

# Polycyclic aromatic hydrocarbons (pahs)



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Health Benefits of Vegetables Affiliation Essential nutrients necessary for life have always been obtained from food. Furthermore, bioactive compounds obtained from these food substances are very important in health promotion and disease eradication in our bodies. The highest killing diseases currently have been discovered to be the chronic diseases. Medical specialists have found the reducing effect of vegetables to these diseases and have always recommended a healthy diet termed “ Eat your fruits and vegetables.”

Polycyclic aromatic hydrocarbons (PAHs) are always known to be the atmospheric pollutants which causes harm to humans. The truth is there are toxic and non-toxic PAHs occurring naturally in our environment, the non-toxic ones are found in the food we consume (Glenn 1995). They are known as Phytochemicals and are available not only in vegetables but also fruits, grains and several other plants used as foods. These are essential for our health when cooked and consumed appropriately (Sommerburg 1998). This document will discuss the benefits of consuming abundant vegetables in our diet to prevent chronic diseases.

Phytochemicals are the bioactive non-nutrient compound found in vegetable. Almost 5000 phytochemicals are estimated to be identified but more are still deemed to be unknown, limiting the full knowledge of the vegetable benefits to our health, suggesting that there could be more benefits. In our day to day activities, our cells are constantly exposed to a lot of oxidizing agents, some toxic and some beneficial to our life. These are the normal PAHs and are found in air, water or the food we consume, some are even being metabolically produced within the cells. Optimal physiologic conditions in our bodies require a balanced state a balanced state of oxidants and antioxidants (Block 1992). Excessive oxidants production causes imbalance

which leads to oxidative stress which mostly affects the chronic bacterial, parasitic and even viral infections. This causes serious oxidative damages to the biomolecular substances mainly the proteins, lipids and DNA increasing the risk of chronic diseases like cancer and even cardiovascular disease. Consumption of sufficient antioxidants slows down or even prevents this oxidative stress in our bodies. Vegetables are the known source to have a wide variety of these antioxidant compounds, these may be phenolics or carotenoids which helps in protecting cellular systems from damage due to the oxidative stress, reducing the risk of chronic diseases (Hung 2004). An evidence to show that the compounds found in vegetable can reduce cardiovascular disease which are the heart disease and stroke is the one conducted as part of Harvard-based Nurses' Health Study and Health Professional Follow-up Study which has been the longest and the largest study on this to date. It included around 110000 men and women and their health and dietary progress being monitored for fourteen years. The study has shown that the higher the average daily consumption of vegetable by one, they would have a lower risk of suffering cardiovascular disease. Those who had lowest consumption of vegetables, below 1.5 servings in a day, were compared with those who had higher consumption, about 8 servings and above and it showed that the higher intakes were 30 percent likely to be associated with heart attack or stroke. The combination of this study with other studies across U. S and Europe, the conclusion was similar, consumption of 5 serving and above a day roughly reduces the risk of coronary heart disease and stroke by 20 % as compared to consuming less than 3 servings daily (Hung 2004).

Vegetable consumption is very essential to our health, combination of fruits

and vegetable being optimal (Sommerburg 1998). Consuming a larger portion in our diet is highly recommended, we should look at the variety too. We should not depend on one type of vegetable to provide all the nutrients we need but the more we consume a variety of them, the more we optimize our health condition and reduce the risks of chronic diseases. More information on the health benefits should be provided to consumers concerning their dietary supplements. The more we consume vegetables and fruits, the more we create a healthy nation.

#### References

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