Non-Communicable Diseases Watch

July 2017

衞生防護中心 Centre for Health Protection

衞生署 Department of Health

Asthma Awareness

Key Messages

※ Asthma is a common chronic lower respiratory disease. The strongest risk factors and triggers of asthma include tobacco smoke, indoor or outdoor allergens, air pollution, and chemical irritants in the workplace.

※ In Hong Kong, a territory-wide household survey in 2014 reported that about 68 000 persons (or 1.0 % of total population) had asthma as told by practitioners of Western medicine.

※ Asthma is treatable and its symptoms can be controlled. Good management generally involves identifying and avoiding asthma triggers, tracking the symptoms and lung function, taking asthma control medications as prescribed, and working in partnership with family doctor and other healthcare professionals to monitor disease progress and adjust treatment regime accordingly. Besides, taking the 'wellness approach' can help maintain overall health and lessen the possibility of asthma attacks.

※ Parents and carers of asthmatic children should be mindful of the things that can trigger asthma, know the signs of worsening asthma, make the home environment 'asthma-friendly', learn and teach children how to use asthma control medications correctly. Also, make sure the school knows about the children's illness.

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Asthma Awareness

Asthma is a common chronic lower respiratory disease, characterised by recurrent attacks of breathlessness and wheezing, chest tightness and coughing, particularly at night and in the early morning. According to World Health Organization (WHO) estimates, as many as 235 million people worldwide have asthma. In 2015, the disease accounted for about 383 000 deaths globally. While asthma is the most common non-communicable disease among children, most asthma-related deaths occur in older adults.[1]

Major Risk Factors and Triggers of Asthma

The cause of asthma is still not fully understood. There are however a number of recognised risk factors and triggers of asthma.[2] While anyone can develop asthma at any age, people with a family history of asthma or having another allergic condition (such as atopic dermatitis or allergic rhinitis) are more likely to develop the disease. It is well-documented that active or passive smoking exacerbates asthma. While maternal smoking during pregnancy increases the asthma risk for the child,[3] smoking during childhood is an important risk factor for asthma in adolescence.[4] In adults, the risk of developing asthma is significantly higher among current smokers and ex-smokers compared with those who have never smoked.[5] Studies also show a modest association between asthma and adiposity. Compared with normal weight children, overweight and obese children would have a respective 35% and 50% increased risk of doctor-diagnosed asthma.[6] Overweight or obese adults as a whole would also be more likely to develop asthma than normal weight adults.[7] Moreover, common environmental triggers are indoor or outdoor allergens (such as house dust mites in bedding, carpets and stuffed furniture, pet dander, pollens, moulds and other fungi), air pollution (such as tobacco smoke, exhaust gas from cars) and chemical irritants in the workplace. Other triggers can also include certain foods (such as shellfish) and additives, respiratory tract infections (such as influenza and common cold), cold air, extreme emotional arousal (such as anger, anxiety and fear), strenuous physical activities and certain medications (such as aspirin, non-steroid anti-inflammatory drugs and beta-blockers).[1, 8] Of note, a single trigger can set off an asthma attack in some people. For others, several triggers must be present at the same time. Thus people with asthma must learn the factors which may trigger their episodes, and try to minimise their exposure to them.

Local Situation

In 2014, a territory-wide household survey reported that about 68 000 persons (or 1.0 % of total population) had asthma as told by practitioners of Western medicine (Table 1).[9] However, it is noteworthy that earlier studies observed a much higher prevalence of ever asthma among children aged 6-7 (7.9%, based on parental reported symptoms) or adolescents aged 13-14 (10.1%, based on self-reported symtpoms).[10]

Severe attacks of asthma can be life-threatening that usually require emergency treatment and hospital care. In 2015, there were over 7 700 episodes of inpatient discharges and deaths in public and private hospitals attributed to asthmatic attack, of which 30.2% occurred among people aged 24 and below.[11] Of 113 registered deaths attributed to asthma in 2016, people aged 65 and above accounted for 69.0%.[12]

Table 1: Disease burden of asthma in Hong Kong

Age group	Had asthma as told by practitioners of Western medicine, 2014		Episodes of inpatient discharges and deaths in public and private hospitals, 2015		Registered deaths, 2016#	
	Number of persons	Rate*	Number of episodes	Rate**	Number of deaths	Rate**
24 and below	16 400	1.0	2 340	142.9	2	0.1
25-44	16 100	0.8	1 030	46.2	11	0.5
45-64	17 100	0.8	1 586	68.7	22	0.9
65 and above	18 500	1.8	2 788	250.1	78	6.7
Total	68 000	1.0	7 744	106.2	113	1.5

Notes: #Provisional data; *As a percentage of population in the respective age group; **Per 100 000 population of the respective age group.

Sources: Census and Statistics Department, Hospital Authority and Department of Health.

Prevention and Control of Asthma

While asthma has no cure yet, there is evidence that breastfeeding in early life is protective for childhood asthma.[13, 14] Besides, the disease is treatable and its symptoms can be controlled. For people with asthma, the aim of asthma management is to achieve a normal symptom-free life, optimise lung function, and reduce the risk of progressive lung damage. While treatment for asthma varies from person to person, good management generally involves identifying and avoiding asthma triggers, tracking the symptoms and lung function, taking asthma control medications as prescribed, and working in partnership with family doctor and other healthcare professionals to monitor disease progress and adjust treatment regime accordingly. Besides, taking the 'wellness approach' can help maintain overall health and lessen the possibility of asthma attacks. This includes no smoking, eating a balanced diet (with sufficient amounts of fresh fruit and vegetables), maintaining an adequate level of physical activity (Box 1), maintaining an optimal body weight, getting enough sleep and rest, managing stress and being cheerful, and getting appropriate vaccinations (such as vaccination against influenza).[15]

Box 1: Exercise and Asthma[16]

Exercise is possible for asthmatics. The keys are choosing the right exercises as well as the best times and places to do them.

For asthmatics, below are some tips for exercising:

- ✓ Check with family doctor that their asthma is well-controlled, or get a customised exercise prescription;
- ✓ Consult family doctor about taking asthma medication prior to exercise;
- ✓ Choose suitable type(s) of exercise. Use a stepwise approach and start slowly. Know the body's limit and do not overdo it. Take frequent breaks and allow adequate recovery time between sessions;
- ✓ Warm up gradually before exercise, and cool down after exercise;
- ✓ Always have the reliever inhaler at hand during exercise as prescribed;
- ✓ Avoid exercising outdoors when weather is cold or level of ambient air pollution is high. Pay heed to weather warnings and air quality health index issued by the Hong Kong Observatory;
- ✓ Exercise with family, friends or other people. Make sure the people exercising with know that you have asthma;
- ✓ Do not perform exercise during an asthmatic attack;
- ✓ If symptoms occur during exercise, stop, take the reliever inhaler as prescribed and restart only if feel better; and
- ✓ If symptoms worsen, seek medical care at once.

For parents and carers of asthmatic children, working closely with family doctor and other health-care professionals is of vital importance in managing asthma. They should be mindful of the things that can trigger asthma, know the signs of worsening asthma (e.g. an increased need to use rescue inhaler or nebulizer medication), make the home environment 'asthma-friendly' (such as keeping it smoke-free and well-ventilated, cutting down on the amount of dust), learn and teach children how to use asthma control medications correctly. Talk to the family doctor and obtain full information on the potential risks and benefits of vaccinating the asthmatic children. To prevent exacerbations in children with repeated wheezing episodes and effectively control asthma, doctors may prescribe inhaled cortico-steroids. Short courses of oral corticosteroids may be prescribed to treat acute asthma attacks. A small number of people with severe asthma may be prescribed longer courses of oral corticosteroids at higher doses. Same as taking any medicine, use of steroids may have certain well known adverse effects. Doctors however will strike a balance between the potential risks and the potential benefits of steroids in deciding the most suitable treatment for patients with asthma. Thus, do not stop taking or adjust the prescribed dosage without discussing the issue with the doctor. In fact, children with asthma, on steroids or not, should have their growth monitored closely. Avoid over-protection. Focus attention on the things that children can do with adequate support and encouragement. Also, make sure the school knows about the children's illness and any relevant advice from the doctor (e.g. exercise advice).[17]

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The Leisure and Cultural Services Department (LCSD) will hold the '**Sport For All Day 2017**' on 6 August 2017 to encourage people of all ages and those with disabilities to maintain a healthy lifestyle by participating in various sports activities and forming the habit of exercising at least half an hour a day. A celebration event for the 20th anniversary of the establishment of the Hong Kong Special Administrative Region, this year's 'Sport For All Day' has dance as its theme to invite the general public to participate in sports activities and share the joy of our return to the Motherland. On the day, a series of free recreation and sports programmes will be offered at designated LCSD venues across the 18 districts, while most of the LCSD's recreation and sports facilities will be open for free use by the public. To know more about the 'Sport for All Day 2017', please visit http://www.lcsd.gov.hk/en/sfad/2017/index.html.

Of note, sport should make no friends with any alcoholic drink. To echo with the Sport For All Day, an active, alcohol-free lifestyle will be promoted under the theme '**Stay Sober, Sport Better**' by the Department of Health (DH) from late June to early September. The DH aims to inform the public of how alcohol could affect their everyday leisure, such as sport by increasing related health promotion and publicity events. For more information about sport and alcohol, please visit https://www.change4health.gov.hk/en/alcohol_aware/facts/sports_and_alcohol/index.html.

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.