

### **Banana potassium and stroke**

Potassium channels are heterogeneous and different potassium channels can be found in one cell. These channels serve many physiological functions and any irregularity in the channels can interrupt communication signals from cell to cell and contribute to many diseases like stroke, heart problem, diabetes, hypertension etc. In brain, these channels regulate neuronal signaling and protect neuron and muscles under metabolic stress. Dr Lily Jan and colleagues, University of California at San Francisco, USA are working at molecular level to isolate individual potassium channel genes those give rise to these channels. Eighty potassium channel genes in the genome of nematodes, as well as forty brain disease causing genes have been revealed with the progress of genome project ([www.ucsf.edu/pibs/faculty/ljan.html](http://www.ucsf.edu/pibs/faculty/ljan.html)). The team of scientists have reported in Proceedings of the National Academy of Science (2000) that TASK-1, a protein present in nerve cells (granule cells) that functions as a molecular channel in the cell membrane and regulates movement of charged potassium ions in cells.

Recently, Dr Deborah M Green, Neuroscience Institute of The Queen's Medical Centre has reported (Neurology, The Scientific Journal of American Academy of Neurology; 13 August 2002; <http://www.aan.com>) that people with low level of potassium in their diet may suffer from stroke 1.5 times more compared with those whose potassium intake is at higher level in their diet. It is believed that a diet containing approx. 3.5 g potassium/day may reduce risk of stroke. The combination of a low sodium and high potassium intake has been found to be associated with low frequency of stroke in individual. Potassium supplementation has not been recommended because of its adverse effect [Nutr.Rev.1998, 56 (5pt 1) pp 151-153]

Banana, a fruit of tropical region, is known to be a good source of potassium. United States Food and Drug Administration (October 2000) has accepted the claim that banana is a good source of potassium and low in sodium. Other food rich in potassium are avocados, citrus fruits and green vegetables, milk and nuts. One banana of normal size (about 120 g) contains 16% of fibre, 15% of vitamin C and 11% of potassium. It is low in calories, contains no fat, cholesterol and sodium ([www.dole.com/bobby/bananas/nutrition.ghml](http://www.dole.com/bobby/bananas/nutrition.ghml)). It pro-

vides plenty of energy. Banana is known to be fruit of poor people in India because the common people can afford it. It is extensively consumed food in the world.

For treatment of high blood pressure, heart diseases, and kidney problem, diuretic medicines are used which increase the urine production by kidney and reduce the water in the body and also some salts get discharged as a result potassium is also lowered down. It does not mean that diuretic medicines increase the chance of stroke. However, banana may be helpful in supplementation of potassium loss due to use of diuretic medicine. Further study is required to establish the fact that consumption of potassium at higher level would prevent stroke.

### **Calcium may cut colon cancer risk**

Colon cancer is a common cancer these days and next to lung cancer. Incidence rate of colon cancer is 10 per 1,00,000 at age 45-50 to 300 per 1,00,000 at age 75-80. Men are more prone to this than women. Risk factors for colon cancers are age, food and food habits. Smokers, drinkers, sedentary and obese persons are more likely to develop colon cancer ([www.maxinet.com/mansell/polyp.htm](http://www.maxinet.com/mansell/polyp.htm)). It remains silent initially with no symptoms. With the progress of the disease, blood loss in stool, iron deficiency of unknown origin, fatigue and weakness are some of the primary indications of the disease that requires thorough check up by colonoscopy. Under the disease, inner lining of the colon, large intestine, gets disturbed and results in polyp formation. Removal of these polyps at an early stage reduces the colon cancer risk ([www.ccalliance.org/cca](http://www.ccalliance.org/cca)). Recently, a study has been published in Journal of National Cancer Institute, Vol 94 (March 20,2002) pp437-446, in which it has been reported that calcium at a dose of 700mg per day may reduce 40-50% risk of colon cancer. Dr Mercola ([www.mercola.com/2002/apr/6/colon\\_cancer.htm](http://www.mercola.com/2002/apr/6/colon_cancer.htm)) has expressed his opinion that in this study, main source of calcium was dairy product and dairy products in US contains Vitamin D. Vitamin D helps in more absorption of calcium. It has been suggested that in the study natural source of vitamin D i.e. sun exposure or animal products may also be included, so as to understand the mechanism involved in it.

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