DEHYDRATION & CHILDREN

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Drinking But Still Under-Hydrated

Sub-clinical dehydration is a major, undiagnosed health issue throughout the US population. Children are no exception. Many adults do not like the taste of water treated by municipal water systems because of the offensive taste of chlorine, water pipe residues, and many hidden contaminants. Consequently, they use coffee, tea, soft drinks, alcoholic beverages, and juices as water sources. Growing children follow the example of their parents and other influential adults. Their impressionable minds are easily swayed by flashy advertising campaigns from the producers of junk beverages, which not only lack nutritional value, but also contain stimulants and artificial ingredients harmful to their health. Popular beverages among children and adults are inadequate to meet the optimal hydration needs of the body. Because parents are not in the habit of adequately hydrating themselves, they pass their poor health habits on to their offspring.

Optimally Hydrating the Body

Nothing hydrates the body better than pure water. The reason for this fact is simple. Molecules in solution move from a region
where they are abundant to a region where they are scarce. Pure water can quickly hydrate the body because, after a person

drinks pure water, water molecules are in much higher concentration in the gastrointestinal tract than in the bloodstream. Water naturally moves unimpeded from the intestines to the blood, and from the blood, to the cells. If anything is dissolved in water – salts, sugar, coffee, flavorings, etc. – the movement of water molecules is impaired and optimal hydration is not possible. Therefore, sugar-saturated drinks are not good beverages for assuring the hydration of children or adults.

Education Begins With Parents

American children have become so accustomed to sweet beverages, used by parents as pacifiers, that more than 70% of pre-school children drink no water at all. In truth, parents are caught in a real dilemma. Tap water can contain undesirable levels of arsenic, lead, aluminum, fluoride, nitrates and other pollutants such as pesticides. Even well water can contain these environmental contaminants. Yet the alternatives are worse. In addition to pollutants, the acid in soft drinks and juices tends to leach aluminum out of cans, causing high intake of aluminum when ingested. Long-term intake of aluminum has been linked to Alzheimer's disease. Generations of tomorrow's patients with this neurological disorder are being created inadvertently today by parents who train their children to use these kinds of beverages to quench their thirst. In addition, many of the sweet beverages ingested by children can contribute to behavioral difficulties. Artificial colors and flavors have been linked to allergies, asthma, and attention deficit / hyperactivity.

Sugar-sweetened soft drinks and some fruit juices are heavily laden with sugar – as much as 8 1/2 teaspoons or more per 12

fluid ounces. This sugar burden puts great stress on the liver and pancreas and contributes to obesity. And to add insult to injury, sugary drinks contribute to tooth decay.
To make matters worse, the phosphates in soft drinks induce the loss of calcium through the urine. This is exactly what is not needed in children whose bodies need calcium to mineralize growing bones. Could this be one of the reasons for the recent rise in rickets among children in the US? Bone mass is only laid down during he first two or three decades of life. If massive consumption of soft drinks continues throughout these
formative years, one can only imagine the adverse impact as this generation reaches middle age and senior years, battling the
ravages of osteoporosis.

Hydration and Growth

There is a more profound impact that sub optimal hydration has on children. All DNA activity, protein manufacture, and enzymatic biochemical reactions require dynamic water molecule participation within the cell for optimal generation and maintenance of new tissue. Deficits in pure water intake can
obstruct protein synthesis and optimal growth and development in children.

How Much Water Should a Child Drink?

Hydrating a weaned child optimally requires the application of the same rule of thumb indicated for adults. The basic number of fluid ounces of pure water to be consumed daily is equal to half the number of pounds the body weighs. A fifty-pound child should drink at least 25 ounces (3 to 4 eight-ounce cups)

of water daily. Increase intake according to increased physical activity and atmospheric temperature. This amount should be distributed throughout the day to ensure continuous hydration. Do not rely on thirst as an accurate indicator of water need.
Even among world-class athletes, thirst is unreliable. A good way for children and concerned parents to assure adequate intake is to have children drink at least 8 ounces of pure water every two waking hours.

Sports and Hydration

Children who are physically active, especially those involved in intense sports activities, should hydrate thoroughly, beyond the above recommendations. Athletes typically perspire more than non-athletes. Intensity, duration, and environmental temperature have the greatest influence on rate of perspiration. In addition to potential health risks, athletic performance is impaired by less than optimal hydration. It has been estimated that in adults, there is a 25% loss of stamina and performance capacity after the body loses 2% of its weight as perspiration. Proportional water losses in children can have similar adverse effects on even the most athletically gifted child. It is prudent to weigh the child before and after an intense workout. For every pound of body weight lost, the child needs to drink at least 16 fluid ounces (2 cups) of water. Recovery time can be reduced with optimal hydration. Not only will pure water help to flush out lactic acid and other metabolites that prolong recovery, hydration at the cell level improves the manufacture of repair
proteins, which correct the micro-trauma that occurs in muscle and other tissues during strenuous movement. Be sure

your active child is thoroughly hydrated with pure water before, during, and after an event. The more the child perspires, the more water intake is needed to replace the loss.

Illness and Dehydration

Fever poses significant health threats to children due to loss of water as perspiration; vomiting and diarrhea induce the additional loss of electrolytes in ejected fluids. In addition to the commercial electrolyte replacement beverages, pure water can be used to rapidly replace water lost during childhood illnesses. Consult your family health practitioner or pediatrician for detailed guidance.

Getting Water into the Cell, Where Growth and Development Occur

"Aquaporins" are tiny protein water channels on cell membranes that allow cells to tightly control the influx of water and
oxygen. Only water molecules in single-file array can enter the cell. But water molecules tend to clump into clusters too large to traverse aquaporins. Some pollutants in the water will cause aquaporins to close. Therefore, no matter where you are in the world, it is important to drink the purest water you can find to facilitate the influx of water into all the cells of the body.

Pure water is Nature's beverage. Teach your children to use pure water to maintain good health throughout their lives.

Take the 21-Day Pure Water Challenge!

Here's a great way to get children hooked on pure water! Parents can turn this into a "fun" experiment and be active participants
in the test. Try giving your children only pure water every time they ask for a drink for 21 days. You'll start hearing them asking
for water instead of other drinks. In the end everyone will feel the difference because they're properly hydrating. Making pure water a beverage of choice and part of the daily routine will only help your family's health and well being. So take the Pure Water Challenge!

An educational newsletter brought to you by the health-conscious people at Bio-Hydration Research Lab, Inc., makers of Penta™ purified drinking water (www.pentawater.com).

About the Author

Dr. Joiner-Bey brings more than 20 years of experience in the field of natural medicine. He is an author, seasoned educator, seminar leader, instructor, medical editor and book author in classical homeopathy, therapeutic nutrition, and Western botanical medicine. Journal editor in nutrition, botanical medicine, and homeopathy. Dr. Joiner-Bey is revered for his teaching at naturopathic and chiropractic colleges on the philosophy and application of scientifically verified natural therapeutics.