



WEIGHT MANAGEMENT Lifestyle

INTRODUCTION

Dr Darren Leong
Staff Registrar

In this edition of our weight management newsletter, Dr Lim Baoying, one of our CSMC doctors, talks on the haze and health; our trainer Jonathan gives us some tips on exercising indoors and Yan Yin, our dietitian gives us useful advice on what we can eat while enjoying the year-end festivities.

HAZE & HEALTH

Dr Lim Baoying

Hopefully by the time this article is published, we are not under the horrid cloud of haze that plagued this region for the past few months. Haze had been a problem for the people in Southeast Asia for periodically for weeks to months once every few years since 1997 and in that year, an estimated 100 million people were exposed to acute health risks.

This article serves to remind us of the more profound health risks that air pollution cause than the obvious discomfort and inconvenience that the haze had created for all of us. It is not just about the itchy eyes, noses and throats, frequent sneezing and headaches.

PM are particles found in the air, including dust, dirt, soot, smoke, and liquid droplets. PM_{2.5} is the smallest particle and is believed to be the more dangerous pollutant as compared to the larger particulate matter, PM₁₀, as it can travel further and get lodged in your small blood vessels and deep in the lung tissues.

Drawing some reference from WHO's review in 2013*, there is evidence that air pollution could contribute to the development of diseases such as hypertension, diabetes mellitus, atherosclerosis, obesity and cancers. So who said bad air doesn't make you fat? That's a bad pun intentionally anyway.

So protect yourself with minimizing strenuous activities outdoor when the PSI and PM_{2.5} indices are high, hydrate well, use air filtration systems when indoors (particulate matters penetrate indoors as well, and air conditioning does not get rid of them well.), and wear your N95 if you have to be outdoors for prolonged periods when the haze is heavy.

*Review of evidence on health aspects of air pollution (REVIHAAP) project

Scary fact #1:

The World Health Organization (WHO) in 2012 estimated that 1 in 8 of total global deaths (~7 million/ year) could be attributed to air pollution.



Scary fact #2:

The European Society of Cardiology (ESC) Congress News in London on 31st Aug 2015 ranked air pollution ninth as a modifiable disease risk factor for cardiovascular disease above other commonly recognized factors, such as low physical activity, a high-sodium diet, high cholesterol, and drug use. And the principal culprit is the fine nano-particles known as particulate matter (PM) $\leq 2.5\mu\text{m}$ in diameter (PM_{2.5}) which occurs in diesel and petrol exhaust.



Sit to stand (aim for 2 sets of 15 repetitions)

Sit up straight on a chair with knees and feet hip's width apart. Your shin should be perpendicular to the ground and knees should be above the ankles. Attempt to stand from a seated position without allowing your knees to deviate from its starting position (forward, inward or outward). Complete the movement by standing up straight and tall. To return to the chair, push your bum backwards before proceeding to sit.

Make it simpler: Use a higher chair or place a pillow on the chair so that your starting position isn't too low.

Safety considerations: Your entire foot should always be in contact with the floor as you stand up and as you sit down. Chair should be placed against a wall so that it cannot move away. Ensure that you have no sharp knee pains throughout the exercise. If you do experience sharp pains even with an easier form of the exercise, please stop and see a doctor.



Chair (inclined) planks (aim for 2 sets of 5 repetitions; hold for minimum 15 seconds)

Place forearms on a chair and adopt a straight and rigid body (shoulders, hips, knees and ankles ought to form a straight line). Maintain this position for as long as possible. Keep a steady breathing rhythm as you do the plank.

Make it simpler: Perform the plank with the palms rather than the forearms (similar to a push-up position). If a chair is too low, attempt the plank with a table instead.

Safety considerations: Never allow your lower back to sag downwards toward the floor. Always keep your abdominal area nice and tight so that you can maintain good posture and prevent lower back pain. Ensure that you have no wrist, shoulder or back pains throughout the exercise. If you do, please stop and see a doctor.



EXERCISING

Jonathan Jacob
Exercise Physiologist

Shayne Hu
Exercise Physiologist

INDOORS

Chair (inclined) push-ups (aim for 2 sets of 10 repetitions)

Place palms on a chair and adopt a straight and rigid body (shoulders, hips, knees and ankles ought to form a straight line). Slowly lower your chest till it is just above the chair. At this point, your body should still be forming a straight line without any dipping of the lower back or bum sticking up in the air. Complete the exercise by pushing your chest away till the elbows are straightened again.

Make it simpler: Attempt push-ups while palms are on a table. Starting higher makes the push-up simpler.

Safety considerations: Never allow your lower back to sag downwards toward the floor. Always keep your abdominal area nice and tight so that you can maintain good posture and prevent lower back pain. Ensure that you have no wrist or back pains throughout the exercise. If you do, please stop and see a doctor.



Marching on the spot (aim to do this 5 times; march for 60 seconds non-stop)

Start with right hand at chest level and left knee at hip level (this means that you are balancing with your right leg). Coordinate your limbs such that as your right hand and left leg moves back, your left hand comes forward and up to chest level and right knee is raised to hip level (balancing on left leg now). Continue marching to the beat of Christmas songs.

Make it simpler: Keep your arms by your side so that you just move your legs.

Safety considerations: Have something nearby which you can lean on or hold to prevent falling.



FOODS TO FIGHT THE HAZE

Phoi Yan Yin
Dietitian

Many think that the haze merely irritates the lining of our nasal passage and throat, causing mucus build-up and sneezing, increasing incidences of allergic rhinitis. However, the tiny pollutant particles go deeper than that – they pass into our bloodstream where they increase free radical production in our body, cause cellular inflammation and increase the risk of chronic diseases such as asthma, cardiovascular disease and cancer. This article will discuss antioxidants, which help to “mop” up free radicals and reduce their damaging effects in our bodies, and immune-strengthening vitamins, which helps to combat allergic rhinitis. With this year’s haze being one of the worst in recent years, take a further step beyond simply donning the N95 mask, and try out our useful dietary tips to gear your body up against the haze!

STAY HYDRATED

Adequate fluid consumption aids the kidney in cleansing our blood of waste products that build up within our body. The Health Promotion Board recommends 8 glasses of water/day, which should come from plain water or unsweetened beverages such as iced or sparkling water, plain tea, or our “Healthy, flavoured water recipe”. During this period, also avoid excessive intake of coffee and alcohol, which can be dehydrating.

VITAMIN A

Vitamin A is involved in immune function and maintaining clear vision. Our body produces its active form, retinol and retinoic acid, from carotenoids and beta-carotene, which are found mainly in orange coloured foods such as sweet potato, carrot, pumpkin, cantaloupe, red peppers, mangoes, apricots and dark green vegetables such as spinach and broccoli. Beta-carotene also has anti-oxidative functions, which acts as a double whammy against haze-induced inflammation.

VITAMIN B6

Vitamin B6 is involved in more than 100 biochemical processes within our body, and plays a crucial role in immune function. It is easily obtained from chickpeas, tuna, salmon, poultry, potatoes, and fortified cereals.

VITAMIN C

Vitamin C is an important antioxidant that reduces inflammation and strengthens our immune system. It also produces collagen and connective tissue, hence adequate vitamin C intake coupled with sufficient fluid intake will keep our skin supple during this drying period. Citrus fruits, green, leafy vegetables (e.g. spinach, kale and kai lan), bell peppers, and Brussels sprouts are rich in Vitamin C.

VITAMIN E

Like Vitamin C, Vitamin E is an antioxidant that reduces inflammation in our body. It also aids in improving our immune function to prevent us from falling sick. Vitamin E may be obtained from wheat germ oil, sunflower seeds, almonds, and sunflower oil.

You can see that all of the foods above belong to different food groups. Therefore, a well-balanced diet of a variety of grains, fruits, vegetables, and protein will fuel your immune system optimally, without you even thinking about it! So when the next haze hits, instead of reaching for the phone to order a fast food delivery, ensure your fridge is adequately stocked with these healthy foods beforehand, to survive the smog outside!

References

1. Young, B. (2014). The kidneys and how they work. [Online] Available at: www.niddk.nih.gov/health-information/health-topics/Anatomy/kidneys-how-they-work/Pages/anatomy.aspx
2. Health Promotion Board. (2014). Dietary guidelines for older adults. [Online] Available at: <http://www.hpb.gov.sg/HOPPortal/health-article/HPB042201>
3. WHO. (2015). Ambient (outdoor) air quality and health. [Online] Available at: www.who.int/mediacentre/factsheets/fs313/en/ [Assessed 14 Nov 2015].
4. Ehrlich. (2013). Allergic Rhinitis. [Online] Available at: <https://umm.edu/health/medical/altmed/conditions/allergic-rhinitis>
5. National Institutes of Health. (n.d.). Dietary Supplements Fact Sheets. [Online] Available at: <https://ods.od.nih.gov/factsheets/>



EATING *Smart* THIS CHRISTMAS

Phoi Yan Yin
Dietitian

Christmas is a season of festivity and joy where friends and family gather for a yearly affair of re-union and feasting. Beholding the huge spread at each Christmas meal, you see the crisp, golden turkey, the fluffy panettone, the beautifully candied yams and the glorious Christmas pudding. However, this sumptuous spread may also be a cause of much trepidation for you, or friends and family members, who are trying to shed some pounds, or controlling the diet to manage medical conditions. This article contains some handy tips so you can enjoy this joyous Christmas period while making your health, and that of your loved ones, a priority.

PLAN AHEAD

A study of 1165 adults in America showed that planning meals in advance is effective in achieving weight loss. Have a light breakfast and lunch on the day of your Christmas dinner, to allow for a slightly heavier dinner. If not, pre-empt and decide before arriving at dinner, what and how much you would have, to prevent succumbing to temptations on the spot.

QUARTER YOUR PLATE

It is still possible to have a well-balanced diet during Christmas if you follow the Health Promotion Board's "My Healthy plate" concept by filling each quadrant of your plate with carbohydrates, fruits, vegetables, and proteins respectively. If you are spoilt for choice, you may pick small portions of different foods to make up a quadrant, such as bits of roast turkey, ham, and stew to make up your "protein quarter". This allows for variety, without excess. To go one step further, pile on more vegetables: its fibre will slow down your digestion so you feel full faster, and for longer.

PORTION PROPORTIONS

Did you know that using a smaller plate results in you eating less as compared to a bigger plate? With the same volume of

food, a small plate will be full, creating the illusion of abundance, whereas a big plate will look incomplete, and thus unsatisfying. Furthermore, a small plate is more restrictive if you go for seconds!

KEEP THE CALORIES LOW

Not all foods are created equal. Fats and oils provide 9 calories (kcal)/gram, followed by alcohol (7kcal/gram), and carbohydrates and protein (4kcal/gram each). Therefore, for the same volume, a food high in fat would pack much more calories - they are known as energy-dense foods; examples include animal skin, gravy, chips and pastries, which should be avoided.

Similarly, when preparing food for guests, use low fat cooking methods such as stewing, braising, roasting or grilling, and skim off oil atop stews.

KNOW YOUR DRINKS

Empty calories are food or drinks that provide us with calories while short-changing us on nutrients. Examples are sweetened beverages such as fruit juices, syrup-flavoured drinks and alcoholic beverages. Choose iced or sparkling water, or our "Healthy, flavoured water recipe" as a low-calorie option. Drinking more fluids also help to increase satiety and prevent you from going for seconds or snacks.



HEALTHY, FLAVOURED WATER RECIPE (MAKES 1 JUG)

- 1 jug of iced water /sparkling water/diet Sprite
- 2-3 sprigs/slices of vegetables: basil/mint/celery/cucumber/carrot
- 3-4 pieces/slices of fruits: strawberry/watermelon/orange/lemon/lime/lychee

1. Mix all of the above in a large jug
2. Stir and slightly crush fruit and vegetable slices for greater release of flavours

- * You may experiment with different flavour combinations, or come up with your own!
- strawberry + mint
 - celery + cucumber + carrot + basil
 - orange + lemon
 - lychee + watermelon + lime

References:

1. American Journal of Preventive Medicine (2011) Practices associated with weight loss versus weight-loss maintenance, 41 (2) pp. 159-166.
2. Health Promotion Board (2015). Health Promotion Board. [Online] Available at: www.hpb.gov.sg/HOPPortal/health-article/HPB064355 [Assessed 14 Nov 2015].
3. Wansink, B (2004) Environmental factors that increase the food intake and consumption volume of unknowing consumers. Annual Review of Nutrition, 24, pp. 455-479.