

## **Tea and Prostrate cancer**

### **The facts we need to know.....**

News paper reports {Male tea drinkers 'at greater risk of prostate cancer'. BBC News, June 19 2012, Seven cups of tea a day 'raises risk of prostate cancer by 50%'. Daily Mail, June 19 2012, Drinking Tea 'Increases Cancer Risk'. Sky News, June 19 2012, Men who drink 7 cups of tea are 50 per cent more likely to develop prostate cancer. The Daily Telegraph, June 19 2012} suggested that tea enhances prostrate cancer . These reports were based on a scientific publication entitled “Tea Consumption and the Risk of Overall and Grade Specific Prostate Cancer: A Large Prospective Cohort Study of Scottish Men” by Kashif Shafique, Philip McLoone, Khaver Qureshi, Hing Leung, Carole Hart & David S. Morrison published in Nutrition and Cancer Volume 64, Issue 6, 2012.

### **What was the paper say?**

The paper suggests that tea may be a potentially modifiable and highly prevalent risk factor for the most common cancer in men, prostate cancer. They found a positive association between consumption of tea and overall risk of prostate cancer. However, they found no association with tea drinking and more aggressive disease. The underlying biological mechanisms for such association have not been defined.

### **What is cohort?**

A cohort is a group of people who share a common characteristic or experience within a defined period.

### **What are main limitations of cohort study?**

The main limitation of cohort study is that they show associations rather than prove causes. They can only show tea to be associated with cancer but will never be able to

prove that tea causes cancer as many other factors may be involved in the study design have been ignored at large.

**Shall we believe the reports and stop taking black tea?**

**NO.....**

**Why NO.....?**

In the above mentioned scientific paper the information on tea consumption and other lifestyle factors were only collected at the start of the study. As the follow-up was for 28 years, other habits, and other cannot have remained constant over this entire period. Given the long duration of follow-up period of 28 years, tea habits and other behaviours such as alcohol and smoking levels are likely to have varied over this period of time.

The study highlights that many healthy behaviours, such as having a optimum body weight, not drinking alcohol and having optimum cholesterol levels, were more common in those people in the highest tea consumption group. They raised the possibility that these men, who were generally healthier, may have lived for longer, allowing more time for prostate cancer to develop. It is well known that as with increase in age, the risk of developing prostate cancer increases in male. This rationale could explain the results on prostate cancer presented in this paper and tea might be enhancing the life span of an individual. The study did not collect data on family history of prostate cancer patients. Cancer risks associated with family history may have influenced the findings that have been reported as data was not analysed considering the fact.

**What is the so special about black tea?**

Black tea has polyphenols especially theaflavins which is absent in green tea. These compounds exhibited strong anticarcinogenic activity. The study by and Hennings *et al* 2006, have revealed that tea polyphenols and theaflavins are bioavailable in the prostate and may help to prevent prostate cancer. Reports (Hung-Hsiao Lee *et al*,2004 ) also suggest that theaflavin is an useful prostate cancer chemoprevention agent and it acts

through suppressing the function of androgen and its receptor.

**Black tea has many health benefits. Studies continue to show that black tea is very good for all of us.**

References:

Henning SM, Aronson W, Niu Y, Conde F, Lee NH, Seeram NP, Lee R-P, Lu J, Harris DM, Moro A, Hong J, Pak-Shan L, Barnard RJ, Ziaee HG, Csathy G, Go VLW, Wang H and Heber D. Tea Polyphenols and Theaflavins Are Present in Prostate Tissue of Humans and Mice after Green and Black Tea Consumption . *Journal of Nutrition*, 2006, 136:1839-1843

Hung-Hsiao Lee, Chi-Tang Ho and Jen-Kun Lin Theaflavin-3, 30-digallate and penta-O-galloyl-b-D-glucose inhibit rat liver microsomal 5 $\alpha$ -reductase activity and the expression of androgen receptor in LNCaP prostate cancer cells. *Carcinogenesis*, 2004, 25:1109—1118.