

Water 1: Good Water Bad Water

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Michael Cheikin MD
Holistic Medicine and Physiatry
www.cheikin.com 610-239-9901

The topic of water is vast. Our bodies are 65% water. While our planet's surface is 70% covered by water, it only comprises 0.05% (1/2000th) of its mass. Yet this unique substance enables the processes of life on Earth. This article will focus on the various compartments of water in our body, each with different functions. This information is valuable as it helps us measure and understand the waters within and without our body in our quest for optimal health.

Compartments and Types of Water

We keep cash in our wallet, in savings and in retirement funds. Even though it's all money, it has different roles.

Some we can access readily, some require a few steps and some funds are stashed away for the gravest of emergencies. Likewise, the water in our body is not all the same. In fact, the MRI works because the water in each type of cell is slightly different.

Water is a "universal solvent", able to carry many substances within its liquid state. Much of the biological world can be divided into things that are either water-soluble or water-insoluble (i.e. fat, plastic and rubber).

The cell, the basic unit of life can be depicted as a sphere of water contained by a fatty bag. Within that fatty membrane sit hormone receptors, signaling molecules, transport proteins, pores, and other structures that enable the cell to exchange substances and information with the rest of the world. In dehydration, the cell shrinks, causing a closing of pores and crowding of molecules that impair several functions, including excretion and detoxification. This is why water is necessary for any detoxification. The converse is also true--without sufficient water, we must be toxic.

Immediately surrounding the cell is "extracellular" fluid. Through this extracellular fluid that pass nutrient and waste molecules to and from the circulatory system. The circulatory system consists primarily of arteries, veins and lymphatics. The arterial system ends in capillaries which bring nutrients in the proximity of every living cell of our body. The venous and lymphatic systems return wastes and fluids for detoxification, disassembly and excretion.

The body adds special fluids, to our digestive system, starting with saliva and including pancreatic juices, bile, and other secretions, up to 25% of the volume of our gut.

The brain has two large collections of water within its very center, called the ventricles. Their purpose is unclear.

Bad Water

Inflammation is a process by which the body recognizes and disassembles invaders and the self, followed by repair. This occurs in the joints, skin, gut, brain, and liver; wherever an intervention is required. Inflammation is

necessary to repair a broken bone, a skin wound, a torn muscle, or an infected liver. The optimal outcome is a return to baseline or even better. Exercise of the body or mind causes it to grow stronger by the process of inflammation.

Inflammation involves cells, materials, and increased fluids involved in defense and repair. This water is necessary to carry the materials to and from the problem area. Excessive extracellular fluid, commonly experienced as "swelling", "edema", stiffness and/or puffiness, causes a barrier to proper flow. Symptoms of such inflammation can look as weight gain and/or weight loss resistance, bloating, nighttime urination, swelling of the face or other locations

based on use or gravity.

Modern theories of disease and aging include chronic inflammation as an important, often dominant factor.

Measuring Water

A simple and powerful way to measure water in the body is by using an accurate scale (to 0.2 pounds) on a daily basis at the same time and conditions. Since a gallon of water weighs 8.5 pounds, 0.2 pounds of weight represents 3 ounces of water. Most of us can fluctuate by 1-2 pounds (a quart of water!) and some up to 10 pounds in one day. This weight cannot be muscle or fat, since we

can't grow or burn these quantities that quickly. In general, water weight will go up with inflammation in the gut, joints, legs, brain or other places. Problematic foods, either singly or in combination can cause a gain in water weight immediately. However, water accumulation can also occur over several days making it challenging to identify problematic foods or combinations.

Other aspects of water measurement and applications will be discussed in future articles.

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Michael Cheikin MD is a holistic physician, Board Certified in Physical Medicine and Rehabilitation ("Physiatry"), Pain Management, Spinal Cord Medicine and Electrodiagnostic Medicine and licensed in Medical Acupuncture. Dr. Cheikin has extensively studied yoga, diet and metabolism, Ayurvedic, Chinese and energy medicine and other alternative modalities for over 30 years. He specializes in obscure, chronic and severe problems that have not responded satisfactorily to other methods of healing.
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Water Compartments	
Intra-cellular	water inside the cells;
Extracellular	water outside cells, including the water in our tissues and bloodstream
Circulation: Arterial Blood	the water in our arteries
Circulation: Venous Blood	the water in our veins
Circulation: Lymphatic Fluid	the water in our lymphatic channels
Gut	the water within our gut contents, (25% comes from the gut itself)
Cerebrospinal Fluid and Ventricle System	a specialized fluid system within the brain that communicates with the fluid in the spine