Benefits of Taking Multivitamins

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PROFESSIONAL NATURAL MEDICINE

Key Nutrient Requirements For Adolescents Through-to Older Adults

Adolescence

Teenagers require additional nutrients to support growth, metabolism and energy levels as they transition between childhood and adulthood. Adolescence is a time of rapid skeletal growth[1] hence demand increases over this period.[2]

Physical growth and sexual development increase the need for zinc in males (especially)[3] and iron in females who are establishing regular menstrual cycles.[4]

Social pressure and academic stress also factor in during school years, adding to the many changes that can feel difficult to cope with during this stage of life. The stress experienced can be made worse by nutritional deficiencies, whereas maintaining optimal levels of magnesium, B vitamins, vitamin C, and iron helps to avoid mental and physical fatigue.[5]

Adults

Taking care of our long-term health is important throughout adulthood in order to prevent lifestyle-related and age-related diseases. As such, nutritional deficiencies have been linked to many health conditions and emphasise the importance of a balanced diet and appropriate supplementation when required.[6] Together with B vitamins,[5,7] magnesium[8] also helps supply our bodies with the energy we need to move and think.

Achieving an adequate intake from diet alone is made harder by the time constraints we experience on a day-to-day basis. It isn't easy to find the time to cook healthy dinners and prep lunches while trying to fit in time to exercise, socialise and importantly unwind at the end of the day, not to mention taking care of kids! Stress also results in magnesium depletion, commonly leading to fatigue and irritability.[8] When considering the everyday impact of nutrition and stress, it's not surprising that many adults are struggling to stay on top of everything at work and at home!

Preconception, Pregnancy and Breastfeeding

Pregnancy and lactation are times of increased daily nutritional requirements where multivitamin supplementation is essential. These help to support maternal health, and the growth and development of the baby during gestation and in early years of life. Folic acid is the best example of a nutrient required for ensuring a healthy pregnancy, associated with significantly reduced risk of neural tube defects.[9] Choline,[10] vitamin D,[11-13] zinc,[14] iodine,[15,16] selenium,[17,18] and iron[19,20] among others are also essential for fertility, supporting growth and development during pregnancy, and promoting infant health.

Male preconception care is also important for healthy reproduction. Key antioxidant nutrients to support hormonal balance and sperm quality include selenium,[21] zinc,[22] and vitamins C[23] and E.[21]

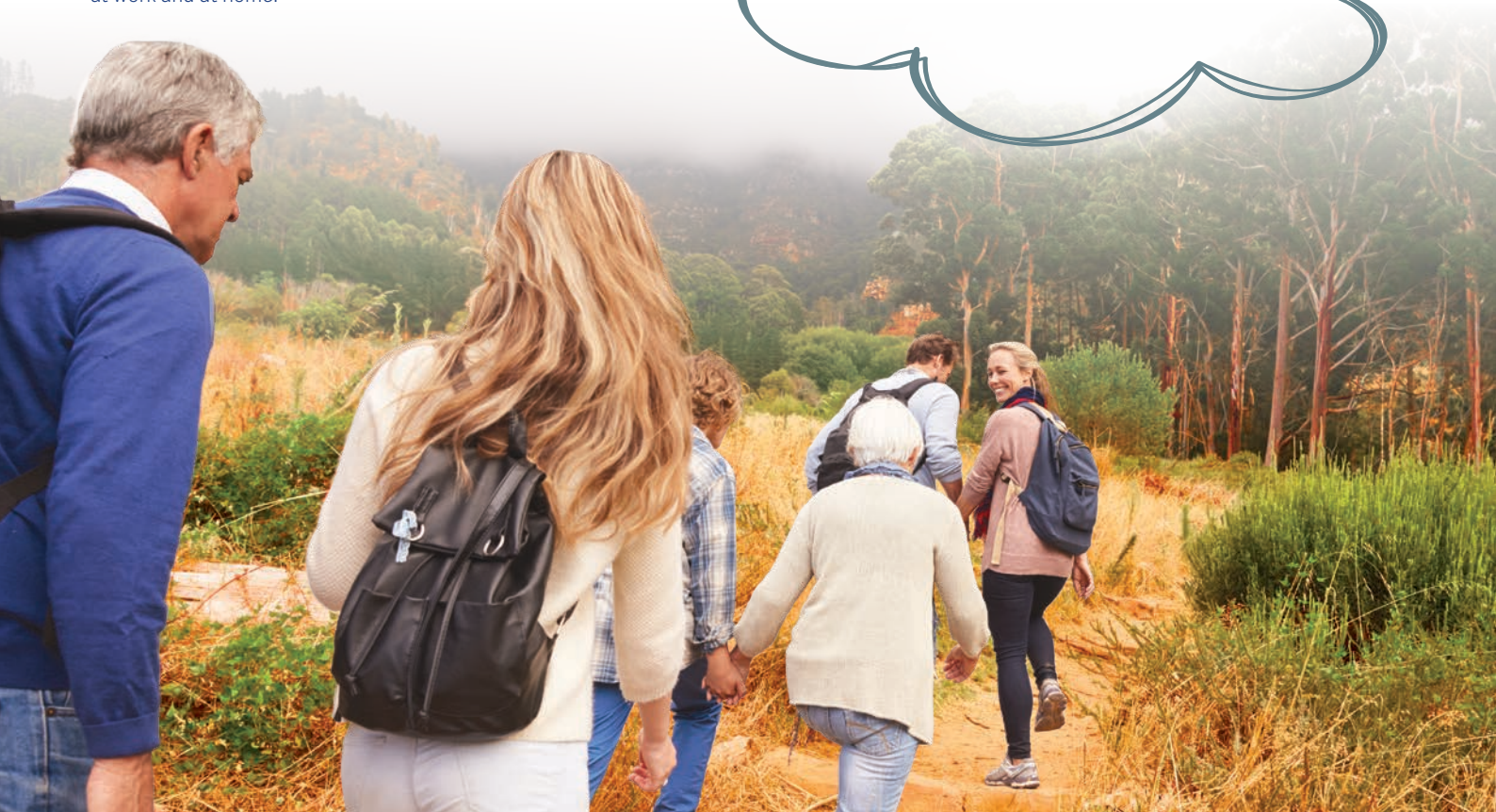
Older Adults

Taking care of your physical and mental wellbeing promotes healthy ageing, longevity and vitality.

Maintaining bone mineral density to avoid osteoporosis in the elderly requires an adequate supply of vitamin D[24] and calcium.[25,26]

Preserving cognitive abilities and memory is another priority for many older adults and elderly people. Adequate levels of vitamin B12[27,28] and D[29,30] can help slow cognitive decline.

Nutritional deficiencies have been linked to many health conditions



Causes of Micronutrient Deficiencies

Eating a Typical Western Diet

In modern times, we often trade quality for convenience. Processed junk foods high in saturated fat, sugars and added salt[31] are nowadays eaten in disproportional amounts to fresh fruit and vegetables, and wholegrain foods.

Compared to the anti-inflammatory Mediterranean diet, the typical Western diet is more energy dense and nutrient poor, deficient in health-promoting, antioxidant nutrients such as vitamins A and D.[32]

Conventional Farming Practices

Synthetic chemical pesticides and fertilisers have been adopted to increase crop yields in order to meet the food demands of a growing global population, in place of sustainable agricultural practices. However, this has also led to the depletion of nutrients (selenium[33] and magnesium)[34] in cultivated soil and, in turn, deficiencies in the food we consume.

Restrictive Diets

Some diets inherently lack specific nutrients, such as vegan and vegetarian diets; the low fermentable oligosaccharides, disaccharides, monosaccharides, and polyols (FODMAP) diet; and the ketogenic diet. Supplementation is therefore recommended for optimal nutrition. Besides that, keeping our bodies well-nourished isn't just a matter of what we eat, but what we are capable of absorbing. Individuals suffering from the effects of malabsorption do not derive the same nutrition from the foods they eat as those with a healthy gut.

Vegan and vegetarian diets: antinutrients such as phytic acid[35] and oxalates[36] present in legumes, grains, nuts, and seeds reduce mineral absorption from plant-based foods. Vegans especially are at an increased risk of vitamin B12[37] and D, calcium, iron, and zinc deficiency.[38]

Low FODMAP diet: the potential for inadequate intake of B vitamins and calcium increases on a low FODMAP diet due to short-term exclusion of multiple foods.[39]

Ketogenic diet: calcium, phosphorus[40] and magnesium[41,42] supplementation may be required to sufficiently digest and metabolise fats into energy and maintain bone health when eating a low-carbohydrate, high-fat diet.

Malabsorption

Lactose intolerance,[43,44] irritable bowel syndrome (IBS),[45] inflammatory bowel disease (IBD),[46] coeliac disease,[47] small intestinal bacterial overgrowth (SIBO),[48] and other digestive health conditions[49] may impair the absorption of nutrients or lead to avoidance of certain foods, contributing to low vitamin and mineral intake.

In coeliac disease, low vitamin B12,[50,51] folate, vitamin D, iron, magnesium, and zinc[52] are commonly reported.

Stress

Physical and mental stress depletes certain nutrients – especially vitamins B6 and B12, folate, vitamin C, magnesium, and zinc,[5] which are required building blocks to make the chemical messengers (neurotransmitters) and hormones that facilitate the stress response. Signs and symptoms of stress include the following:[53]

- headaches
- changes in mood (e.g. irritability, feeling frustrated, anxious, or depressed)
- forgetfulness and difficulty concentrating
- muscle tension
- sleep problems
- constant tiredness, weakness and fatigue
- changes in appetite
- unintentional weight loss or gain
- digestive discomfort
- diarrhoea or constipation

High Caffeine and Alcohol Consumption

Diuretics like caffeine (e.g. coffee, energy drinks, tea, chocolate, etc.) flush out water-soluble nutrients such as B vitamins,[54] increasing nutritional demand. Chronic alcohol consumption can deplete vitamin A,[55] magnesium, calcium, selenium, chromium, and zinc[56] in addition to B vitamins as well.[57]

Who Would Benefit Most from Multivitamins?

Stressed or Busy Individuals

Individuals who work in fast-paced jobs, work night shifts and are busy parents are among those who stand to benefit the most from replenishing nutrients commonly depleted by stress and intense mental exertion that aren't typically replenished through diet alone.

Expecting and New Mothers

For the body to grow a baby in the womb and supply milk to nourish a newborn, greater amounts of nutrients are required. For the mother, depletions in calcium and iron due to pregnancy are especially important to avoid weakening of the bones[63] and fatigue,[19] respectively.

People With Low Energy

Vitamins B2, B3 and B5 are cofactors involved in converting carbohydrates into energy. Sufficient levels obtained through dietary sources and appropriate supplementation can help prevent mental and physical fatigue.[5]

People With Physical Jobs, Athletes and Exercise Enthusiasts

Individuals who engage in intense physical activity, labouring jobs or trades require more calories and micronutrients to satisfy increased energy requirements compared to those living an inactive or sedentary lifestyle. Athletes engaging in competitive sport and regular intensive training are more metabolically active and typically require additional magnesium[58] and other electrolytes to compensate for losses through sweat.[59] Iron status is a special consideration in female athletes,[60] required for endurance and lost via sweat and menstruation.[61] Zinc is also in high demand, necessary for muscle tissue repair in general.[62]

People Who Are Run Down

Those feeling tired, unwell and overworked are more susceptible to frequent and recurrent colds and flus. Vitamins A,[64] C[65] and D,[66] together with mineral zinc[67,68] can help reduce the incidence of these infections by supporting immune function.

Students

Stress arising from academic pressures (i.e., studying and exam performance) increases the risk of nutrient deficiencies, particularly magnesium[8] and B vitamins.[5,7] Extracurricular activities, expectations (e.g. self-esteem issues) and social relationships are other common sources of stress for students, so it isn't just the workload of assignments that adds up to feeling overwhelmed!

The Elderly

Ageing increases the risk of nutrient deficiency as digestive function weakens,[69] appetite declines and the risk of chronic disease increases.[70] Certain medications commonly prescribed in the elderly (e.g. proton pump inhibitors like Nexium used to treat reflux)[71] can also impact vitamin B12, vitamin C, calcium, iron, and magnesium metabolism leading to nutritional deficiencies.[72]

Discuss with a healthcare professional or pharmacist whether a multivitamin may be suitable for you

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