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Research Article

SOURCES AND FUNCTION OF A WATER IN THE HUMAN BODY

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ABSTRACT

The research is conducted on the sources of water and proper mothod of water purification . water is one of human basic need , Water is a chemical neutral, colorless, odorless and tasteless liquid found all over the world (Essick, 2009).

Precipitation is primary input of water on the earth. Water occurs broadly in two classes, namely surface and ground water which existed these state, solid, liquid and gaseous forms. Water constantly circulate in nature by a process kwon as hydrological cycle in which water circulate from sea to atmosphere by precipitation and back to earth. The surface water forms all the water bodies such as Rivers , lakes ,streams , seas and oceans, while ground water are mostly stored in water bearing soil formations called aquifers .

The findings also revealed that the methods adopted by the rural area people for treating their water includes filtration and boiling.

KEYWORDS

Water, purification, function, sources, human, surface, body.

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INTRODUCTION

It is well known fact that clean water is absolutely essential for healthy living. Adequate supply of clean water is basic health need for all human beings, as with all animals, plants live on the planet is dependent upon water. Not only do we need water to grow our food, generate our power and run our industries, but we need water as a basic part of our lives. Our bodies need to ingest water every day to continue functioning (Water Aid 2012).

Gleick, (2011) asserted that basic needs of water go beyond what we need to drink or ingest through our food for daily survival. Water need standard is five (5) liters per person per day. It includes the need for water to maintain health. Communities and individual can exist without many things if they have to, for instance they can be deprived of comfort of shelter or food for a period of time, but they can not be deprived of water and survive for more than few days. Often the intimate relationship between water and life is interwoven into fabric of all countries, religions and societies in myriad (Water aid 2010). Water for basic need (household services) represent a relatively small amount of total quantities withdrawn for other uses. Yet although many fortunate people throughout the word are able to take water for granted where it is available for an estimated 1.1 Billion people, water rules their daily lives with the cruel irony that is often both the most precious and sought after commodities requiring grinding daily labour to acquire (Water aid 20l0).water is a critical determinant for survival in the initial stages of disaster, people affected by the disaster generally much more susceptible to diseases, illnesses and death, diseases which are related to large extent to inadequate water supply and poor hygiene. The most significant of these diseases are diarrhoea diseases and other infectious diseases transmitted by faeco-oral route, other water related diseases include those carried by vector associated with solid waste and water (UNICEF 2010).

Concept of Water

Water is a liquid which fall or descends from the clouds in form of rain, rivers, lakes and seas etc. Water is a chemical neutral, colorless, odorless and tasteless liquid found all over the world (Essick, 2009).

Precipitation is primary input of water on the earth. Water occurs broadly in two classes, namely surface and ground water which existed these state, solid, liquid and gaseous forms. Water constantly circulate in nature by a process kwon as hydrological cycle in which water circulate from sea to atmosphere by precipitation and back to earth. The surface water forms all the water bodies such as rivers, lakes, streams, seas and oceans, while ground water are mostly stored in water bearing soil formations called aquifers (Water aid 2010).

Water is one of the prime necessities of human existence, it is very necessary for social, economic

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and technological development of a community, water makes up about 70 o/o of body weight in men and about 60o/o in women. Water consist of 2 to 3 liters in plasma, a large amount of water is lost each day in faeces, sweat and urine (Essick, 2009).

Benefit of water to a human being

1. Water Protects Your Tissues
2. Water Helps Your Body Remove Waste through perspiration and urination.
3. Water help to digestion the e eat easily
4. Water Prevents You From Becoming Dehydrated
5. Water Helps Brain to Function normally and speedy
6. Water Keeps Your Cardiovascular System Healthy
7. Water Can Help You Eat Healthier
8. Water help to protect Spinal Cord
9. Water help to give strength to our body
10. Water help to protect all our body Joints.

Sources of Water

Water is one of the prime necessities of human existence, it is very necessary for the social, economic and technological development of a community. Water is a chemical neutral, odorless, colorless and tasteless liquid. Water is a liquid which falls from the clouds in form of rain, rivers, lakes, streams, seas and oceans which occurs in two classes, namely the surface water and ground water. Water exist in these state, solid liquid and gaseous forms (Water Aids 2010).

Therefore, the sources of water in Shukari ward are from well, ponds and well which was sunken by the government and its dry up during dry season. In the raining season, villagers use rain water (collected from the roof and surface water fetch from the ground) for the house hold. Villagers travel from far distance using donkeys and motorcycles in search of water for the family during the dry season, which are of low quantity and quality to meet the family demands. Due to inadequate water supply, several diseases are afflicting the rural populace despite the mandate released by united nations water conference (UNICEF, 2009) that all national governments are to prove all people, irrespective of their domiciles, social status, etc with clean water of safe quality and adequate in quantity (Essick, 2010).

Water is essential element of all the biological activities of living cells, animal and plants. Water makes up about 70% of the body weight in men about 60% in women. A large amount of water is lost each day in faces, sweat and urine. Under normal circumstances, this is balanced by intake in food and to satisfy thirst. Dehydration with serious consequences may occur if intake does not balance with the loss.

Provision of water in its adequate requirement is evitable for successful living (Water Aid, 2007).

Health Hazards Associated with Water

Water despite its usefulness, it can be adverse effect, especially when in excess of requirement or when supply fall extremely below requirement. These resulted into large overland flow popularly known as flood and later drought

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(Wilson 2008). Flood generally has a net result of excessive erosion, raising the water table above plant root zone which in turn has the negative effect of a salinizing the soil thereby rendering it unproductive, such soil which is usually reluctantly abundant as barren land like desert. Both flood and drought have the net result of depressing the agricultural productivity of the soil and thus creating a society sick with hunger, poverty and many other socio-economic ills (Water Aids, 2007). Drought and flood have a consequential effect that posses a threat to the social, economic and wellbeing of the rural populace.

Diseases

Water is acclaimed "key to health" and there is a general contention that water is even more basic than all other essential things of life and living (Essick, 2009). Water is closely related to health, absence of water in its required quantity and quality can result in to diseases. Nigerian rural populace lack a reliable supply of clean water and only one tenth of the urban dwellers have access to reliable sources of portable water (UNICEF, 2009).

Water-borne Diseases:

These are diseases basically contacted as a result of drinking water polluted by human wastes, ingestion of food washed by bacteria and virus, some of the water borne diseases includes, cholera, typhoid, dysentery, hepatitis A and B and gastrointestinal disorder, etc.

Water wash diseases

These are diseases caused absolutely by scarcity of water for washing hand and maintenance of personal hygiene e.g. trachoma and scabies. Trachoma is chronic inflammatory conditions caused by Chlamydia trachomatis in which fibrous tissues are formed in the conjunctiva and cornea leading to eye lid deformity, and is a common causes of blindness in tropical countries. The microbes are spread by flies, communal uses of contaminated washing water, cross infection between mother and child, contaminated towels and clothing, etc.

Water insect transmitted diseases:

These are the diseases not directly linked with water but are caused by agents host in the environment of the breeding and feeding places: such diseases are malaria and on chocerciasis (River blindness), etc. these diseases are best controlled by improving the sanitary condition of the environment, destruction of insects breeding sites and a large scale vector control.

Similarly, several problems associated with inadequate water supply, people are compelled to buying and fetching of water from unfit sources such as uncovered wells, streams, ponds and rivers which are at high risk to pollution by linkage especially borehole.

Methods of Water Purification

Water sources are more apt to contain bacterial contaminants, despite the fact that appearance of the water can easily deceive. Water that is used must therefore be properly treated regardless of it sources, since most lakes, springs, wells and

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surface water are subjected to pollution. People of community purify their water and periodically analyze for chemical or bacteriological contamination.

(Water Aids 2007) stated that, the most common type of water treatment is done by tepid stand gravity filtration methods that causes chemical addition and mixing flocculation, sedimentation, filtration and chlorination.

The first three (3) steps are designed to remove turbidity and colour (Essick, 2007). Essick further stated that although flocculation and sedimentation assist in the removal of bacteria and other organism such as large and protozoa. Filtration remove most impurities from the water with effective filters include sand, diatomaceous, silica and othrocite coal.

Similarly, disinfection of water depends upon the number and nature of organism present in temperature, time of PH (potency of hydrogen), oxidation, potential and the type of disinfectant used. Chemical that good disinfecting qualities include; potassium per manganite, copper silver, ozone, chloride dioxide and the hydrogen.

Uses of Water

The uses of water are many, from drinking and cleaning to irrigating crops and landscapes. Water is used for cooling, recreation and dust control. Water is needed for restaurants, most industrial; processes and even some religious ceremonies. On another level, the splash flow of water in streams and fountain sooth and inspires (Oshima T.2009).

In one way or another, water Is a part of almost every thing human makes or do washing a load laundry uses water, filling a backyard pool needs water, growing a pound of cotton needs water, producing a pound of copper uses water. All these water demand are made by various supply sources including the salt, Gila and Colorado Rivers and ground water pumped from beneath the surface. Non consumptive uses of water such as bathing, hydropower generation and creation, some can be used again and again, although some uses lower quality of water once used, waste water can be treated and used again as reclaimed water or effluent (Dawood,2010).

Water is useful in the normal functioning of the body system which includes; provision of the moist internal environment which is required by all living cell in the body. Participation in all the chemical reaction which occur inside and outside the body cells. Dilution and moistening of food, regulation of body temperature as a constituent of sweat, which is secreted on the skin, it evaporates and cooling of the body surface. A major constituent of blood and tissue fluid, it transport some substances in solution and some suspension round the body and dilution of wastes products and poisonous substances in the body. Water provide the medium for excretion of waste product, e.g urine and faeces (Water Aids, 2007).

CONCLUSION

Based on the findings of the study, the following conclusions were drawn:

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Majority of the rural area agreed that most common sources of water supply are from ponds, surface water, well and rain water which is inadequate for their daily needs.

From the findings it shows that the rural area people agreed that due to lack of adequate water supply, there are many problems facing the area

The findings also revealed that the methods adopted by the rural area people for treating their water includes filtration and boiling.

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