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Water

Describe the normal and abnormal water loss from the body. Importance of water ƒ Water, next to oxygen is the body's most urgent need. It is more essential than food. Without water, nutrients are of no value to the body. ƒ Failure to understand the role of body water contributes to health problems such as indigestion and constipations and even to needless death. ƒ Infant and children have a greater proportion of water than old persons, and obese persons have proportionately less water than lean persons, ƒ Water is taken in the form of water itself, beverages, such as coffee, tea, fruit juices, and milk; and soups, ƒ Solid foods contribute the next largest amount of water, as much as 25% to 50% of water requirements,

Fresh vegetables and fruits are 80% to 90% water; meat is 50% to 60% water, and even bread is about 35% water, ƒ The sensation of thirst usually is a reliable guide to water intake. Except in infants and sick persons, especially comatose person who cannot respond to the thirst stimulus. ƒ If losses are not replenished, heat exhausting and possibility heat stroke may occur, ƒ Dehydration can occur rapidly in comatose patients and in disabled or elderly persons with brain impairment that are unable to respond to the sensation of thirst, ƒ Other conditions, such as fever, diabetes mellitus, vomiting, diarrhea, and the use of drugs such as diuretics also increase water need. Body water ƒ About half of the adult body weight is water 55% for man and 47% for woman. ƒ About 2000 to 2500 cc of water is eliminated every day from the body carrying waste products with it. ƒ The lost water has to be replaced in the form of fluid or foods containing water. ƒ Although some water is formed, as end products of food metabolism, **from 6 to 8 glass of water should be drunk every day,**

Water in relation to body function.

It is an essential component of blood and lymph and the secretion of the body, as well as the more solid tissues. ƒ Moisture is necessary for the normal functioning of every organ in the body. ƒ Water is the universal medium in which the various chemical changes of the body take place. ƒ As a carrier water aids in digestion, absorption, circulation and excretion. ƒ It is essential in the regulation of body temperature. ƒ Lubrication of joints and movement of the viscera in the abdominal cavity ƒ Waste products are transported to the blood in watery solution and eliminated by the kidneys.

Abnormally

Due to kidney disease ƒ If there is excessive perspiration due to high environmental temperature. ƒ Due to diarrhea and vomiting ƒ Due to hemorrhage and burn Dehydration The term dehydration implies more than changes in water balance. There are always accompanying changes in electrolyte balance. When the water supply is restricted or when losses are excessive the rate of water loss exceeds the rate of electrolyte loss. Then the extra cellular fluid becomes concentrated and osmotic pressure draws water from the intra-cellular fluid into the extra-cellular fluid to compensate. This condition is called extreme thirst and dehydration. Discussion questions 1. Discuss the distribution of water in the body. 2. Mention the importance of water, 3. Describe the factors causing dehydration.