

Plant Power - The New Supernutrients

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Few people can have missed the message that fruit and vegetables do us good. They are packed with vitamins, some minerals and help to increase intakes of fibre. Good though these reasons are for trying to ensure a regular intake of such foods, these nutritional benefits seem to be just the tip of the iceberg. For hidden away inside every crunch of an apple, mouthful of mango and bit of broccoli you take are a host of other plant or 'phyto' nutrients thought to offer yet more benefits to our health and wellbeing.

Understanding the role these phytonutrients play in plants gives a clue as to how they may help humans. In nature the bright green and red pigments you find in cabbages and lettuce, tomatoes and strawberries have evolved to help absorb otherwise harmful ultra violet radiation from the sun. Aroma compounds in garlic and onions help protect them from bacterial and viral infections and certain enzyme blockers have been formed to fight toxic pollutants.

Plants have developed literally hundreds of thousands of naturally phyto-protective substances or phytonutrients which help them fight everything from fungal to bacterial infections, and to survive the stresses and strains imposed by their local environments.

The theory is that as we consume these plant foods, we may assume some of these protective benefits 'second-hand'. Many of the phytonutrients that scientists have discovered have, like vitamin C, antioxidant properties. This means that they can help to fight free radicals; chemicals produced by the body which may, if they are not deactivated, trigger changes in cells leading to the development of anything from heart disease and cancer, to cataracts and wrinkles.

Ideas as to the possible disease-fighting functions of phytonutrients were first looked into by researchers who study disease patterns around the world. Such work led them to believe for example that something in the diets of Japanese women and men could be helping to protect them against cancers of the breast and prostate.

One major difference between the Japanese and European diet was found to be the amount of Soya products eaten. The Japanese enjoy Soya bean curd for example on a regular basis, and as a result, the levels of plant oestrogens from these foods found in their blood are fifty times those of Europeans. Studies in Japan led scientists to think that these plant oestrogens could block human oestrogen action in the body and explain the differences in breast and prostate cancer in the East and West.

The good news is that there are lots of foods enjoyed all over Europe which are packed with protective phytonutrients. The table explains more and gives plenty of good reasons for us to keep trying to eat more fruit and vegetables for the taste and colour of good health.

FOOD	PHYTONUTRIENT	POTENTIAL HEALTH BENEFITS AGAINST

Tomatoes	Red pigment lycopene	Heart disease, prostate cancer
Garlic & Onions	Sulphur compounds such as allicin Saponins	Infections; raised cholesterol; tumours
Carrots	Orange pigment beta carotene	Malignant changes in the lungs
Broccoli, Cabbage & Brussels Sprouts	Isothiocyanates	Lung cancer
Apples, Grapes, Onions & Tea	Quercetin	Heart disease and cancerous changes to cells
Strawberries & Grapes	Ellagic acid	Pollution from tobacco smoke
Oranges & Grapefruit	Terpenes	Ulcers and tooth decay

References

1. Recent Advances in Phytochemistry: Functionality of Food Phytochemicals. Volume 31; 1997 - Timothy Johns and John Romeo. Published by Plenum Press.
2. Antioxidants - the case for fruit and vegetables in the diet; Catherine Rice-Evans and Nicholas J. Miller: British Food Journal, Vol. 97 No 9, 1995, pp 35-40.