

Eat Your Way To Healthy Ageing

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Asia's ageing population and wide socioeconomic disparities have created a wide range of health concerns for its people. Latest developments and trends suggest that nutritional science and healthy ageing can be promoted through diets. By Sarah De Quadros, marketing manager, and Satya S Jonnalagadda, director of global nutrition, Kerry

Population demographic trends indicate that ageing individuals are a growing segment in the food and beverage consumer market. By 2040, the over-65 demographic will account for 15 percent of the population in Asia.

Successful longevity is an essential component of healthy ageing and is impacted by diet, nutrient intake and lifestyle practices throughout life, which can influence overall health, physiological, and functional changes associated with the ageing process.

Proper nutrition throughout life not only helps prevent and/or lower the risk of chronic diseases, it also plays an important role in promoting the healthy ageing process, in management of chronic diseases and in meeting the nutritional needs of those who are malnourished, frail or ill.

Older adults with poor overall diet quality are likely to have suboptimal levels of nutrition biomarkers, which in turn could negatively affect their quality of life and functional independence. Availability of nutritious food and beverages is essential to ensure successful ageing and well-being for the rapidly growing, heterogeneous, ethnic population of older adults to help maintain independence, functional ability, disease prevention and management, and overall quality of life.



Health & Wellness Trends In Asia

There are emerging concerns within the Asia Pacific about unhealthy food consumption patterns stemming from poor awareness on proper nutrition, changing economic status and lifestyles. The result is an overall excessive amount of sugar and fats, as well as foods with few or no valuable nutrients, contributing to obesity and a micro-nutrient deficiency—the double burden of malnutrition.

With increasing GDP, lower and middle-income countries in the Asia Pacific are experiencing patterns of physical inactivity and diets richer in calories and fat, contributing to some of the public health crisis and epidemics.

Despite this trend in health status, the overall awareness of health and wellness appears to be growing. Based on a recent consumer survey conducted by Datamonitor, the percentage of consumers in Asia Pacific who make conscious attempts to eat healthy ranges from 41 percent to 85 percent¹ and is expected to grow at a compound annual growth rate (CAGR) of 10 percent to €280 billion (US\$233.14 billion) in 2018².

Product launches with health and wellness claims from May 2012 to May 2013 accounted for 45 percent of launches, while this figure rose to 51 percent during the review period from May 2013 to May 2014. The most popular health and wellness claims that were specifically targeted at individuals 55+ years were:

- No additives/preservatives (35 percent)
- Vitamin/mineral fortified (17 percent)
- Low/no/reduced sugar (17 percent)
- Other functional claims (14 percent)
- Bone health (12 percent)
- Added calcium (11 percent)



Nutrition & Healthy Ageing

Not only will the number of people aged over 60 increase significantly over the coming years, but also the number of people aged over 80.

Both obesity and under-nutrition coexist in Asia mainly due to wide socioeconomic disparities. As the rate of obesity increases across the Asia Pacific, other health problems are emerging, such as cardiovascular disease, higher risk of stroke and diabetes. Treating these conditions, especially in an ageing population, will place a great burden on public health care systems across the region.

The Asia-Pacific Cohort Studies Collaboration (APCSC) found that the prevalence of overweight and obesity among 14 countries in the Asia Pacific varied considerably by country. For example, the combined prevalence of overweight and obesity increased by 46 percent in Japan from 16.7 percent in 1976-1980 to 24 percent in 2000, and by 414 percent in China from 3.7 percent in 1982 to 19 percent in 2002. China, the most populous country in the world, is already reaching half the rate of obesity and overweight prevalence in the US and the rate is growing rapidly. Even further down the scale, the issue is only starting to rear its head in countries like Vietnam with a doubling in adult male obesity and overweight prevalence between 2005 and 2010³.

Alongside obesity, other related lifestyle diseases continue to grow as a serious health threat. In the Asia Pacific, it is projected that non-

communicable diseases (NCD's) will account for up to 80 percent of all deaths and 40 percent of all morbidity by 2030.

NCDs are the number one killer in Southeast Asia, mainly cardiovascular disease (CVD), chronic respiratory diseases, diabetes and cancer. Almost one in 10 Chinese adults has diabetes, which translates to more than 92 million consumers and some 150 million Chinese adults are pre-diabetic.

In the western pacific region, it is estimated that 132 million adults have diabetes, while in Southeast Asia, 70 million adults have diabetes. Therefore, managing the nutritional intake and lifestyles of individuals from early on in life and throughout adulthood and the ageing process is vital to a successful and healthy ageing process.



Eating Well For Health

Whatever one's age, daily food choices can make an important difference in health and in how one looks and feels. Eating a well-planned, balanced mix of foods every day has many health benefits.

Eating well may help reduce the risk of heart disease, stroke, type 2 diabetes, bone loss, some kinds of cancer, and anaemia. In the presence of one or more of these chronic diseases, eating well and being physically active may help individuals better manage these conditions and their overall quality of life. Healthy eating provides nutrients, such as vitamins, minerals, protein, healthy fats and oils, dietary fibre, among others, that may help lower risk factors and/or help manage chronic diseases. Eating well also promotes energy level. By consuming adequate calories, the body obtains the fuel it needs throughout the day.

Food Choices Affect Weight

Consuming the right number of calories for the individual's level of physical activity can help with weight management. Extra weight is a concern for older adults because it can increase the risk for diseases such as type 2 diabetes and heart disease and joint problems. While weight loss has well established benefits, recommending weight loss in ageing individuals is debatable, given some of the potential negative consequences, such as loss of muscle mass and bone mass, which can impact their overall health status. Choosing mostly nutrient-dense foods—those with a lot of nutrients but relatively few calories—can help provide the nutrients needed while reducing calorie intake



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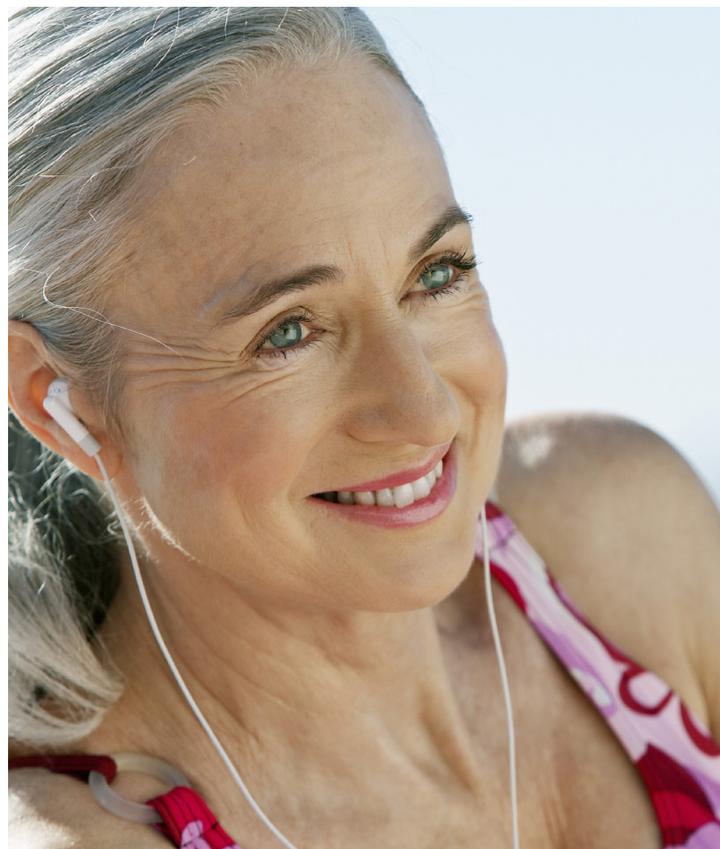
Meng He, New York, US

Food Choices Affect Digestion

Food choices also affect the functioning of the gastrointestinal system (digestion and absorption of nutrients). For instance, not getting enough fibre or fluids may contribute to constipation. Eating more wholegrain and high fibre foods, fruits and vegetables and drinking more water may help alleviate constipation. Maintaining a healthy functioning digestive system, and regular bowel function, can impact overall health and quality of life.

Ageing Associated Nutritional Conditions

Ageing has been observed to be associated with changes in appetite, taste and sensory perceptions. Loss of response to internal and external cues, for instance in regulation of thirst, control of appetite, and dysregulation of certain processes, such as gastric emptying, are observed with ageing, which in turn can impact dietary intake and nutritional status. General decline in sensory acuity is also associated with ageing and can impact health and nutritional status of ageing individuals. Small, energy and nutrient dense, portions of food and beverages, along with taste and sensory characteristics that appeal to the ageing tongue are some ways to address these changes.



Malnutrition

Not only will the number of people aged over 60 increase significantly over the coming years, but also the number of people aged over 80. As people age, the incidence of chronic disease rises. Heart disease, hypertension, metabolic abnormalities and neurodegenerative diseases are amongst the chronic conditions that increase in incidence with age, and with them come the burden of malnutrition. Malnutrition may increase vulnerability to infection, delayed wound healing, decreased muscle strength and depression, as well as have an effect on outcomes such as the length and frequency of hospital stays and quality of life. Protein energy malnutrition (PEM) accompanied by micronutrient deficiencies is a common problem in ageing individuals, especially among those suffering from chronic diseases and poor health. Weight loss and poor nutrition are important quality measures in long term care. In a recent systematic review, researchers found that the factors most consistently associated with poor nutrition included impaired function, dementia,

swallowing/chewing difficulties, poor oral intake, and older age.

Addressing these nutritionally modifiable factors through targeted nutrition interventions can help lower the risk and improve outcomes among malnourished elderly. Nutritional intervention, with calorie and protein dense oral nutritional supplements, has been shown to result in more rapid rehabilitations, lower infection rates, higher discharge rate and lower mortality.

In order to address these key nutritional needs, consumers should look for products containing high quality protein and easily digestible, hydrolysed plant and dairy proteins to help meet the protein needs and also to help modulate immune responses.

Additionally, consumers should look for products containing healthy oils and fats that deliver the targeted fatty acids to help modulate the inflammatory responses, while delivering the energy needed.

Sarcopenia

The ageing process is associated with gradual and progressive loss of lean body (muscle) mass along with lowered strength and physical endurance. Age-related loss of muscle mass or sarcopenia, has been widely observed especially among sedentary adults. The Asia Working Group for Sarcopenia suggests that the impact of sarcopenia in Asia may be stronger than in other continents due to the rapidly ageing population and population size. The rate and extent of muscle changes seem to be genetically determined and often begin in the 20s in men and the 40s in women.

Regular aerobic and resistance exercise programs have been shown to counteract most aspects of sarcopenia. In addition, good nutrition, especially adequate protein and energy intake, can help limit and treat age-related declines in muscle mass, strength, and functional abilities. Protein nutrition in combination with exercise is considered optimal for maintaining muscle function. The Society for Sarcopenia, Cachexia and Wasting Diseases' nutritional recommendations for the prevention and management of sarcopenia suggest adequate protein and energy intake in combination with exercise.

Research also suggests that leucine-enriched balanced essential amino acid and balanced amino acid supplementation is recommended for sarcopenia. In 2013, the European Society for Clinical Nutrition and Metabolism (ESPEN) hosted a Workshop on Protein Requirements in the Elderly. Based on the evidence presented and discussed, the following recommendations were made:

1. For healthy older people, the diet should provide at least 1-1.2 g protein/kg body weight/day;
2. For older people who are malnourished or at risk of malnutrition because they have acute or chronic illness, the diet should provide 1.2-1.5 g protein/kg body weight/day, with even higher intake for individuals with severe illness or injury; and
3. Daily physical activity or exercise (resistance training, aerobic exercise) should be undertaken by all older people, for as long as possible.

Nutritional products containing high quality protein and hydrolysed proteins can help consumers achieve these protein goals, while the unsaturated oils can help deliver targeted fatty acids to help modulate the inflammatory responses with sarcopenia.

Bone & Joint Health

As one ages, along with declining levels of dietary intake and physical activity, osteopenia and subsequent osteoporosis occurrence increases, which in turn are associated with increased risk of hip fractures and subsequent poor quality of life and mortality. Bone mass or density is lost as people age, especially in women after menopause, because the bones lose calcium and other minerals. Negative calcium balance is commonly associated with these outcomes, which could be due to inadequate intakes, immobilisation, illness, lack of exercise, malnutrition, medications such as corticosteroids and antacids, and endocrine disorders. PEM also contributes to the occurrence of osteoporotic fractures by lowering bone mass and altering muscle strength as well as impairing recovery.

Changes in posture and gait (walking pattern) are common with ageing. Changes in the muscles, joints, and bones affect the posture and gait, and lead to weakness and slowed movement. Changes in the muscle tissue, combined with normal ageing changes in the nervous system, cause muscles to have less

tone and ability to contract. Inflammation, pain, stiffness, and deformity may result from breakdown of the joint structures. Almost all elderly people are affected by joint changes, ranging from minor stiffness to severe arthritis. A well-balanced diet with adequate amounts of key nutrients such as protein, omega-3 fatty acids, calcium, vitamin D, antioxidant nutrients, is important.

Digestive Health

Constipation is a common occurrence among older individuals, due to changes in lifestyle practices, poor hydration, inadequate dietary intakes, especially fibre, and polypharmacy. Prebiotic fibres have been shown to have a positive impact on gastrointestinal tolerance and bowel function among older individuals. Probiotics can also play an important role in not only modulating digestive health, but also providing immune benefits and overall physiological health benefits. Science in the area of gut microbiota is rapidly emerging and new frontiers of the role of diet-gut microbiota interactions and their impact on ageing are being discovered. Furthermore, ageing individuals may experience difficulties with digestion and absorption, hence providing nutrients in easily absorbable forms, such as hydrolysed proteins, and more bio-accessible forms, such as colloidal forms of bone health nutrients calcium and phosphorus, may be important especially among the sick elderly.

Immunity

There is a decline in the relative mass of immune tissue over the life span, and an associated decline in immune function with ageing. This immunodeficiency state predisposes to progressive T-cell dysfunction with advancing age, which has been implicated in the etiology of many chronic degenerative diseases of the elderly, including arthritis, cancer, vascular injury, auto-immune complex disease, as well as increased susceptibility to infectious disease. The nutritional intake and protein status impact the individuals' susceptibility and resistance to infections. Furthermore, nutritional lipids also modulate the immune system, since they serve as precursors of eicosanoids, prostaglandins, and leukotrienes—the synthesis of which could be influenced by antioxidants and micronutrients such as vitamins E, and C, selenium, zinc and copper. Adequate nutrition is of pivotal importance in terms of immune function, especially in terms of disease prognosis among frail elderly.

Proper nutrition throughout life not only helps prevent and/or lower the risk of chronic diseases, it also plays an important role in the management of chronic diseases and in meeting the nutritional needs of those who are frail, malnourished, and ill. Availability of nutritious food and beverages is essential to ensure successful ageing and well-being of the rapidly growing demographic.



References:

1. Data Monitor 2013 Consumer Survey Data - Food and Non-Alcoholic Drinks.
2. Euromonitor Health and Wellness Market. www.euromonitor.com/health-and-wellness
3. WHO Global Burden of Disease. www.who.int/topics/global_burden_of_disease/en/
4. Asia-Pacific Cohort Studies Collaboration (APCSC). www.apcsc.info/
Chen et al. Sarcopenia in Asia: Consensus report of the Asian Working Group for Sarcopenia. JAMDA. 2014; 15:95-101.
5. Deutz et al. Protein intake and exercise for optimal muscle function with aging: Recommendations from the ESPEN Expert Group. Clinical Nutrition. 2014
6. Kaiser et al. Frequency of malnutrition in older adults: a multinational perspective using the mini nutritional assessment. J Am Geriatr Soc. 2010; 58:1734-1738. doi: 10.1111/j.1532-5415.2010.03016.x.
7. Meinert et al. Diets with high or low protein content and glycemic index for weight loss maintenance. N Engl J Med. 2010;363:2102-2113.
8. Shaw et al. Global estimates of the prevalence of diabetes for 2010 and 2030. Diab Res Clin Pract. 2010;87:4-14; doi: 10.1016/j.diabres.2009.10.007. Epub 2009 Nov 6.
9. Tamura et al. Factors associated with weight loss, low BMI, and malnutrition among nursing home patients: a systematic review of the literature. JAMDA. 2013;14:649-55. doi: 10.1016/j.jamda.2013.02.022. Epub 2013 Apr 30.
10. The Future of Population in Asia: Asia's Aging Population.
www.eastwestcenter.org/fileadmin/stored/misc/FuturePop08Aging.pdf