Research Article

A Survey on General Awareness among People about the Role of Antioxidants in Health

[1.] **Meghana Reddy J,** [2.] **Gayatri Devi**
[1.] 1st year BDS, Saveetha Dental College and Hospitals, Chennai, India.
[2.] Professor, Department of physiology, Saveetha Dental College and Hospitals, Chennai, India.
***Corresponding author's E-mail:** meghanareddy.j@gmail.com

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ABSTRACT

The aim of the study is to do a survey on general awareness of antioxidants among people. Antioxidants are man-made or natural substances that may prevent or delay some types of cell damage. It is to find out how many people are aware of the benefits of antioxidants and to bring awareness among people who are not aware about the benefits of antioxidants. To create awareness among the people for better health of public.

Keywords: Antioxidants, Awareness, Public health.

INTRODUCTION

Antioxidants are man-made or natural substances that may prevent or delay some types of cell damage.Vegetables and fruits are rich sources of antioxidants which are found to be healthy; however, research has not shown that the antioxidant supplements to be beneficial in preventing diseases.[1] Antioxidants are chemicals that interact and neutralize free radicals, thus preventing them from causing damage. Antioxidants are also known as "free radical scavengers."[2] Nutrition professionals recommend a high intake of antioxidants routinely from food to encourage a wide variety of healthy outcomes, be it healthier skin, cancer prevention, improved immune function, or rreduced risk of heart disease.[3] Antioxidant molecules have been shown to counteract oxidative stress in laboratory experiments. However, there is controversy as to whether consuming large amounts of antioxidants actually benefit health. There is also some concern that consuming antioxidant supplements in excessive doses may be harmful.[1] Dietary Antioxidants: Vitamin C, vitamin E, and beta carotene are the most widely studied dietary antioxidants. Vitamin C is considered the most important water-soluble antioxidant in extracellular fluids. It is a major lipid-soluble antioxidant which is the most effective chain-breaking antioxidant within the cell membrane where it protects membrane fatty acids from lipid per oxidation. Vitamin C has been cited as being capable of regenerating vitamin E.[4]

Effects of dietary antioxidants on cell signaling and gene expression, where effects can be demonstrated at low concentrations, may be more important for health benefits than direct antioxidant activity.[7] we are just starting to understand the science of how boosting our supply of antioxidants relates to our health. What we do know from population studies is that people who eat a lot of fruit and vegetables live longer. Lab tests indicate that some antioxidants may prevent specific diseases: Flavonoids found in green tea are thought to be behind the low rates of cardiovascular disease in Japan, and lutein, an antioxidant found in vegetables such as spinach and corn, protects against deterioration in the eye's lens.[9] Antioxidants enhance the immune system's defence against the diseases caused by free radicals. They include Vitamins A, C and E and selenium, and we have been told that they may help prevent cancer, heart diseases and even such neurological conditions as Alzheimer's.[10] Free radicals are highly unstable molecules,they naturally form,when you exercise and when the body converts food into energy. The body can also be exposed to free radicals from a variety of environmental sources, such as cigarette smoke, air pollution, and sunlight. Free radicals can cause "oxidative stress," a process that can trigger cell damage.[1] Free radicals create a destructive process in cells, causing the molecules within the cells to become unstable. They may even be a big soldier in the formation of cancerous cells by a "chain-reaction" effect, causing other cells to become damaged. Because of the inherent instability of free-radicals, they try to attack other healthy cells to get stable themselves. These causes the once-healthy cells to react in the same way, attacking others in an never-ending attempt for cellular stability.[5] Excessive intake of isolated antioxidants can have toxic effects and may even promote rather than prevent oxidative damage. In fact, some studies have shown that high doses of antioxidants increase the risk of death.[6] Some antioxidants are produced by the body and some by plants, and so they can be derived from the diet. Their job is to conflict free radicals – highly reactive molecules formed as a natural by-product of cellular activity. Antioxidants block the chain reactions triggered by free radicals that can damage and destroy cells. So it may seem entirely reasonable that it would be a good thing to eat and drink more antioxidants to boost the supply or even rub them into the skin.[10]

MATERIALS AND METHODS

This is a questionnaire based study on awareness of antioxidants in health. A questionnaire containing 10questions which brings awareness among the people was prepared .This questionnaire was distributed randomly to chosen people in the saveetha dental college. This questionnaire consists of positively framed questions.

RESULTS

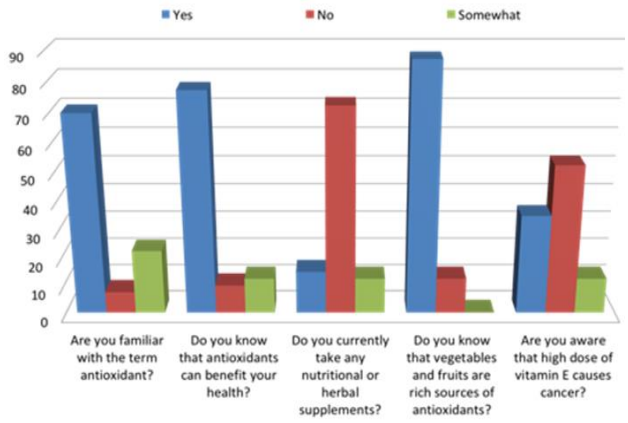
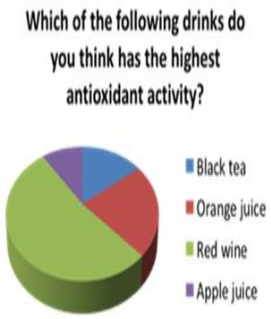


Image: 1



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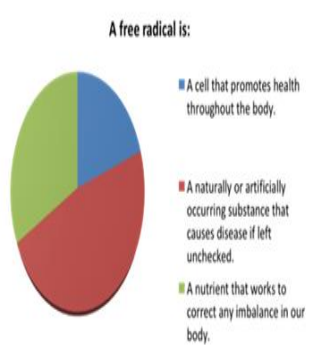

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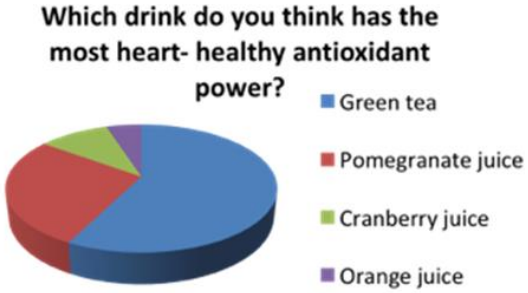

Image: 4

67% of the people were aware of the term antioxidant (Image -1),75% of the people about the importance of antioxidants and about 84% of the people were aware that fruits and vegetables contain antioxidant properties. 50% of the people were aware that red wine contains highest antioxidant properties.(Image-2) We all have a misconception that green tea has the most heart healthy antioxidant power but that is false, pomegranate has the most heart healthy antioxidant power.(Image-4) Only 10% of them were under herbal medication. (Image-1)35% of them knew that high dose of vitamin E causes cancer, 52.25% of the people didn't know about the consequences of high dose vitamin E.

DISCUSSION

The obesity epidemic, issues around what constitutes the "perfect diet," and emerging science on the health benefits of foods and food components have reached epic proportions, which affects efforts to communicate with patients and other consumers about healthful eating.[11] Specifically, consumer perceptions of antioxidant health effects and food sources are influenced by these factors, and can be considered within the broader context of "functional foods," or foods that may have health benefits beyond basic nutrition.

In a study conducted on the public awareness and knowledge of antioxidants in Trinidad, West Indies by Ambika Boodhu and NeelaBadrie[13] the results published by them was found to be similar to the results of the present study. Another study on the physiological implications of antioxidants in food by Rashmi Venkatesh and DishaSood[12] also found similar results as the parent study.

CONCLUSION

From this study, we may aware of that the majority of the population was familiar with the term antioxidant. There is overwhelming evidence that oxidative stress occurs in cells as a consequence of normal physiological processes and environmental interactions, and that the complex web of antioxidant defence systems plays aimportant role in protecting against oxidative damages. Most of the people were aware of the benefits of the antioxidants but they didn't prefer talking antioxidant rich food as it is not as tasty as the junk food.

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