ISR Dry Drowning Response

In light of the recent and tragic loss of a 10 year old boy in North Carolina who recently appeared in the national media, we at Infant Swimming Resource feel compelled to address the possibilities of the circumstances that tragically took this young man's life.

Obviously a complete and total autopsy report will assess the sodium level in this child's body to either confirm or refute the possibility of hyponatremia. For those of you who may not be familiar with hyponatremia please see the document below taken directly from a previous edition of the ISR Parent Resource Book. Also from the same ISR Parent Resource Book please read the following concerning the other possible cause of death for this 10 year old boy who died a few hours after his visit to a swimming pool.

We wish to extend our sincerest sympathies and condolences to the family of this child. We continue to hear about drowning tragedies in the United States and continue to educate medical professionals, our instructors at ISR, and the public about keeping all of our children safer in and around the water.

In over 6 million lessons ISR has never experienced any type of accident due to our extensive safety protocols.

Sincerely,
Dr. Harvey Barnett, Founder of Infant Swimming Resource
JoAnn Barnett, President of Infant Swimming Resource

Excerpt taken from the Infant Swimming Resource. LLC. Parent Resource Book 10th Edition, 2005.

Hyponatremia: Can my baby drink too much water?

What is hyponatremia? It is an imbalance of substances in the bloodstream that reduces the effectiveness of sodium.

How are ISR lessons structured to prevent hyponatremia? Early in the lesson sequence we teach breath control. We monitor the output of urine prior to each lesson with the BUDS Sheet.

At ISR, our greatest concern is your child's safety. This detailed chapter is included to address the issue of hyponatremia, or water intoxication. However, it is essential to understand that ISR has NEVER experienced an incidence of water intoxication in over 6 million lessons. We have however screened out 22 students who showed signs of the condition and instead of giving the child a lesson that day, we

directed the parent to take the child to the Pediatrician. The children were excluded from lessons until the condition and contributing causes had been resolved.

Simply put, hyponatremia occurs when either too much water is taken in or not enough water is excreted. This disturbs the delicate balance and function of chemical and electrical processes in the body and can lead to a very serious medical problem.

ISR lessons are structured to prevent water intoxication from occurring on several levels. Initially, you provide information to the Instructor through the National Registration Form and daily BUDS sheet. By checking the BUDS sheet, the Instructor can monitor fluids ingested, as well as urination frequency for any abnormalities. During lessons, one of the first things a child learns is to open her eyes and close her mouth when under water. As lessons progress, the Instructor continually monitors the child to make sure the child is not drinking water when submerged. Lessons are kept to a 10 minute maximum, so that the child is not exposed to the water for a significant enough period of time, even if he or she was drinking water.

This chapter includes detailed information and sites several medical studies on hyponatremia. Consult this chapter and your ISR Instructor if you have any questions or concerns.

It is difficult not to belabor this subject since it is the primary reason still cited by some pediatricians not to enroll infants in swimming programs. The media has distorted this issue and reported it to the public with embellishments and sensationalism. With the inaccurate reporting of drowning statistics and the overstatements of water intoxication in the press, it is no wonder parents are concerned and confused and infant drowning is still at epidemic proportions in certain parts of the United States.

Intoxication is a process in which a substance acts as a poison to the system. The toxic substance can be anything if it is ingested into the body in sufficient quantities or under particular conditions. While we usually think of alcohol or drugs as intoxicating substance, literally anything can become a toxin or a poison to our systems. One such substance is water.

Water intoxication involves complex chemical and electrical processes within the bloodstream and the tissues serviced by the blood. Electrolytes are substance in the body such as sodium, potassium, chlorine, magnesium, calcium, phosphate, bicarbonate, and sulfate. They are grouped together in a delicate balance that controls normal metabolism and body functions. For instance, calcium is necessary for the relaxation of the skeletal muscles and contraction of the cardiac muscles. Potassium helps to contract the skeletal muscles and relax the cardiac muscles, while sodium is essential for keeping the fluids within the body balanced.

Basically, water intoxication occurs when either too much water is taken into the body or not enough water is excreted. When an excess of ingest water enters the bloodstream from digestive processes, it dilutes the bloodstream to the point where the sodium concentration is so low that an imbalance is created with the other substance in the blood. Since the concentration of (and, therefore the effect of) sodium has been reduced, the water in the bloodstream is absorbed by the cells throughout the body. Due to this excess, the cells of the nervous system may begin to malfunction, and very serious problems can begin very quickly.

This condition is medically termed hyponatremia. *Hypo* means under or below, and *natremia* means action of sodium processes within the body. A specific search of

medical journals including Pediatrics and The Journal of Pediatrics for article sealing with hyponatremia brought forward a total of 16 articles for review. Each of the articles falls into one of five categories:

1. **MISMANAGED FEEDING** of infants in the home account for 3 articles.
2. **ENEMAS** using tap water in excessive amounts, which caused the hyponatremic condition, account for 2 articles.
3. **PHYSIOLOGICAL** descriptions accounted for 6 medical aspects of water intoxication, ranging from effects on the central nervous system to the use of saline infusion for diabetics and polydipsia.
4. **MISCELLANEOUS** causes, of which there are two. One appeared in Neurology in 1973 and was titled "Voluntary Water Intoxication in Normal Infants," and the other discussed child abuse involving forced ingestion of copious amounts of water.
5. **SWIMMING RELATED** water intoxication in infants. Your Pediatrician may have to order these articles since they appeared in the medical journals over 20 years ago. Request a copy; you should read these for yourself. **As of 1993, there have been no other reports of hyponatremia related to infant swimming lessons in the medical literature.**

Your child is enrolled in an established technique that monitors for conditions that could lead to hyponatremia before the lesson begins. If the conditions are noted correctly by you on the BUDS sheet, then the lesson will not begin on that day because it would be unsafe to put a water retaining, lethargic, pail child into the water. *Over 4.2 million ISR lessons have been given to over 138,000 infants and young children since 1966. We have never seen a hyponatremia AFTER our lessons because we look carefully for the conditions that could create a situation BEFORE our lessons begin.

**Please note these figures are from an excerpt taken from the Infant Swimming Resource. LLC. Parent Resource Book 10th Edition, 2005. The most current statistics are featured at the top of this letter.*

Caution:

Being unconscious while underwater is a very dangerous situation. Death has occurred up to 48 hours after some near-drowning victims have been revived or undergone effective CPR, even in cases where the victim was revived and walked away from the scene! Since you do not know if your child hit his head or was incapacitated in any way as he or she stumbled into the water, **always react immediately, as though it is a rescue situation, whenever your child falls into the water.**

Any near-drowning involving even momentary loss of consciousness must be followed by a 48-hour period of observation in a hospital.