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- Honorary Consultant in Respiratory Medicine (HKSH)□
- Honorary Clinical Assistant Professor (HKU)
- Clinical Associate Professor (Honorary), Department of Medicine and Therapeutics (CUHK)
- Specialist in Respiratory Medicine

Dr. Lam Chung Mei, Jamie (BSc (Med))
Specialist in Respiratory Medicine

SLEEP & CARDIOMETABOLIC DISEASE

Lack of sleep can have serious long-term effects on health. It leads to fatigue, poor concentration, mood swings, weight gain, and elevated blood pressure and blood sugar levels, contributing to what is known as Metabolic Syndrome. In recent years, this condition has become increasingly recognized, with many people experiencing high blood pressure, obesity, and other related diseases. Questions such as “Why am I so young yet have high blood pressure?” or “Why is my immune system weaker?” are becoming more common, as are concerns about endocrine disorders.

When sleep is insufficient, whether it’s due to busy schedules or simply sleeping only 4-5 hours a day, it negatively impacts the pituitary and adrenal glands in the brain. This disruption affects various organs in the body, including the immune system, liver, fat storage, and the blood vessels' lining and elasticity. Over time, these issues can lead to hyperglycemia, metabolic syndrome, obesity, and cardiovascular diseases.

The Importance of Good Sleep for Health
Good sleep helps maintain physical health and mental well-being, supports the body’s recovery, consolidates memory, clears waste, and maintains normal metabolism.

Sleep Stages
Sleep is divided into light and deep stages, including Non-Rapid Eye Movement (NREM) and Rapid Eye Movement (REM) sleep. These two stages are crucial for body repair and the consolidation of memories in the brain.

Sleep Recommendations
- Elementary school students: 10-13 hours
- Middle school students: 8-10 hours
- Adults: Over 7 hours

Long-Term Effects of Sleep Deprivation
Chronic sleep deprivation can lead to fatigue, decreased attention, low mood, weight gain, high blood pressure, and unstable blood sugar. It can also lead to metabolic syndrome, reduced immunity, and hormonal imbalances. Research shows that lack of sleep affects pituitary and adrenal gland function, which can impact other vital organs.

Insomnia and Medications
- Some medications increase alertness and affect sleep quality.
- Sleeping pills can lead to addiction, increased dosage, and frequent use, so they should be taken under medical supervision.
  To improve sleep quality, establish a regular routine, reduce stimulant intake, manage stress, and regulate the biological clock. Avoid staying up late and ensure a proper day-night cycle.

Sleep Apnea and Snoring

Sleep apnea is a common sleep disorder, typically manifested by snoring and intermittent breathing pauses. Common symptoms include fatigue, headaches, poor concentration, and memory decline. If untreated, it may worsen.

Types of Sleep Apnea
- Obstructive sleep apnea: The most common, accounting for 70-80% of cases, usually caused by airway obstruction.
- Central and mixed sleep apnea also exist.
  In Hong Kong, a significant number of people are affected by sleep apnea, impacting overall health.

Health Risks of Sleep Apnea
Sleep apnea can trigger cardiovascular diseases, arrhythmia, high blood pressure, high cholesterol, diabetes, and stroke. It can also lead to daytime sleepiness, fatigue, poor memory, and poor concentration, which increases the risk of accidents.

Diagnosis of Sleep Apnea
Sleep studies can accurately diagnose sleep apnea by monitoring brain activity, breathing patterns, oxygen levels, muscle activity, and heart activity. New Bluetooth technology has made detection more convenient and widespread.

Severity of Sleep Apnea
- Mild: 5-15 breathing pauses per hour
- Moderate: 15-30 breathing pauses per hour
- Severe: More than 30 breathing pauses per hour

Tips for Better Sleep

Practice Good Sleep Hygiene
Good sleep hygiene, includes avoiding the use of blue light devices before bed, maintaining melatonin levels, creating a relaxing sleep environment, and ensuring that the bed is used only for sleeping.

Avoiding Screen Use Before Bed
Using phones, tablets, or computers before bed keeps the brain active, reducing melatonin production, which affects the ability to fall asleep.