

Non-Communicable Diseases Watch

February 2015



衛生防護中心
Centre for Health Protection



衛生署
Department of Health

Ageing Well and Optimal Golden Years

Key Facts

- ※ The population is ageing, both globally and locally. In step with population ageing, disease burden from age-dependent chronic diseases is projected to increase.
- ※ Many of the causes of chronic ill health or disability are the result of accumulated lifestyle and other risks much earlier in life. To enjoy healthy ageing, individuals are encouraged to lead a healthy lifestyle in earlier stages of life.

Keys to Healthy Ageing

Healthy ageing starts with healthy behaviours in earlier stages of life.

- ※ Do not smoke
- ※ Be physically active
- ※ Eat a healthy and balanced diet
- ※ Maintain an optimal body weight and waist circumference
- ※ Avoid alcohol
- ※ Get adequate sleep
- ※ Keep mentally active
- ※ Think positively and manage stress
- ※ Maintain close ties with families, friends and the community
- ※ Prevent accidents and injuries
- ※ Pay attention to good oral health
- ※ Use medications safely
- ※ Get appropriate preventive medical and health services

Ageing Well and Optimal Golden Years

The world population is ageing, primarily due to declining fertility and longevity. In 2010, an estimated 524 million people (or 8% of the world's population) were aged 65 and above. By 2050, this number is expected to almost triple to about 1.5 billion, representing 16% of the world's population.¹ In Hong Kong, the population is also ageing. In 2013, 14.2% of the total population, or about

1.02 million persons were aged 65 and above. The proportion will increase to 30.2%, or over 2.56 million persons aged 65 and above, by 2041. Meanwhile, the older population is itself ageing. In 2013, the proportion of elders aged 85 years and above within the population was 2.0%. By 2041, the share is projected to reach 5.8% (Table 1).^{2,3}

Table 1: Number and percentage of persons aged 65 and above in Hong Kong in mid-2013 and mid-2041 (projected) by age group

Age group	Year 2013		Year 2041	
	Number (Thousands)	Percentage of total population	Number (Thousands)	Percentage of total population
65 – 74	508.5	7.1%	1 052.3	12.4%
75 – 84	368.4	5.1%	1 015.3	12.0%
85 and above	144.6	2.0%	490.4	5.8%
65 and above	1 021.5	14.2%	2 558.0	30.2%

Source: Census and Statistics Department.

Ageing and Chronic Diseases

In step with population ageing, disease burden from age-dependent chronic diseases is projected to increase. For example, cancer accounted for 87.0 million disability adjusted life years (DALYs) in elders aged 60 and above in 2010 globally,

but the burden of cancer in elders was forecast to increase by 69.2% from 2004 to 2030. For diabetes mellitus, it accounted for 22.6 million DALYs in elders worldwide in 2010. By 2030, its burden was forecast to increase by 95.7% (Table 2).⁴

Table 2: Numbers of DALYs attributed to major age-dependent diseases for people aged 60 and above in 2010 and projected change from 2004 to 2030

Type of diseases	Number of DALYs in 2010 (Million) ^a	Projected change from 2004 to 2030 ^b
Cancer	87.0	+69.2%
Ischaemic heart disease	77.7	+34.7%
Cerebrovascular disease	66.4	+44.4%
Chronic obstructive pulmonary disease	43.3	+88.7%
Diabetes mellitus	22.6	+95.7%
Visual impairment	10.4	+86.3%
Dementia	10.0	+82.6%
Hearing impairment	7.5	+70.6%

Notes: ^a Estimates of DALYs were generated by the Institute of Health Metrics and Evaluation; ^b Increases in DALYs between 2004 and 2030 were calculated by the World Health Organization.

Source: Prince et al, 2014.

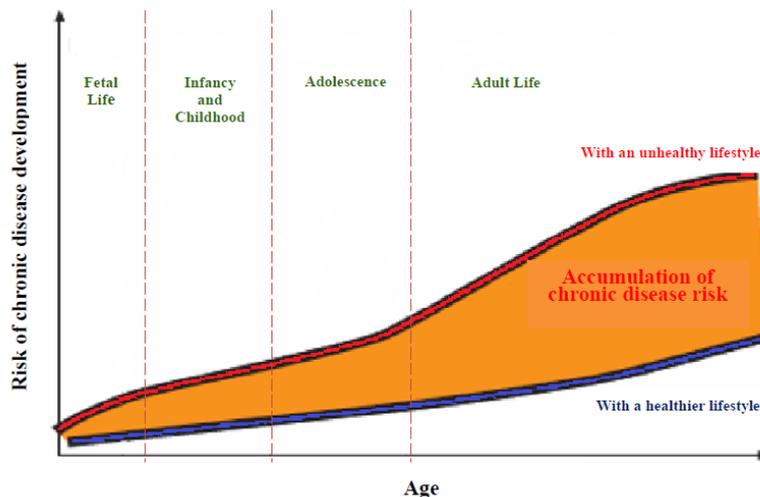
For multi-morbidity (the co-existence of multiple chronic diseases), it increases sharply with age and is strongly associated with impaired quality of life, disability, dependence and mortality.⁴ A systematic review of the literature reported that prevalence of multi-morbidity in elders ranged from 55% to 98%.⁵ In Hong Kong, the Thematic Household Survey conducted during October 2011 to January 2012 reported that nearly three in four (73.7%) people aged 65 and above had chronic health conditions as told by practitioners of Western medicine, including hypertension (46.0%), diabetes mellitus (20.0%), heart diseases (9.8%), cancer (3.5%) and stroke (3.2%).⁶ Another Thematic Household Survey conducted in 2008 also found that about two-fifths (40.6%) of people aged 60 and above residing in domestic households had two or more chronic diseases (including those that did not require regular medical treatment).⁷

Factors Affecting Healthy Ageing

Health in later life is affected by a number of factors that operate over the course of a person's life. Across the cultures studied, determinants that are important to ageing well include physical health and functional status, mental or cognitive effectiveness, social relationships and resources, meaningful daily life activities (that help to maintain identity and health), and material security (such as secure housing, sustenance or access to needed services).⁸

From a biological perspective, the degeneration that accompanies ageing proceeds at different rates in different individuals. In general, some physical changes can begin as early as 30 or 40 years of age, such as loss of skin elasticity, decrease in bone mass or changes in vision.⁹⁻¹¹ Nevertheless, unhealthy lifestyle and exposure to environmental pollutants (such as secondhand smoke and ultra-violet radiation^{12, 13}) can speed up the degeneration process. In fact, many of the causes of chronic ill health or disability are the result of accumulated lifestyle and other risks much earlier in life (Figure 1). For example, unhealthy lifestyles such as excessive intake of saturated fat and salt, and reduced physical activity during childhood and adolescence may lead to high blood pressure in adulthood, thus increasing the risk of coronary heart disease and stroke in older age.¹⁴ Study showed that people with high health risk (defined in terms of smoking, higher body mass index and lack of physical activity in midlife and late adulthood) had an earlier onset of disability and more disabilities in their final years of life. Conversely, adoption of healthier lifestyles was associated with not only an increase in lifespan, but also an increase in health span. The age at onset of disability could be postponed by more than 5 years in the low-risk group as compared with the high-risk group.¹⁵

Figure 1: Schematic diagram of accumulation of chronic disease risk with age



Keys to Ageing Well

Increasing life expectancy has led to higher expectations among people not only to live longer, but to live longer with fewer disabilities, better health and higher quality of life. Although the risk of developing chronic diseases and associated disability increases as people get older, this does not mean that the loss of functional capacity is an inevitable consequence of ageing. Contrary to the myth that “older people are frail”, many elders are independent in daily living tasks. In Hong Kong, the Thematic Household Survey conducted in 2008 found that 93.1% of people aged 60 and above in the domestic households did not have impairment in activities of daily living (ADL) while 96.3% were able to make independent decision on their own general affairs in daily living.⁷ Furthermore, a screening for frailty of 816 community-living people aged 65 and above in 2014 found that 35.1% of them were found to be robust. However, 52.4% and 12.5% of them were classified as pre-frail and frail respectively. The prevalence of frailty increased with age from 5.1% for people aged 65-69 and 16.8% for those aged 75 and above. Elders who exercised an hour or more daily, however, showed a lower prevalence of frailty. Compared to the pre-frail group, the frail group generally had more chronic diseases, medications, falls and functional disabilities. They also showed signs of sarcopenia (loss of muscle mass due to natural ageing), mild cognitive impairment and depressive symptoms with poor self-rated health compared with those in the pre-frail group.¹⁶

The Hong Kong Government recognises the health and social consequences of population ageing, and will continue to formulate responsive ‘age-friendly’ public policies that empower people to age well and support the involvement of elders in positive and productive living. However, individuals irrespective of their ages should also take steps to maintain as much of their health and functional capacity as possible by adoption of good habits.

Even for those in advanced age or who have had a lifetime of ‘over-indulgence’, it is never too late to change and receive the benefits associated with a healthier lifestyle. Here are the things that we can and should do for a healthy old age:

Do not smoke — Smoking is one of the major risk factors for multiple chronic diseases and premature death, and therefore smoking cessation is beneficial at any age.¹⁷ For example, the risk of premature death decreases by 50% if someone gives up smoking between 60 and 75 years of age.¹⁸ Current smokers can call the Integrated Smoking Cessation Hotline of the Department of Health at 1833 183 for free quit smoking advice and help.

Be physically active — Physical activity at all ages can help keep the body fit and young, reduce the likelihood of obesity and many age-related conditions, delay functional decline and the onset of chronic diseases. Healthy elders should do at least 150 minutes of moderate-intensity physical activity (such as brisk walking or swimming slowly), or 75 minutes of vigorous-intensity physical activity (such as fast swimming), or equivalent combinations of both throughout the week, in bouts of at least 10 minutes in duration. Apart from aerobic activities, healthy elders are recommended to perform resistance exercise (such as progressive weight bearing training programmes) at least 2 non-consecutive days per week and stretching exercises of at least 10 minutes that involve major muscle tendon groups (each with 4 or more repetitions of 10-30 seconds of static stretch) on a minimum of 2 days per week.^{19, 20}

Eat a healthy and balanced diet — Balanced diet is an important component of ageing well by keeping the body and brain in an optimum condition. Eat in accordance with the Food Pyramid, with at least 5 servings of fruit and vegetables every day. Avoid foods that are high in fat, sugar and salt.

Maintain an optimal weight and waist circumference — Being underweight or overweight are threats to ageing well. Being obese makes people more vulnerable to many life-threatening diseases, including certain cancers, coronary heart disease, stroke and diabetes mellitus. For Chinese adults living in Hong Kong, aim for a body mass index (BMI) between 18.5 and 22.9 kg/m². Irrespective of their BMI, men should keep their waist circumference below 90 cm (~36 inches) and women should keep theirs below 80 cm (~32 inches).

Avoid alcohol — Alcohol consumption is a major risk factor for a variety of health problems. Elders are especially vulnerable to the effects of alcohol due to changes in body composition, decreased metabolic capacity and the presence of other medical conditions.

Get adequate sleep — Prolonged lack of sleep can affect hormone production and metabolism as well as impair mental health.

Keep mentally active — Lifelong learning and frequent participation in mentally stimulating leisure activities can also protect against cognitive decline and age-related memory problems. Such activities include “thinking’ games (such as mahjong, chess or cards), crossword puzzles or word games, writing and reading.

Think positively and manage stress — Research suggests that optimistic individuals are more likely to live a healthier and longer life.²¹ Chronic psychological distress is increasingly recognised as a cause of premature ageing of key body systems (such as the immune system) and premature deaths (such as from coronary heart disease and respiratory diseases).^{22, 23} Stress management is therefore an important strategy for healthy ageing.

Maintain close ties with families, friends and community — Personal relationship and social connectedness is vital for active and healthy ageing.

A meta-analytic review reported that people with stronger social relationships had a 50% increased likelihood of survival than those without social ties.²⁴ Elders with a more diverse and wider range of social ties tend to be happier, less lonely and less anxious.²⁵

Prevent accidents and injuries (particularly falls among the elders) — Take appropriate precautions to protect the knee joints from serious or repeated injuries so as to decrease the risk of damaging the cartilages and causing degenerative changes later in life. In elders, falls are a significant threat to the health, safety and independence. To reduce the risk of falls, elders can incorporate adequate amount of muscle-strengthening and stretching activities as well as balance training in their activity plan (such as walking, progressive weight training programme, weight bearing calisthenics and Tai Chi).

Pay attention to good oral health — Poor oral health (i.e. primarily dental caries, gum diseases and tooth loss) is associated with a multitude of systematic health problems. To elders, teeth are important not only for maintaining adequate and balanced nutrition, but also in speech, appearance and a positive self-image.²⁰ Regardless of age, choosing a healthy lifestyle, maintaining vigilance in oral hygiene and getting regular dental check-ups are important steps to ensure healthy teeth and gums for a lifetime.

Use medications safely — As age increases, the effect of specific medications or combinations of several medications on physical health or mental well-being can change. In view of this, it is important to understand the uses of medications, and how and when to take them. Ask the family doctor or a pharmacist to review all medications (including over-the-counter drugs and herbal remedies) so as to avoid possible drug duplications, interactions or adverse drug reactions. Take all medications exactly according to prescription.

Get appropriate preventive medical and health services — Follow vaccination schedule as advised by the family doctor. For example, influenza is an important contributor to ill-health and mortality in the elderly. Among non-institutionised elders, influenza vaccination may reduce the number of hospitalisations by 25-39% and has also been shown to reduce overall mortality by 39-75% during influenza seasons.^{20, 26} Some diseases, such as certain cancers, hypertension or diabetes mellitus may be silent in their early stages. Appropriate screening or health checks based on personal risk profile can help tackle health problems and diseases early, enabling effective treatment before detrimental health effects occur. Ask and follow family doctor's advice before having screening or health checks.

Remember, healthy ageing starts with healthy behaviours in earlier stages of life. For more information about healthy ageing and elderly health, please visit the Elderly Health Service website at <http://www.info.gov.hk/elderly>.

Remember, healthy ageing starts with healthy behaviours in earlier stages of life. For more information about healthy ageing and elderly health, please visit the Elderly Health Service website at <http://www.info.gov.hk/elderly>.

References

1. Global Health and Aging. Geneva: National Institute of Ageing and World Health Organization, 2011.
2. Hong Kong Population Projections, 2012-2041. Hong Kong SAR: Census and Statistics Department, 2012.
3. Hong Kong Annual Digest of Statistics. Hong Kong SAR: Census and Statistics Department, 2014.
4. Prince MJ, Wu F, Guo Y, et al. The burden of disease in older people and implications for health policy and practice. *Lancet* 2014.
5. Marengoni A, Angleman S, Melis R, et al. Aging with multimorbidity: a systematic review of the literature. *Ageing Res Rev* 2011; 10(4):430-9.
6. Thematic Household Survey Report No. 50. Health Status of Hong Kong Residents. Hong Kong SAR: Census and Statistics Department, 2013.
7. Thematic Household Survey Report No. 40. Socio-demographic Profile, Health Status and Self-care Capability of Older Persons. Hong Kong SAR: Census and Statistics Department, 2009.
8. Hawkins BA. Aging well: toward a way of life for all people. *Prev Chronic Dis* 2005; 2(3):A03.
9. Your Aging Eyes. NIH News in Health; January 2011.

10. Cerimele D, Celleno L, Serri F. Physiological changes in ageing skin. *Br J Dermatol* 1990; 122 Suppl 35:13-20.
11. Davies JH, Evans BA, Gregory JW. Bone mass acquisition in healthy children. *Arch Dis Child* 2005; 90(4):373-8.
12. Valacchi G, Sticozzi C, Pecorelli A, et al. Cutaneous responses to environmental stressors. *Ann N Y Acad Sci* 2012; 1271:75-81.
13. Wu JP, Che TT. Secondhand Smoke Exposure in Aging-related Cardiac Disease. *Aging Dis* 2013; 4(3):127-33.
14. Aboderin I, Kalache A, Ben-Shlomo Y, et al. Life Course Perspectives on Coronary Heart Disease, Stroke and Diabetes. Key Issues and Implications for Policy and Research. Geneva: World Health Organization, 2002.
15. Vita AJ, Terry RB, Hubert HB, Fries JF. Aging, health risks, and cumulative disability. *N Engl J Med* 1998; 338(15):1035-41.
16. Screening Reveals over 50% Community-dwelling Population Aged 65 or Above are Pre-frail. Press Release dated 12 January 2015. Hong Kong SAR: Faculty of Medicine, Chinese University of Hong Kong.
17. Gellert C, Schotker B, Brenner H. Smoking and all-cause mortality in older people: systematic review and meta-analysis. *Arch Intern Med* 2012; 172(11):837-44.
18. Ten Facts on Ageing and the Life Course. Geneva: World Health Organization, 2014.
19. Global Recommendations on Physical Activity for Health. Geneva: World Health Organization, 2010.
20. Hong Kong Reference Framework for Preventive Care for Older Adults in Primary Care Settings. Hong Kong SAR: Task Force on Conceptual Model and Preventive Protocols of the Working Group of Primary Care, Food and Health Bureau, 2012.
21. Peterson C, Park N, Lim ES. Can optimism decrease the risk illness and disease among the elderly. *Ageing Health* 2012; 8(1).
22. Bauer ME, Jeckel CM, Luz C. The role of stress factors during aging of the immune system. *Ann N Y Acad Sci* 2009; 1153:139-52.
23. Robinson KL, McBeth J, Macfarlane GJ. Psychological distress and premature mortality in the general population: a prospective study. *Ann Epidemiol* 2004; 14(7):467-72.
24. Holt-Lunstad J, Smith TB, Layton JB. Social relationships and mortality risk: a meta-analytic review. *PLoS Med* 2010; 7(7):e1000316.
25. Litwin H, Shiovitz-Ezra S. Social network type and subjective well-being in a national sample of older Americans. *Gerontologist* 2010; 51(3):379-88.
26. WHO Expert Committee on Biological Standardization. Biologicals: Influenza. Geneva: World Health Organization.

Elderly Health Care Voucher Scheme

Dear elders, are you planning for more preventive care like a health assessment or dental check? The Elderly Health Care Voucher Scheme (the Scheme) will be of use to you.

The Scheme has been implemented since 1 January 2009 to provide subsidy for elders to receive private primary healthcare services that best suit their needs. Under the Scheme, elderly people aged 70 or above holding a valid Hong Kong Identity Card are eligible to receive health care vouchers each year to pay the healthcare services provided by the following private healthcare professionals who have enrolled in the Scheme: medical practitioners, Chinese medicine practitioners, dentists, occupational therapists, physiotherapists, medical laboratory technologists, radiographers, nurses, chiropractors and optometrists. In addition to preventive healthcare services, the elderly can also use vouchers for curative and rehabilitative services.

Starting from 2014, the annual voucher amount per elder has been increased to \$2,000. Unspent vouchers can be accumulated for use in subsequent years, subject to a financial ceiling of \$4,000.

The Scheme is designed to offer greatest convenience for the participating elderly. Vouchers are issued and used through an electronic system called the eHealth System. The elderly does not need to register, collect or carry vouchers. When using vouchers, they only need to visit the healthcare service providers participating in the Scheme with the below Scheme logo displayed at their clinics or healthcare centres for easy identification, show their Hong Kong Identity Card and sign a consent form for use of vouchers.



To know more about the Elderly Health Care Voucher Scheme, please visit the Scheme's website at <http://www.hcv.gov.hk> or call the enquiry hotline at 2838 2311 for more information.

Non-Communicable Diseases (NCD) WATCH is dedicated to promote public's awareness of and disseminate health information about non-communicable diseases and related issues, and the importance of their prevention and control. It is also an indication of our commitments in responsive risk communication and to address the growing non-communicable disease threats to the health of our community. The Editorial Board welcomes your views and comments. Please send all comments and/or questions to so_dp3@dh.gov.hk.

Editor-in-Chief

Dr Regina CHING

Members

Dr Thomas CHUNG	Dr Ruby LEE
Dr Cecilia FAN	Mr YH LEE
Dr Anne FUNG	Dr Eddy NG
Ms Janice HO	Dr Lilian WAN
Dr Rita HO	Dr Monica WONG
Dr Winnie LAU	Dr Priscilla WONG