



WATER BALANCE FACTORS[®]

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WATER

Water is the largest single component of the human body. It constitutes about 60% of body weight in young adult males and 50% in young adult females. Water constitutes 93% of plasma and 97% of interstitial fluid.

Total body water is distributed in two major compartments or spaces, based on differential concentration of the two major cations sodium and potassium. The two compartments are intracellular water (ICW) and extracellular water (ECW).

Extracellular water consists of the water component of the extracellular fluids, plasma, interstitial fluid, and the water component of extracellular solids including tendon, fascia, dermis, collagen, elastin, and skeleton.

Intracellular water is the major component of cells, except fat cells, and constitutes 73% of the weight of metabolically active cells of muscle and viscera.¹

Since distribution of total body water is based on the concentration levels of sodium and potassium it is wise to maintain proper balance. This also helps in maintaining proper acid-alkaline balance. This is important for good health.

The maintenance of a constant volume of fluid in the extracellular space, of an appropriate blood pH, and of the normal hydration of cells is an essential component of nutritional health.²

WATER BALANCE

Too much sodium creates lowered potassium, and the reverse is also true. Too much of either cation (a positively charged particle) will create an imbalance in the distribution of fluids between the cellular walls.

One great way to insure that you are not consuming too much sodium is to

read every label on prepared foods. Also keep in mind that restaurants usually use large amounts of salt to flavor foods.

Sodium is thought to cause high blood pressure. Hypertension is formally of unknown etiology, indirect evidence¹ suggests that several aspects of nutrition, especially the ingestion of excessive amounts of sodium, may be involved.³

WATER FACTORS AND HOMEOSTASIS

The following information is provided to help you better understand the role that certain nutrients play in the overall health and homeostasis of the body. Those nutrients are:

VITAMIN B-6 is necessary for the metabolism of fats- carbohydrates-proteins. It is necessary for healthy skin, the nerves and muscles, and aids in antibody formation and digestion. When the body is low in this vitamin, the muscles can become weak. A deficiency will also cause nervousness, learning disorders, dermatitis, hair loss, mouth disorders, acne, irritability, depression, anemia and arthritis.

Alcohol, birth control pills, tobacco, coffee and radiation exposure can affect the body's ability to absorb and utilize this vitamin.

POTASSIUM is stored almost entirely within the lean tissues, where it serves as the dominant intracellular cation.

Potassium deficiency causes urinary ammonium wasting. Decreased total body potassium can lead to hypokalemia. This can cause impaired glucose tolerance with impaired insulin secretion, cardiac effects, impaired protein synthesis, respiratory and vocal cord muscle weakness.

Diuretics, fasting, alcohol, diarrhea and vomiting⁴ can decrease the absorption and utilization of this mineral.

HOMEOSTASIS

Homeostasis can be disrupted by several factors including subclinical nutrient levels. To give you a clearer idea of how homeostasis can disrupt your health, here's the definition: homeostasis (homeo=same; stasis=standing still) is defined as balance and harmony within the body. It is the condition created when each cell in the body functions in an internal environment which remains within certain physiological limits. Homeostasis is achieved when: (1) the body has the proper amounts of gases, nutrients, ions, and water; (2) maintains the optimal temperature and; (3) has an optimal volume for the health of the cells. When homeostasis is disturbed, health may be affected.⁵

MICHAEL'S[®] WATER BALANCE FACTORS[™] is a synergistic combination of Vitamin B-6 and Potassium complemented by herbs. The herbs corn silk, uva ursi and hydrangea are well known for their healthful benefits. **MICHAEL'S[®] WATER BALANCE FACTORS[™]** is one ideal way to increase the amount of potassium available to the intracellular spaces of the body.

Like every **MICHAEL'S[®]** nutritional supplement this one is manufactured with all natural fillers, binders and coating. In addition, all of **MICHAEL'S[®]** products are free of yeast, sugar, and starch. Some products are dairy, soy, and wheat free too.

DID YOU KNOW?

VITAMIN C has many uses in the body. It increases the absorption of iron, helps in the production of collagen and is essential for the immune system. Vitamin C is needed for healthy teeth, gums and bones while strengthening the blood vessels.

Some common symptoms of

vitamin C deficiency include muscular weakness, anemia, appetite loss, skin hemorrhages, swollen joints, slow-healing wounds and fractures, bleeding gums, low resistance to infections and susceptibility to bruises.

Stress, high fever, tobacco, antibiotics, aspirin and cortisone are all factors that affect the body's vitamin C level.

VITAMIN A is a fat-soluble nutrient which plays an important role in the immune system and the healthy formation of bones, teeth, skin and for the maintenance of the outer layer of many tissues and organs, the mucous membranes.


The mucous membranes are the thin sheets of tissue cells that cover or line various parts of the body that open to the outside. Examples include linings of the mouth; digestive tube; breathing passages and the genital and urinary tracts. The mucous membranes release mucus. Mucus contains water, cast off tissue cells, mucin, and white blood cells.

Mucin is a carbohydrate that is the main part of mucus. It is present in most glands that release mucus.

White blood cells, also called leukocytes are important to the health of the body. There are different types of leukocytes. Their functions are the destruction of bacteria, fungi, and viruses, and rendering harmless poisonous substances that may result from allergic reactions and cellular injury.

Some symptoms that are apparent from a vitamin A deficiency are: susceptibility to infections, allergies, sinus trouble, and night blindness to name a few.



 NATUROPATHIC PROGRAMS	
Water Balance Factors™	
Supplement Facts	
Serving Size: One (1) Tablet	
Amount Per Serving	% Daily Value
Vitamin B-6 (as Pyridoxine)	50 mg 2,500%
Potassium (as Potassium Amino Acid Complex)	70 mg 2%
Corn Silk (Zea mays)	300 mg *
Buchu Leaf (Barosma betulina)	200 mg *
Elder Flowers (Sambucca canadensis nigra)	100 mg *
Hydrangea Root (Hydrangea arborescens)	100 mg *
Uva Ursi Leaf (Arctostaphylos uva ursi)	100 mg *
Parsley Leaf (Petroselinum sativum)	50 mg *
Samphire Fruit (Crithmum maritimum)	50 mg *
Watermelon Seed (Citrullus vulgaris)	50 mg *

*Daily Value not established.

OTHER INGREDIENTS: Terra Alba (Calcium Sulfate), Dicalcium Phosphate, Stearic Acid and Magnesium Stearate.

About MICHAEL'S® Products

Seasoned health food shoppers already know that a combination of nutrients is always more effective than taking single nutrients one at a time. Add in the cost savings of taking combinations, with herbs included, and the math proves to be more efficient, too. Combinations increase assimilation and reduce the amount of binders and fillers. That's why MICHAEL'S® created the **FACTORS OF LIFE®** programs. Your life is busy enough as it is. Why worry when synergistically complete nutrition is conveniently at hand?

MICHAEL'S® products include an expiration date to ensure freshness. He personally guarantees purity and specified content. Each product is hypo-allergenic with no artificial colors or flavors. The formulas contain cold-pressed or organically grown (when available) herbs to ensure the highest quality. Additionally there is no sugar, wheat, corn, gluten, sodium, or anything artificial in any of our supplements. These high-potency, all-natural products are even manufactured with food-grade fillers, binders and enteric coatings. Most are suitable for vegetarians and tell you so right on the front label. Every product is double safety sealed with an outer shrink wrap and inner bottle freshness seal. As is normal in all-natural products, some color and texture variations may occur, but do not affect product purity, potency or assimilation.

Above all else, all MICHAEL'S® NATUROPATHIC PROGRAMS are designed to produce physical results you can feel, due to the innovative nutritional supplementation with specific, targeted **FACTORS OF LIFE®** programs. As always, the newest developments, the finest ingredients and the most effective formulations for your total healthcare from MICHAEL'S® NATUROPATHIC PROGRAMS.

Sources Cited:

Tobian L: The relationship of salt to hypertension, Am J Clin Nutr 32: 2739-2748, 1979.

^{1,4}Modern Nutrition in Health and Disease (7th ed.) Maurice E. Shils, M. D., Sc. D. and Vernon R. Young, Ph. D. Editors. Philadelphia: Lea and Febiger Publishers, 1988. p. 1433.

^{2,3}Page, David M. Clinical Nutrition (2nd ed.) Washington, D. C.: C. V. Mosby Co. Publishers 1988.

⁵Tortora, Gerald J. and Grabowski, Sandra R. *Principles of Anatomy and Physiology*, 7th ed. New York: HarperCollins College Publishers, 1993. p 9.