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Welcome to Issue 23 of our Bulletin, updating you on issues of importance or topical interest relating to nutrition and physical activity of older people. In this issue, we look at vitamins and minerals – what do we need and do we need supplements of these?

DIETARY SUPPLEMENTS: DO WE NEED THEM?

Following on from our two previous bulletins we ask “What about **vitamin and mineral supplements** and **herbal remedies?**” The market for nutritional supplements in New Zealand is huge, estimated in 2012 to be worth \$US188 million, with growth estimated around 6% annually. Certainly, some of this will be export earnings.

According to the report “Vitamin and Dietary Supplements in New Zealand 2014”, the trend is that vitamins and dietary supplements remained important within New Zealand during 2013 as consumers continued to be concerned with health and wellness issues. Consumers (the worried well) continued to shift towards prevention, rather than treatment, with self-medication and self-care remaining central trends during 2013. Consequently, value sales for vitamins and dietary supplements increased during 2013, as consumers continued to use vitamins and dietary supplements to both raise general health levels as well as prevent disease/illness.

The 2008/2008 New Zealand Adult Nutrition Survey showed that in the older age group, over half (52.6%) the women aged 65-74 took a dietary supplement occasionally, and 44.6% were regular supplement users. Of older women – 75+ years, 45.1% took a supplement occasionally. With the ‘younger’ men, (65-74yrs) 44.3% were occasional users, and 40.1% were regular users. In the 75+ yr. men, 40.1% were occasional users, and over one-third (34.5%) were regular users. The survey did not identify between users who were prescribed the supplement or who self-medicated. However, it did find that diets of the users and non-users were similar, indicating that supplement users were not likely to be in need of a supplement.

In general, we should be maximising our intake of vitamins and minerals in whole foods, rather than supplements, as the evidence suggests that it's whole foods rather than isolated food components that are associated with good health. There have been a number of studies assessing the relationship between anti-oxidant nutrients (vitamin A and carotenoids, vitamin C, vitamin E and selenium) and chronic disease outcomes, mainly heart disease and cancer. Results have been inconsistent, and in some studies, adverse effects were shown. Supplementation is not recommended, unless under medical supervision, and the supplementation should be based on individual needs. It's important that doctors, pharmacists and other health practitioners are aware of the risks and benefits of supplement use in older people.

The temptation to take a supplement, just in case, can be strong! We see a lot of advertising on television for supplements, and the presenters seem very plausible – and you know them! Celebrity advertising is powerful!

We need to trust our food! We talked about processed food in our last Bulletin – it is not as dreadful as we are often expected to believe! If we did not have processed food as part of our diet, our choices would be extremely limited. The technology for processing food so that it is safe and nutritious is very advanced. But we still need to judge processed food for its health benefits, just the same as we judge non-processed food.

So how can we be sure we are getting the nutrients we need?

Firstly, we eat food, not nutrients! Foods are made up of a number of important nutrients and some foods are higher in some nutrients than other foods. This is the reason we recommend eating from a wide variety of foods. Very simply, foods can be categorised into four main food groups – Breads and Cereals, Vegetables and Fruits, Meat and Meat alternatives, and Milk and Milk Products. Including foods all these groups in your diet will give you the best chance of meeting your nutritional needs and your needs for specific vitamins and minerals.

The Food and Nutrition Guidelines for Healthy Older People, (see: <http://www.health.govt.nz/publication/food-and-nutrition-guidelines-healthy-older-people-background-paper>), released by the Ministry of Health at the beginning of 2013, has published some sample three-day menu plans that have been analysed to ensure important nutrients are being met. These plans are not designed to be used as a dietary regimen for individuals, but to show how the recommended daily intakes (RDIs) or adequate intakes (AI) can be met. They also give people an idea of the amounts they need to eat to meet these. It is recommended that older people have three meals a day, and to include in between snacks, especially if their appetite is small. A key message for older people is to maintain a healthy weight, and to discuss unplanned weight loss with their GP.

But what about those vitamins and minerals that may be lacking?

Older people are at higher risk of some nutritional deficiencies than their younger counterparts. GPs should be on the lookout for these in their older patients, and any deficiency should be properly diagnosed by your doctor, and treatment should be specific.

Vitamin D

Older people (70+ years) have a higher requirement for this vitamin than their younger counterparts. Most of our vitamin D is formed by the action of sun on our skin, but in older people, there may be inadequate exposure to sun and this coupled with diminished cutaneous production of the vitamin may influence deficiency. Food sources of vitamin D include oily fish, egg yolks, margarine and foods fortified with vitamin D, but quantities are small, and it is difficult for older people to meet their requirements from sun exposure and food sources alone. Most experts recommend a vitamin D supplement for older people; good vitamin D status has been shown to reduce the risk of falling. Discuss a supplement with your doctor, as it is important not to megadose on this fat soluble vitamin.

Iron

Older women's requirement for iron decreases by about 45% from the age of 51. It is still an essential mineral though, important for making red blood cells that carry oxygen around the body. Older people eating a healthy diet should be able to obtain the iron they require from food. Good food sources include red meat, pulses and beans, eggs, wholegrain products, dried fruits and fortified cereals. Iron sources from animal products is better absorbed than from plant sources, but absorption is enhanced by including vitamin C with your iron rich meal – such as a glass of fruit juice, fresh green vegetables. It is important to be on the lookout for iron deficiency, e.g. post-operatively where there has been blood loss, or it may be a sign of an underlying health problem. Iron deficiency should be diagnosed by your doctor, and appropriate treatment prescribed.

Calcium

Calcium is another important mineral that is required in larger amounts by the 70+ age group, although this is an area of continuing debate. It has a role in bone and dental health, regulates muscle contractions, including heartbeat and helps the blood clot normally. Older people should aim to consume about three servings of calcium-rich foods per day to meet their needs. Include high calcium foods such as milk, especially calcium-enriched, calcium-fortified soy milk, cheddar cheese, yoghurt, canned sardines or salmon, broccoli (even better served with white or cheese sauce!), milk puddings and vanilla ice cream. (pouring cream and soft cheeses do not contain much calcium). Even if you don't consume three servings, you are most unlikely to need a prophylactic (just-in-case) calcium supplement. In fact, there may be a risk of heart attacks for those with high blood calcium levels from supplements. Other harms have also emerged, e.g. hospitalisation for GI symptoms, kidney stones, falls, hip fracture and stroke. You should only take calcium supplements if you have been advised to by your GP or dietitian for a good reason, such as substantial abnormalities of calcium metabolism, or malabsorption problems, and your condition should be monitored.

B vitamins

There are a number of B vitamins that are required in very small amounts by the older body. B vitamins get a lot of press and celebrity endorsement, but the effects on these people are over-rated and unlikely to be the result of the dose of B vitamins. These vitamins are water-soluble, so if you take in more than you need, you'll just excrete them. If you are eating a well-balanced diet, including a wide variety of foods, you should be able to meet your B vitamin requirements – they have a variety of functions, including helping to release energy from food, keeping the skin, eyes and nervous system healthy, and helping to form red blood cells. You should not need to spend money on B vitamin supplements. The one B vitamin that may be a problem in older age is vitamin B₁₂. It becomes harder to absorb because of a lack of intrinsic factor in the older stomach. Rates of vitamin B₁₂ deficiency in older people are higher in New Zealand than in the US, where they fortify more foods with B₁₂. Deficiency results in pernicious anaemia and neurological problems. Including yeast extract and animal products in your diet may help. Otherwise B₁₂ injections or medication may be required.

Vitamin C

Vitamin C for the common cold? This adage has been around for years! This vitamin is an anti-oxidant that helps fight disease and infection. But do you need to buy Vitamin C tablets for this? Mega-doses of Vitamin C have become popular, but in fact, very high levels of vitamin C can interfere with renal function. Vitamin C, like the B vitamins, is a water soluble vitamin, and excess will be excreted by the kidneys. Vitamin C is widely available in a healthy diet. We do need a lot more of this than of other vitamins, but a diet including five or more servings of fruit and vegetables a day (only one of these should be fruit juice), should help you get the Vitamin C you need. Those especially high in vitamin C include citrus fruits, kiwifruit, strawberries, mangoes, peppers and tomatoes.

In summary

Don't be conned into spending large amounts of money on supplements unless you really need them. The best judge of this is somebody who knows you – your GP, or a health professional who can analyse your diet and give you practical suggestions to enable you to meet your needs. Your money is far better spent purchasing the components of a healthy diet. The health food industry is a multi-million dollar industry in New Zealand – and if we are eating well, we should not need their products – just to be sure or just in case. If you do go to a health food shop and the 'nutritionist' advises a regime of pills and potions, take the advice

with a grain of salt; check his/her credentials – Is the nutritionist university qualified, and registered with the Nutrition Society of New Zealand? If not, don't be fooled into parting with your money! The industry works on the 'worried well' and uses pseudo-science and celebrities to push their barrow. Does Dan Carter really kick better, because he takes 'Men's Multi'??

Trust your life-long lessons about the foods that you've always eaten and enjoy, and continue these good habits. And if you are concerned, see your GP or Dietitian/Registered Nutritionist.