

Supplements and cancer



Nutri Scene

DR TEE E SIONG
starhealth@thestar.com.my

Do not use supplements to protect against cancer.

DIETARY supplements include various vitamin and mineral preparations, either singly or in combination. These are intended to “add on” to the diet.

In recent years, these supplements have also come to include various bioactive compounds and even herbal products. They have been touted to be helpful in improving the health and nutritional status of individuals and communities.

There are also some who take supplements in the belief that these will help to protect them against chronic diseases such as heart diseases and cancers. The topic of dietary supplements in the prevention of cancers was thoroughly reviewed by the World Cancer Research Fund (WCRF) expert group. In this article, I am highlighting the 8th WCRF recommendation: Aim to meet nutritional needs through diet alone, from the report of this expert group entitled *Food, Nutrition, Physical Activity and the Prevention of Cancer* (www.dietandcancerreport.org/). I find the *Hong Kong WCRF Recommendations for Cancer Prevention* booklet (www.wcrf-hk.org/) rather useful too.

What are dietary supplements?

Dietary supplements include preparations of vitamins, minerals, amino acids and mixtures of these nutrients; a wide variety of bioactive components, usually of plant sources; “concentrates, metabolites, constituents, extracts and combinations of these ingredients”; herbals and other botanicals. They are used to supplement the diet by increasing total daily intake.

These products are generally intended for ingestion in pill, capsule, tablet, or liquid form, and must not be represented as a food or sole item of a meal or diet. Vitamins, both single vitamin and multivitamin preparations, make up the major category of dietary supplements. But sale of herbal and botanicals have increased rapidly in recent years.

Consumers use dietary supplements for a wide variety of reasons. Some of these products, such as vitamins and minerals, are taken because they are essential nutrients. Others are taken because they are expected to have special health benefits. These supplements are sometimes referred to as “health foods”.

Unfortunately, these benefits vary a great deal amongst various products and many of these effects are ill-defined. Much of the current evidence for dietary supplements lacks well-designed clinical trials. Some of the products have evidence from animal studies or experimental in vitro laboratory studies.

Supplements and cancer – the evidence

The WCRF review found that some studies do show supplements protect against some cancers. On the other hand, other studies have shown that nutrient supplements brought about increased risk to some cancers. Some studies have shown that intake of supplements, especially in high doses, can upset the balance of nutrients in the body. More research needs to be done, but this is one way that they might affect our risk of cancer.

These studies have normally been tested in one particular group of people, eg people in the high risk group, so the benefits might not apply to the general population. In some of these studies, high-doses of dietary supplements are used and are therefore not appropriate for long-term general use. Some sup-



World Cancer Research Fund (WCRF) experts have concluded that it is unwise to recommend widespread supplement use as a means of cancer prevention. – Photos.com

plements can have adverse side effects but the trials are not always able to pick them up. Increasing the consumption of the relevant nutrients through the usual diet is preferred.

The WCRF experts therefore conclude that it is unwise to recommend widespread supplement use as a means of cancer prevention.

Supplements do not prevent cancer

Nutrient-rich whole foods contain substances that are necessary for good health, like dietary fibre, vitamins and minerals. Although some of these substances are available as supplements in the form of pills and tablets, scientists cannot be sure that we get the same benefits if we consume nutrients in this form.

Research also shows that taking high doses of some supplements could be harmful to our health. The WCRF expert report has therefore advised not to use supplements to protect against cancer.

By eating a balanced diet, rich in a variety of vegetables, fruits and other plant-based foods, the expert group feels that most of us should be able to obtain all the nutrients we need. The experts agree that the best source of nourishment is food and drinks – not dietary supplements, where the balance of risks and benefits are not yet known.

The experts also point out several other reasons why a healthy diet is the preferred approach to reducing risk to cancers. Consuming a variety of healthful foods throughout the course of the day, you will be able to consume a whole range of vitamins, minerals and antioxidants at safe levels, and in combinations often not available in supplement form. Natural foods also offer far better protection against cancers and other diseases compared to supplements.

What’s more, a healthy diet has the added benefit of helping us to maintain a healthy weight.

WCRF recommendations

In view of the available scientific evidence, the recommendation of WCRF is therefore:

- Aim to meet nutritional needs through diet alone.

The public health goals, which are for populations and are therefore principally for health professionals, are:

- Maximise the proportion of the population achieving nutritional adequacy without dietary supplements.

The personal recommendations, meant for people, as communities, families, and individuals are:

- Dietary supplements are not recommended for cancer prevention.

Supplements are not necessary

It is generally agreed that with secure food supplies and access to a variety of foods and drinks, when people follow the recommendations here in the context of general dietary recommendations, supplements are normally unnecessary. Furthermore, in diets, nutrients are present in combinations often not found in “multi”-supplements, and with other bioactive substances.

In the Malaysian Dietary Guidelines (www.nutriweb.org.my), there is also a clear message that supplements are not necessary for most people. Eating a variety of foods daily as guided by the food pyramid should provide all the nutrients needed by the body. Supplements of vitamins, minerals, or fibre do not supply the nutrients and other essential components present in foods that are important to health.

The guidelines further emphasise that nutrient supplements cannot be used as a substitute for proper food choices and supplements of some nutrients taken regularly in large amounts are harmful. There should be even greater caution in giving young children dietary supplements.

There are occasions when supplements may be beneficial for particular groups of people, in addition to having a varied diet. Supplements may be needed for persons with certain physiological conditions or stresses when nutritional needs are increased, for example, during illness, the elderly and pregnant and lactating women.

In such cases, nutrient supplements should only be taken on the advice of nutritionists, dietitians and other medical professionals.

Potential for misuse of supplements

Malaysians are now more health-conscious and there is generally greater awareness of the importance of nutrition in overall well-being. In recent years, many consumers have also come to rely on a variety of dietary supplements to improve their health. These supplements comprise a diverse group of products that are now freely available through a myriad of outlets. These include pharmacies, medicinal halls, “health food” stores and clinics of medical practitioners. These are also available through numerous “direct sale” companies and are becoming popular through the Internet.

The personnel involved in the sale of dietary supplements through some of these channels have no formal qualification in nutrition and have a superficial knowledge of dietary supplements. The proliferation of such products has been increasing over the years in the country, coupled with myriad health claims being made. The potential for misuse

and confusion to the consumer is therefore very real. It is therefore extremely important for appropriate regulatory measures to be in place to regulate the sale and marketing of dietary supplements in the country.

Ethical promotion of supplements

Supplements indeed have a role to play for some people, at some times of their lives. I have, however, always been concerned that there is simply too much misuse and overuse of supplements. The public should be clearly informed about what these supplements can do and cannot do. Health professionals should clearly evaluate these products and advise the consumer appropriately. They should not promote dietary supplements when the evidence is inconclusive or non-existent. Health professionals should not be clouded by vested interests or be unduly influenced by advertisements. It is important to impress upon promoters of these supplements to be more ethical in their sale tactics. And companies should employ qualified personnel in the marketing of these products.

More importantly, consumers themselves should be better informed of the dietary supplements and how they should be used. They should be asking more questions on why, what, when before they actually take on these for long periods of time. Particularly for intake amongst young children, we should be even more cautious because their bodies are still developing and therefore their tolerance to high levels of these supplements is even lower.

Dietary supplements are not a quick fix for a healthy diet. The best source of nourishment is foods and drinks, not dietary supplements. Do not use supplements to protect against cancer. To reduce your risk of cancer, choose a balanced diet with a variety of foods rather than supplements.

■ *NutriScene is a fortnightly column by Dr Tee E Siong, who pens his thoughts as a nutritionist with over 30 years of experience in the research and public health arena. For further information, e-mail starhealth@thestar.com.my. The information provided is for educational and communication purposes only and it should not be construed as personal medical advice. Information published in this article is not intended to replace, supplant or augment a consultation with a health professional regarding the reader's own medical care. The Star does not give any warranty on accuracy, completeness, functionality, usefulness or other assurances as to the content appearing in this column. The Star disclaims all responsibility for any losses, damage to property or personal injury suffered directly or indirectly from reliance on such information.*