools can also reduce

risk. As of 2005, Oregon building code requires all residential outdoor swimming pools (in-ground, above-ground, or on-ground), hot tubs or spas to have a barrier. Pools require four-sided fencing and a locking access gates.⁶ Where the wall of a dwelling serves as part of the barrier, the pools must have a powered safety cover or other means of protection such as self-closing doors. Spas or hot tubs with a locking safety cover are exempt from the four-sided fencing rule.

Finally, extra caution should be used when swimming in cold bodies of water. Children should be dressed appropriately for cold water recreation.

REFERENCES

- 1 Safe Kids U.S. Summer Safety Ranking report, 2007.
- 2 Centers for Disease Control and Prevention. <http://www.cdc.gov/ncipc/factsheets/drown.htm>.
- 3 Giesbrecht GG. Cold stress, near drowning, and accidental hypothermia: a review. *Aviat Space Environ Med.* 2000 Jul;71:733-52.
- 4 Oregon Revised Statutes, Chapter 830.
- 5 Oregon State Marine Board: <http://www.boatoregon.com/Safety/Lifejacket.html>.
- 6 Oregon Residential Specialty Code, 2005.

Oregon's Updated Booster Seat Law

The Oregon Legislature passed SB480 that increases the age a child must remain in a booster seat. Taking effect July 1, the new law requires:

1. Children over 40 pounds remain riding in a booster seat until age 8, or they are 4'9" in height.
2. Infants remain riding rear-facing until they are 20 pounds and are 1 year of age.
3. Children who are age 8 or over 4'9" tall must be properly secured with the safety belt system.

Oregon law continues to require that children over 1 year old and between 20 and 40 pounds be restrained with a forward-facing child safety seat up to a minimum of 40 pounds or the weight limit of the seat. The new requirements bring Oregon's law up to best practice recommendations.

A downloadable flier with the new law is available on www.childsafetyseat.org.

Low-income families needing a booster seat should contact their county health department about local resources. Families can also call the Child Safety Seat Resource Center, 1-800-772-1315, or 503-643-5620 in the Portland area, or any Safe Kids Coalition.

For more information, contact the Child Safety Seat Resource Center, 503-643-5620, or any Safe Kids Coalition (<http://www.oregon.gov/DHS/ph/safekids/local.shtml>).

*This includes both motorized and non-motorized vessels; see summary of state boating laws at <http://www.boatoregon.com/Laws/index.html> for further details.