

# hydration

by Dr Jaroslav Boublik

equation

*We all know that we should consume at least two to three litres of fluid each day. While this is important, we must question whether this fluid is penetrating far enough to provide nutrients to all the cells and organs throughout the body. The core issue here is hydration - the body's ability to utilise and manage water at a cellular level.*

**W**hile you might consume enough fluid over the course of the day, it will only be effective if it is reaching the required targets - the tissues of the body. Personally I first discovered a problem with hydration when I was unable to keep water on board while training for a marathon. In other words, the fluids I was consuming were going through me and not into me.

The hydration of the body during sport is an area that has become more and more important over the years. Heat stroke and the need for a scientific approach to hydration made front page news in 1990 when Sydney rugby league prop Danny Shepherd spent 10 days in a coma. Heeding the warning signs the Australian Football League established protocols for dealing with proper hydration and several other sporting codes have since followed suit.

Hydration is not only about supplying the body with fluid, it is also about making sure the fluid reaches the necessary organs and cells to promote proper function. However it is not just the domain of the elite athlete. Good hydration during the early stages of life will prevent visible aging, which occurs





when the largest organ in the body (the skin) becomes regularly dehydrated.

Hydration can be tested by pinching the skin on the back of your hand. If it springs back to its original shape, chances are your hydration is satisfactory. If a small ridge remains for a few seconds you may be lacking fluid.

A major reason for poor hydration as we get older is the gradual decline of the thirst mechanism in the brain. When we are young and get thirsty, there is no stopping us when we want a drink. However over time, by ignoring the signal or responding to the signal for fluid with food or dehydrating drinks (such as coffee or alcohol) the signal will decline. For most people this will occur as early as their teenage years.

Therefore the issue becomes not how much fluid we intake but how well the uptake of that fluid occurs. By improving uptake the water will reach all cells in the body and provide the twin benefits of supplying nutrients to the individual cells and flushing the cells clear of toxins which may have built up.

This is what is known as long path hydration and short path hydration.

Short path hydration means the fluid will follow a path from the mouth, to the stomach, into the small intestines, into the circulation, into the kidneys, into the bladder and out of the body. This process will actually tend to stress the body, particularly the kidneys, rather than assist the hydration of tissues.

Long path hydration means the fluid

will follow a similar path to the circulation, but will then flow into organs and tissues before flowing into the cells.

Recently our company, AquaConneXions has developed specific technology that promotes this pathway of correct long path hydration. The core technology, which has since been patented, contains homeopathic dilutions of several herbs, combined as a concentrate. This concentrate is added to a drink to promote cellular uptake of fluid.

However there are some other good simple techniques that, when used daily, will also assist fluid uptake. The best is a combination of apple juice and water. Apple juice contains a lot of fructose – a key sugar which opens path ways for water to infiltrate cells. Another good vehicle for hydration, which may surprise most people, is cola, diluted 1-1 with water. This is used by a lot of athletes because the caffeine, at a diluted level, will help the body uptake water.

Other soft drinks have other common sugars, which, while not quite as good as fructose, will improve the uptake when diluted with water.

If the body is lacking electrolytes, for instance after an extended period of exercise, then the plethora of sports drinks play their role. Again they are at their most effective when diluted with water. However it is also important to monitor electrolyte levels. Those who tend to perspire a lot may require a lot more electrolytes than someone who did the same amount of exercise but didn't perspire as much.

#### Hydration Solutions for Everyday Health

The best: Apple juice and water, plus herbal or homeopathic additions

Second choice: Apple juice and water

Third choice: Other non-citrus juices and water

Next: Pure Spring water and mineral water; various soft drink diluted with water

Finally: Concentrated Sports drinks.

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