A Bit of Perspective

While successfully completing such individually daunting tasks as: "The Cottage Histories" and the annual publication of the PaBIA/Ojibway Handbook, Hilde Clark, as the Boating Safety and Water Use Director, ably and diligently worked to improve our Georgian Bay summers through consummate attention to member concerns and issues. On behave of all members, Hilde, I thank you for all your passionate energy and limitless hard work!

Last summer, after the reorganization of PaBIA's portfolios, Hilde asked me to take over the responsibilities for the Member Safety Portfolio. I agreed to do so, simply because of the super folks in the portfolio, who are a great group of team players! Graham Smith, in spite of personal challenges, ensured our markers were where they needed to be, and worked countless hours to produce a wonderfully updated PaBIA map. It was published on time; is more detailed and comprehensive than previous maps; and, has already been recognized as a valued asset to our members! Randy Johnson's boating safety classes helped members refresh boating knowledge and prepare for their licensure; several members have commented on the extent of his patience and marked ability to provide his students with clear, easy to follow instructions. Scott Sheard took over the supervision of the Marine Patrol and brought enthusiasm and leadership to the Marine Patrol. With his help, the Patrollers made significant strides in improving the recreational quality of local Crown Land sites. With the reorganization of portfolios, Dr. Michael Evans joined the team. He brings a valued medical perspective to the portfolio. When PaBIA was asked to help the Nurse's Station documentation the need for an important public grant, Dr Evans, with characteristic willingness to help, played a significant role.

In light of Hilde's super effort as director of the portfolio, I must admit to you that I am not nearly as able to leap any building! An event that occurred to me about three weeks after my agreement to become the Member Safety Portfolio Director should provide you some insight into my how I, too, need to be more vigilant in promoting my own safety:

> "While doing minor maintenance on our oldest sleeping cottage, I noticed a "bat-sized" hole in the siding, near the roof overhang. I wanted to cover the hole, but elected to wait until any potential resident was "out for the night!" After dinner, Nicky and I waited for night to fall. I went to get an old aluminum step ladder and something to stuff in the hole, until I could repair it, while Nicky turned on a porch light. The ladder was placed slightly to the left of the hole, so I could use my right hand to stuff a plastic bag filled with paper in the hole. I proceeded to climb the ladder and began stuffing the plastic bag into the hole. Just as I made the final push to completely pack the hole, a leg of the ladder buckled and I fell …. The next morning, it was off to the hospital, where I learned that I would have to live with some cracked ribs for the next 6-8 weeks! What a painful lesson! It was one that I would not have had to learn, if I had been more conscientious about replacing a tired, old ladder and more careful about aligning the ladder with the hole."

Given this experience and others, over the years, I will try to find topics that are relevant to us all.

A Chilling Truth

For most seasonal cottagers, much of our/our families' time is spent on/in the water; when summer water temperatures range from 15.5 deg C (60 deg F) to 21 deg C (70 deg F). Depending upon the person, studies show that a person can become exhausted and/or lose consciousness, when immersed in waters of these temperatures, for 2 to 7 hours. For those cottagers who arrive early in the season, when the ice has just "gone out," or those who prefer to remain past Labor Day, local water temperatures become less forgiving. Other cottagers, who find cruising the Great Lakes, during the spring and fall, more convenient, quieter, and a different natural experience, will also be cruising in colder waters and with fewer boaters around them.

Whether boating, sailing, or involved in some form of water sport, we and our families can, given personal health, water temperature, and length of immersion, become progressively more vulnerable to accidental hypothermia. As most of us know, accidental hypothermia is simply the body's inability to maintain a constant core/internal temperature, while undergoing increased heat loss. Under normal circumstances, our bodies try to maintain a core temperature of 37 deg C (98.6 deg F). As our core temperature declines, our bodies begin shunting blood flow away from our arms/legs to maintain vital organ functioning. When core temperatures decline, hypothermia begins a series of progressively unfortunate consequences.

Another lesser known, but related problem, occurs at the moment of our immersion. Cold shock is the body's reaction to being immersed in cold water. Upon entry, cold water can trigger an involuntary gasping reflex that compels a person to inhale water, while still below the surface. There are instances of cold shock, where persons, without life jackets, drowned without ever returning to the surface. When our head and bodies are immersed in cold water, the immersion triggers a sudden increase in heart rate and blood pressure. Depending on the rate/extent of these increases, and the overall health of the person, cold shock has also been responsible for a rapid loss of consciousness and, in some cases, cardiac arrest.

Studies show that the greatest threat to hypothermia happens on rainy, windy days, when the temperature is between 40 and 60 degrees F - it is generally when we least expect it.

A Few Heat Loss Realities

No wonder we enjoy a swim on a hot afternoon! Water removes heat from our body, at a rate that is 25 to 30 times faster than air at the same temperature. Swimming, treading water, drown proofing or any physical activity is know to increase heat loss by 35 - 50 %! There are instances, for example, where very strong swimmers, wearing a PFD, have drowned or died of cardiac arrest, before they could even swim 100 yards! In colder waters the problem becomes more acute. For example, when immersed in 4.4 deg C (40 deg F) waters, swimmers have become unconscious before they could even swim 100 feet.

It is well known that over 50% of our heat loss will occur from our neck/head. It is not as well known that the sides of our chest are another critical heat loss area; it is an area that is not well muscled and generally lacks much fat. The last area of significant heat loss is our groin area; it is where several large blood vessels pass close to the surface of our skin. To minimize heat loss from an immersion, we need to focus all three areas.

Respiratory heat loss can be another significant factor in lowering core temperatures. We can lose from 10 to 30 % of our body's heat by breathing. Normally, rapid breathing can result from heat related problems, in an attempt to lower our temperature. Collaterally, when unexpectedly immersed in cold water, a person can panic and/or won't remain calm. When this happens, their breathing becomes elevated, even uncontrolled. As our breathing rate increases, we accelerate ventilation and heat loss, while exposing ourselves to another cause of unconsciousness -- hyperventilation.

Age and Health Are Important Factors

Accidental hypothermia is generally considered to be an uncommon problem that we, who spend much of our PaB season on/in the water, tend to discount. While hypothermia is generally believed to affect everyone equally, it is particularly a problem for people with illnesses and/or those over the age of 60. In one UK study, 85 % of hypothermic mortality occurred in victims who were over 60. The increased mortality resulted from a progressive impairment to a person's ability to generate heat. This impairment can result from inactivity; reduced muscle tone/mass; lack of mobility, poor diet, and a reduced ability to shiver, when exposed to cold. Other pre-conditions that can commonly increase one's susceptibility to hypothermia are: infections; diabetes; a history of alcohol abuse; a previous stroke; cardiac illness; and, some tumors.

Declining Body Temperature Has Specific Symptoms

Core Temperature: (Celsius / Fahrenheit)	Symptoms
36 deg / 96.8 deg	Begin to feel cold; skin numb and waxy; fatigue begins.
35 deg / 95.0 deg	Progressive shivering; muscle tenseness; judgment still intact
34 deg / 93.2 deg	Intense, uncontrolled shivering; numbness in extremities; clumsiness; confusion, irrationality, judgment impaired.
33 deg / 91.4 deg	Speech slow, vague, slurred; progressive muscle stiffness; mental confusion: apathy.
32 deg / 89.6 deg	Shivering stops; drowsiness; irrational behavior; physical collapse.
31 deg / 87.6 deg	Marked lack of coordination; clouded consciousness.
30 deg / 86.0 deg	Becomes unconscious.
29 deg / 84.2 deg	Slow pulse and shallow breathing
28 deg / 82.4 deg	Cardiac arrest

If A Victim of An Accidental Immersion

The best treatment for hypothermia is avoiding it!

Many of us store our boats locally. Some owners leave all safety equipment in their boats – others do not. As we approach having our boats prepared for winter storage – we may not be as vigilant or willing to replace safety items that can be replaced after the boat is turned in for storage. When we pick up or drop off our boats do we wear or even have

Personal Flotation Devices (PFD's) for all who are on board? Spring and fall seasons have higher risks if we ever become immersed – accordingly, they should be the times when we are most vigilant to personal safety and the safe operation of our boats, not less.

Regardless of cause or circumstances, there are ways for each of us to improve our ability to survive an accidental immersion and consequences of hypothermia. They are:

A. Wear a PFD and ensure your passengers do too.

1). Much is published about wearing a PFD, when operating/traveling in a boat; some of us believe it is not as necessary as we are so routinely reminded. While taking a group of friends to eat at Snug Harbor, it is too late to check if you have enough PFD's for all on board, when you find that you have water above your floor boards and are taking on water faster than you can pump it out!

2). Wearing a PFD becomes an absolute imperative, when boating during colder times, where the water is, dangerously, colder. Cold water immersions, as seen in the previous table, can/will result in a loss of consciousness; it is simply a function of temperature and duration. The PFD, which so many of us routinely ignore throughout the summer, is the single most important factor for keeping an immersed person alive. It provides its user critical thermal protection; flotation that minimizes physical activity/heat loss; a way to facilitate "huddling;" and, floatation that will keep an unconscious person afloat and available for rescue.

B. Wear some form of supplemental thermal protection – a wet suit or at least the torso portion, normally used for water sports, can significantly improve a person's survival. Ultimately, a dry suit provides the best remediation and should be considered when water temperatures fall below 5 deg C (40 deg F).

C. When alone and unable to climb on top of a partially submerged/overturned boat:

1). Always wear your PFD and never remove it to swim ashore.

2). Use whistle on PFD to attract attention, as needed.

3). Remember - a strong swimmer will not be able to swim more than a kilometer in calm water; colder water promotes cramps and heat loss.

4). Try to cover your head – an old sock cap could be kept in a PFD pocket.

5). Wrap your arms across your chest, so they are close to the sides of your chest.

6). Cross your legs and pull them up to help insulate your groin area.

7). Relax and allow your PFD to keep you afloat.

8). Try to keep as still as is possible.

D. When more than one person is immersed and unable to climb on top of a partially submerged/overturned boat:

1). Always wear your PFD and never remove it to swim ashore.

2). Use whistle on PFD to attract attention, as needed.

3). Remember - a strong swimmer will not be able to swim more than a kilometer in calm water; colder water promotes cramps, heat loss and risk of unconsciousness.

4). Try to cover your head – an old sock cap could be kept in a PFD pocket.

5). Attempt to "huddle."

a). While facing each other, get as close to everyone, as is possible.

b). Attempt to use a strap from your PFD to connect it to the person next to you.
c). Wrap your arms around the shoulders or PFD of persons next to you.
d). Attempt to intertwine your legs with others in the group to limit heat loss through your groin.

6). Relax and help others to remain calm.

7). Allow your PFD to keep you afloat; try to keep as still as is possible.

Thank you!

Lastly, for all the boaters who, last summer, took the time to be more aware of how their boating impacts the quality of life for others also on the water, I want to thank you! Last summer appeared to have less thoughtless behavior and more consideration/respect for safe boating rights of others. We all can and are making a difference. Please have a great and safe 2011 summer.

Dan Kuhn