



WATER : ESSENTIAL TO OUR BODY

DR CHAW YIN MYINT

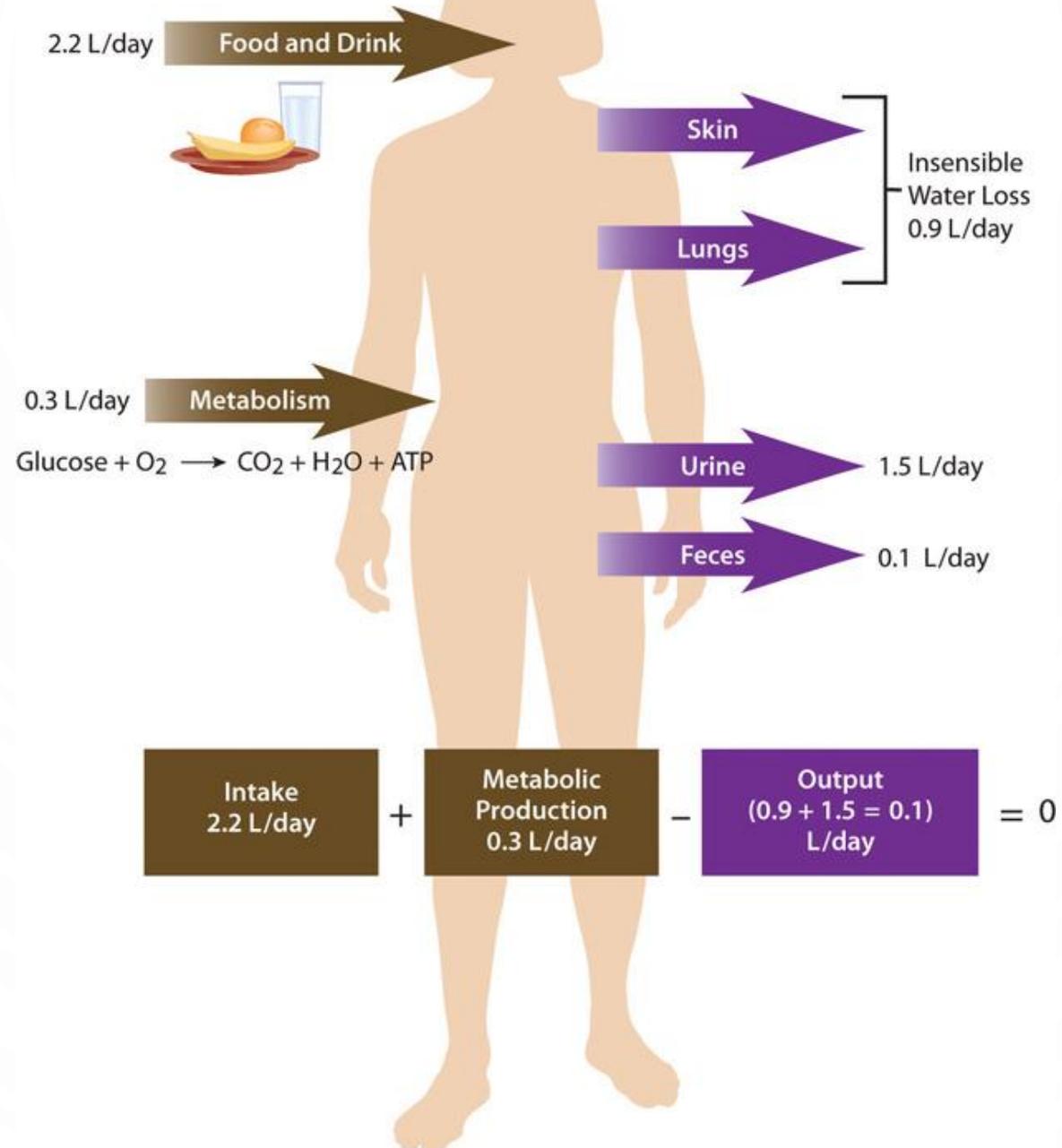
M.B,B.S, MPH, PHD

WHY SHOULD WE DRINK WATER?

Water plays a key role in many of our body's functions

Water Gain

Water Loss



WATER REGULATES BODY TEMPERATURE

- Remaining hydrated is very important in order to maintain body temperature.
- The body loses water when we sweat and this sweat helps in keeping the body cool.
- Excessive sweating



No sweating



Heat stroke

“DRINK PLENTY OF WATER”



WHICH ORGANS IN THE HUMAN BODY HAVE MORE WATER?

Overall your total body weight can be 45-65% water.

- Brain and heart – 73%
- Lungs – 83%
- Skin – 64%
- Muscles and kidneys – 79%

PROTECTING TISSUES, SPINAL CORD, AND JOINTS

- Water also plays a vital role in keeping the body tissues moist. It helps in retaining optimum moisture levels in sensitive areas such as the nose, mouth, and eyes.
- Water also works as a cushion and lubricant for the joints and keeps the spinal cord protected.

ELIMINATING WASTE

- Through defecation and urination, water also aids the body in eliminating waste.
- The kidneys, liver, and intestines need water for flushing out the waste.
- Helping the food move smoothly through the intestinal tract is also an integral function of water.

WATER HELPS REGULATE DIGESTION

- While we generally relate our digestion to our stomach, the process actually begins with the saliva whose basis is water too.
- The enzymes in our saliva help in breaking down the foods and liquids we consume and dissolving nutrients and minerals.
- If the food and liquid are effectively digested, the body will have better access to the nutrients and minerals.
- Digestion of soluble fiber is also done with the help of water. It aids in dissolving the fiber and helps bowel health by ensuring the better movement of stools

CIRCULATION OF BLOOD OXYGEN

- Water also carries a host of important nutrients along with oxygen to all the different parts of the body.
- If we consume an adequate amount of water on a daily basis, it will help in improving the circulation and positively impact our overall health.

WHAT IS EXTRACELLULAR WATER AND INTRACELLULAR WATER

Our total body water (TBW) can be divided into two basic groups.

I. Extracellular Water (ECW)

- Extracellular water is the water located outside our cells.
- 1/3 of your fluid is attributed to ECW, and this water is found in your interstitial fluid, transcellular fluid, and blood plasma.
- Extracellular water is important because it helps control the movement of electrolytes, allows oxygen delivery to the cells, and clears waste from metabolic processes.

WHAT IS EXTRACELLULAR WATER AND INTRACELLULAR WATER CONT.

II. Intracellular Water (ICW)

- Intracellular water is the water located inside your cells.
- It comprises 70% of the cytosol, which is a mix of water and other dissolved elements. In healthy people, it makes up the other 2/3 of the water inside our body.
- The intracellular water is the location of important cellular processes, and although it has many functions, a very important one is that it allows molecules to be transported to the different organelles inside the cell. Essentially, the Intracellular water picks up where the Extracellular water left off by continuing the pathway for fuel to be transported to the cells.

WHAT DOES INCREASED INTRACELLULAR WATER (ICW) MEAN?

Increased ICW as a result of exercise is a sign of increased Lean Body Mass, which is a very good thing and has positive health benefits, including:

- Increased Energy Use
- Increased Strength
- Increased Immune System

WHAT DOES EXCESS EXTRACELLULAR WATER MEAN (ECW)?

Excess ECW can indicate health risks, including:

- Inflammation
- Renal Disease (Kidney Failure)
- Unhealthy Fat Mass Levels (Obesity)



THANK YOU!!