

Non-Communicable Diseases Watch

JULY
2026



Sleep Well · Weigh Better

Key Messages

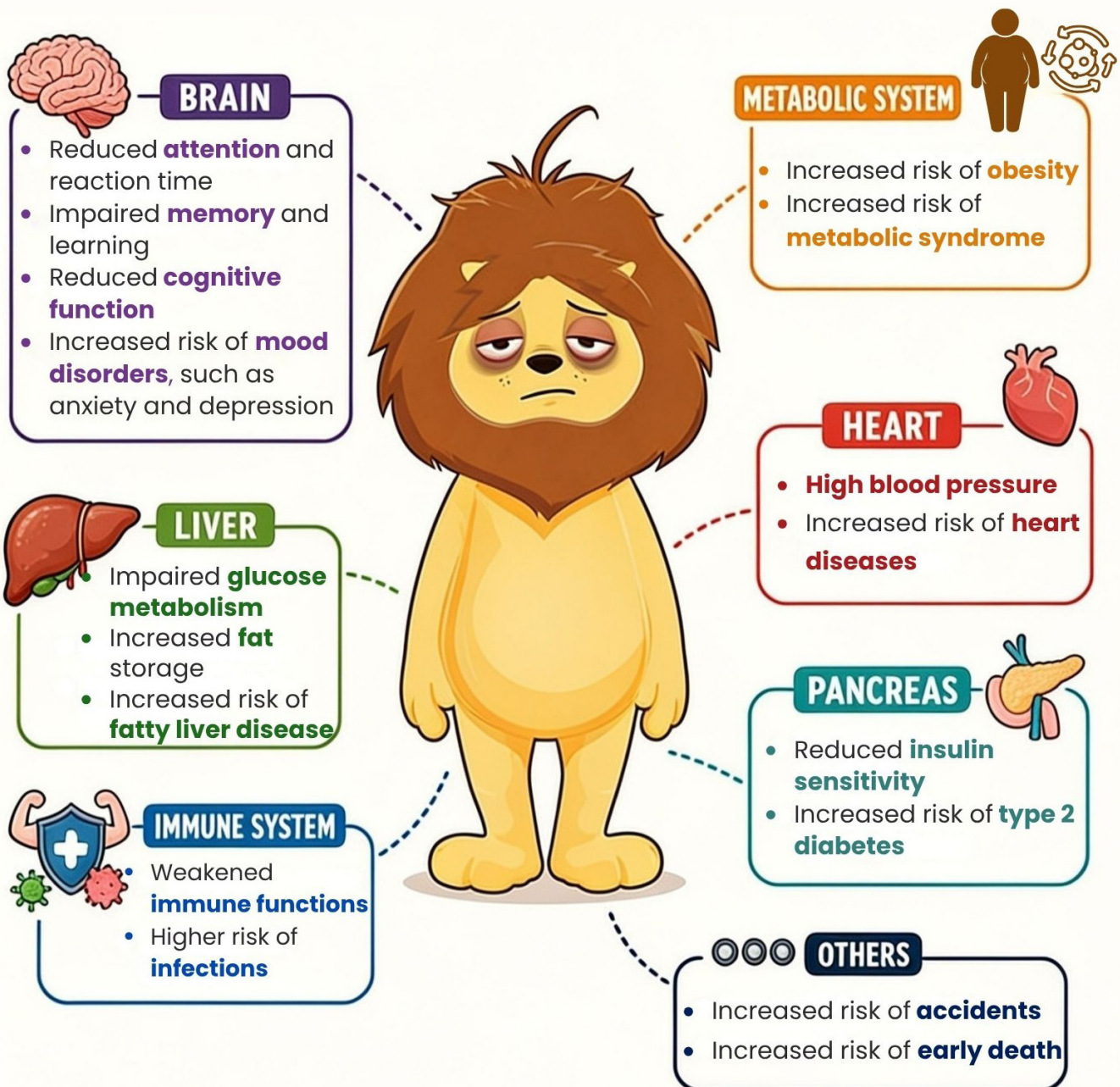
- Sleep deprivation not only affects mental health, but also increases the risk of obesity in children, adolescents and adults.
- Surveys showed that about one-fifth of local preschoolers slept less than 10 hours per day; close to 60% of primary school students averaged fewer than 9 hours in bed daily; over 70% of secondary students slept less than 8 hours per day. Among adults, more than one third reported sleeping fewer than 7 hours per day, and over one-tenth experienced sleep disturbances at least three times per week.
- To promote physical and mental well being and support effective weight management, maintaining consistent, quality sleep is most essential—sticking to a sleep schedule, exercising during the day, avoiding caffeine and other evening stimulants, skipping alcohol, limiting screen use before bed, practising relaxation, and creating a restful environment. If sleep problems persist, seek professional help.

Sleep is a Cornerstone of Good Health

Good, quality sleep relieves fatigue, restores vitality, sharpens the mind, and supports emotional well-being¹. When deprived of sleep, many organs and systems in the body suffer. Substantial evidence indicates that chronic insufficient quantity, poor quality of sleep or irregular sleep timing can have serious health consequences and reduce life expectancy¹⁻⁴.

While physical activity and healthy eating are central to effective weight management, healthy sleep is equally important. This article delineates recommended sleep durations across age groups, investigates the role of sleep in weight management and presents epidemiological evidence linking sleep deprivation to obesity risk. It also highlights common sleep problems within the local population, and offers practical suggestions to improve sleep hygiene.

Immediate and Long-Term Health Consequences of Sleep Deprivation



Sleep Needs Change Across Life Stages

Everyone's sleep needs vary by age, activity and health. Healthy sleep depends not only on the hours asleep but also on the quality, consistency, and the absence of disorders such as insomnia or sleep apnea⁵. Generally, feeling refreshed upon waking suggests adequate rest.

Children need greater amounts of sleep than adults^{1, 5}. Infants and young children especially need longer, high

quality sleep to foster brain development, growth, and immunity. As they grow, children require adequate rest to support learning and emotional regulation, while adolescents need enough sleep to meet hormonal, cognitive, and emotional demands. Adults need fewer hours of sleep than children, but high quality sleep remains essential for metabolism, cognitive performance, and emotional well-being.

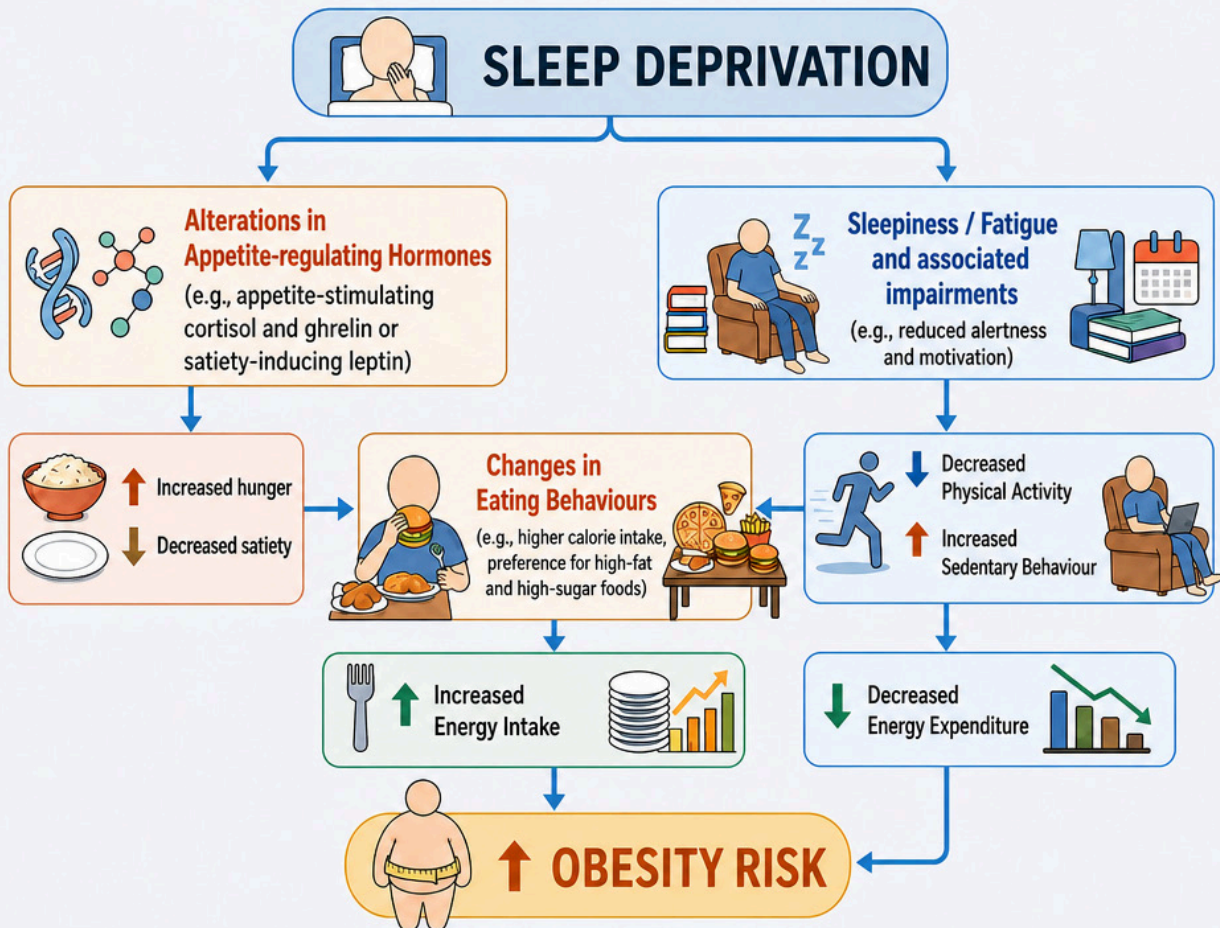


Sleep Matters for Weight Management

Sleep affects weight by regulating appetite, glucose metabolism, and energy balance. Lack of sleep disrupts appetite-regulating hormones, lowers insulin sensitivity, and increases fat storage^{6, 7}. Sleep deprivation also encourages unhealthy eating habits—like snacking and emotional eating (eating in response to emotions

rather than physical hunger) —and reduces motivation for physical activity⁶⁻⁸. Together, these factors contribute to weight gain and increase the risk of obesity. Paying attention to adequate sleep is thus an essential part of effective weight management.

Pathways Linking Sleep Deprivation to Increased Obesity Risk

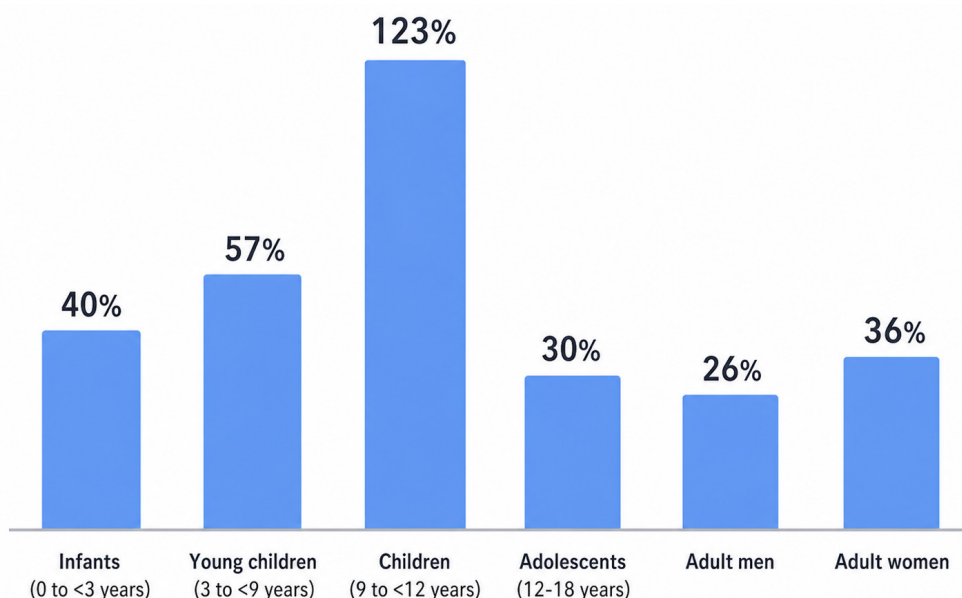


Too Little Sleep, Higher Obesity Risk

Epidemiological evidence consistently indicates that sleep deprivation is a risk factor for weight gain and obesity in children, adolescents and adults⁹⁻¹¹. Among Chinese children and adolescents aged 6–17 years, short sleep duration increased the risk of overweight or obesity by 47%¹². Common behavioural factors contributing to both poor sleep and obesity among children and adolescents included excessive and late-night screen exposure including video games; insufficient physical activity; and unhealthy dietary patterns, such as frequent snacking, increased consumption of sugar-sweetened beverages and fast food¹³.

Adults are often exposed to high occupational stress, fast-paced lifestyles and irregular schedules, all of which can lead to reduced sleep duration, poorer sleep quality and disrupted sleep patterns¹. As people age, natural physiological changes and medical conditions such as arthritis and chronic pain can interfere with sleep. Consequently, sleep disturbances are particularly common among older adults¹⁴. Studies showed that each 1 hour reduction in sleep among sleep-deprived adults was associated with an increase of 0.35 units (kg/m²) in body mass index (BMI)¹⁵. Furthermore, short sleep duration was associated with a higher risk of central obesity¹⁶, with Chinese adults sleeping ≤6 hours per night showing a 13% greater risk¹⁷.

Sleep Deprivation Increases the Risk of Obesity or Overweight^{10, 11}



Many People in Hong Kong Struggle with Sleep

Population Health Surveys conducted by the Department of Health (DH) found that 18.9% of persons aged 18 or above were dissatisfied with their sleep¹⁸; 36.4% slept fewer than 7 hours daily and 10.7% had sleep disturbances at least three times per week¹⁹. Among individuals aged 15 or above, research showed that those with insufficient physical activity, smoking and harmful alcohol use had a 27%, 36% and 111% higher risk of sleep disturbances, respectively²⁰.

Many local students commonly experience sleep deprivation and sleep disorders as well. Surveys showed that 58.7% of primary school students averaged fewer than 9 hours in bed daily²¹. Among secondary students, 70.5% slept less than 8 hours per day²¹, and 10.1% experienced insomnia symptoms at least three times per week²². Notably, students with optimal sleep (9.5 hours for primary, 8.5 for secondary) tended to perform better academically, highlighting the importance of achieving adequate sleep to support academic learning²¹. Parents should prioritise sleep as a key foundation for children's health and academic achievement.

Among Persons Aged 18 or Above

36.4 %
reported sleeping
less than 7 hours
per day



10.7 % reported sleep disturbances
(at least three times per week)



7.7 % intermittent awakening or
difficulty in maintaining
sleep during the night



6.9 % difficulty in falling asleep



6.1 % early morning awakening
and unable to sleep again

Among Secondary Students

70.5 %
averaged fewer
than 8 hours in
bed per day



10.1 % reported insomnia symptoms
(at least three times per week)



6.6 % difficulty in initiating sleep



3.3 % early morning awakening



3.0 % difficulty in
maintaining sleep

Likewise, a substantial proportion of young children did not achieve the recommended amount of sleep, with 41% of preschoolers aged 3–5 years sleeping less than 10 hours per day. Key factors influencing young children's sleep duration included parents' bedtime and sleep habits as well as children's exposure to electronic devices before bed²³. To promote healthy sleep habits in young children and reduce the risk of childhood obesity, parents should set an appropriate and structured family bedtime routine and limit screen use before bed.

Adequate, Quality Sleep Helps Tackle Obesity

Healthy sleep at each stage of life is the cornerstone of lifelong health. Many people think of weight management as a matter of diet and exercise, but sleep is just as important. Those who lack sleep on weekdays often try to catch up on weekends. While weekend catch-up sleep may help reduce obesity risk in adolescents²⁴ and working adults²⁵, it should not be considered as a substitute for regular, adequate sleep. Prolonged or irregular catch-up sleep on weekends may disrupt circadian rhythms, impair metabolic regulation, and increase the risk of cardiovascular disease²⁶.

Besides, research on primary school students found that weekend catch-up sleep does not lower the risk of childhood obesity; but weekend catch-up moderate- to vigorous-intensity physical activity does²⁷. To promote physical and mental well being and support effective weight management, maintaining consistent, quality sleep is essential. By making sleep a priority, we not only fight fatigue but also support effective weight management and enjoy better health.



Getting sufficient, quality sleep is essential for us and our children alike!

References

1. Interpretation of Core Information and Explanations on Sleep Health (18 March 2025). Beijing: National Health Commission the People's Republic of China. Accessed 1 May 2026: <https://www.nhc.gov.cn/guihuaxxs/c100133/202503/70d5836afe804a-858b899ee951a24a13.shtml>.
2. Itani O, Jike M, Watanabe N, et al. Short sleep duration and health outcomes: A systematic review, meta-analysis, and meta-regression. *Sleep Medicine* 2017;32:246-256.
3. Shah AS, Pant MR, Bommasamudram T, et al. Effects of sleep deprivation on physical and mental health outcomes: An umbrella review. *American Journal of Lifestyle Medicine* 2025;15598276251346752.
4. Omichi C, Koyama T, Kadotani H, et al. Irregular sleep and all-cause mortality: A large prospective cohort study. *Sleep Health* 2022;8(6):678-683.
5. Ramar K, Malhotra RK, Carden KA, et al. Sleep is essential to health: An American Academy of Sleep Medicine position statement. *Journal of Clinical Sleep Medicine* 2021;17(10):2115-2119.
6. Akhlaghi M, Kohanmoo A. Sleep deprivation in development of obesity, effects on appetite regulation, energy metabolism, and dietary choices. *Nutrition Research Reviews* 2025;38(1):4-24.
7. Knutson KL, Spiegel K, Penev P, et al. The metabolic consequences of sleep deprivation. *Sleep Medicine Review* 2007;11(3):163-178.
8. Rosenberg R, Breit MJ, Clark KC, et al. Examining the role of sleep in body weight regulation and implications for obesity treatment: A narrative review. *Obesity reviews : an official journal of the International Association for the Study of Obesity*. 2025:e70017.
9. Benfica MA, Ribeiro TC, Silva KSO, et al. Relationship between sleep duration and overweight/obesity: A comprehensive overview of meta-analyses. *Clinical Obesity* 2026;16(1):e70051.
10. Miller MA, Kruisbrink M, Wallace J, et al. Sleep duration and incidence of obesity in infants, children, and adolescents: A systematic review and meta-analysis of prospective studies. *Sleep* 2018;41(4): doi: 10.1093/sleep/zsy018.
11. Lange MG, Neophytou C, Cappuccio FP, et al. Sex differences in the association between short sleep duration and obesity: A systematic-review and meta-analysis. *Nutrition, Metabolism, and Cardiovascular Diseases* 2024;34(10):2227-2239.
12. Guo Y, Miller MA, Cappuccio FP. Short duration of sleep and incidence of overweight or obesity in Chinese children and adolescents: A systematic review and meta-analysis of prospective studies. *Nutrition, Metabolism, and Cardiovascular Diseases* 2021;31(2):363-371.
13. Gale EL, Cecil JE, Williams AJ. Shared determinants of poor sleep, obesity and adiposity in adolescents aged 8-18-years: A systematic review. *Journal of Sleep Research* 2025;34(6):e70029.
14. Miner B, Kryger MH. Sleep in the aging population. *Sleep Medicine Clinics* 2020;15(2):311-318.
15. Cooper CB, Neufeld EV, Dolezal BA, et al. Sleep deprivation and obesity in adults: A brief narrative review. *BMJ Open Sport & Exercise Medicine* 2018;4(1):e000392.
16. Kohanmoo A, Akhlaghi M, Sasani N, et al. Short sleep duration is associated with higher risk of central obesity in adults: A systematic review and meta-analysis of prospective cohort studies. *Obesity Science & Practice* 2024;10(3):e772.
17. Ning X, Lv J, Guo Y, et al. Association of sleep duration with weight gain and general and central obesity risk in Chinese adults: A Prospective study. *Obesity* 2020;28(2):468-474.
18. Population Health Survey 2020-22. Hong Kong SAR: Department of Health.
19. Population Health Survey 2014-15. Hong Kong SAR: Department of Health.
20. Bedford LE, Tang EHM, Dong W, et al. Who reports insufficient and disturbed sleep? Results from a representative population-based health survey in Hong Kong. *British Medical Journal Open* 2022;12(9):e058169.
21. Chan NY, Wu WJ, Chan JWY, et al. Sleep and academic performance among students in Hong Kong: Curvilinear relationship suggesting an optimal amount of sleep. *Sleep Medicine* 2023;106:97-105.
22. Chen CX, Zhang JH, Li SX, et al. Secular trends in sleep and circadian problems among adolescents in Hong Kong: From 2011-2012 to 2017-2019. *Sleep Medicine* 2024;117:62-70.
23. Lan QY, Chan KC, Au CT, et al. Secular trends of sleep-wake patterns in Hong Kong preschoolers. *Sleep Medicine* 2023;104:73-82.
24. Lee MR, Hwangbo Y, Kim JH, et al. The association between weekend catch-up sleep and the reduction of obesity and overweight risk in adolescents with insufficient weekday sleep. *Sleep & Breathing* 2025;29(2):184.
25. Jeong W, Song MJ, Shin JH, et al. Association between weekend catch-up sleep and obesity among working adults: A cross-sectional nationwide population-based study. *Life* 2025;15(10):1562.
26. Zhou Y, Xue F. Can weekend catch-up sleep repay the sleep debt? Balancing short-term relief with long-term risks. *Sleep & Breathing* 2025;29(6):335.
27. Huang WY, Wong SHS. Prospective associations between weekend catch-up sleep, physical activity, and childhood obesity. *Childhood Obesity* 2019;15(1):40-47.

Weight Management Starts with Weighing — the Department of Health Leads the Way



Motivated by our Director of Health, Dr. Ronald Lam, who actively supports weight management, Lazy Lion must also take action. Across different offices of the Department of Health (DH), Lazy Lion has placed weighing scales, fostering a culture of health in the workplace and encouraging colleagues to adopt the good habit of 'regular weighing and self monitoring.' The core of the Weight Management Action Plan includes 'Raise Awareness,' 'Positive Changes' and 'Integrate into Daily Life.' Starting from within the DH, it is hoped that all sectors across Hong Kong will be inspired to join in. From today, let us step onto the weighing scale and build an energetic Hong Kong.

On spotting a weighing scale in public places such as sports centres and healthcare venues, the public are encouraged to step on and check their weight.

Health is not guesswork—science tells the truth. For active weight loss, daily or weekly weighing offers quick feedback and reinforces healthy habits; for maintenance, weekly or monthly weighing is usually enough to track progress and avoid unwanted gain. For more information on weight management, please visit the thematic webpage of the DH at www.change4health.gov.hk/en/weight_management/index.html.



全民運動 SPORT FOR ALL DAY

8 AUG 2026
2月 26年
星期日
SUN



免費康體活動
Free Recreation and Sports Programmes

免費使用康樂設施
Free Use of Leisure Facilities

The Leisure and Cultural Services Department (LCSD) will hold Sport For All Day 2026 on 2 August 2026 (Sunday). This year, the slogan remains "Stay Active, Healthy and Happy!" to encourage people of all ages and abilities to engage in regular sports and physical activities, and promote the benefits of exercise to physical and mental health. To mark the 20th Asian Games to be held this September, this year's event is themed "Asian Games in Motion, City in Action", bringing the community together to celebrate this major sporting event and cheer for the Hong Kong athletes competing at the Games. On 1 and 2 August, a wide range of LCSD leisure facilities will be open for free public use. On the event day (2 August), a series of free sports and recreation programmes will also be offered at designated LCSD venues across the 18 districts. For details of the Sport For All Day 2026, please visit www.lcsd.gov.hk/en/sfad.

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