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## THE DISRUPTION OF THE BIOLOGICAL CLOCK CAUSED BY STAYING UP LATE AT NIGHT

According to the World Health Organization statistics, among the longevity lifestyle habits that contribute to good sleep, exercise is only ranked at the 8th place. Dr. David C.P. Chen thinks this rating is entirely unexpected. Ranked at the 1st place is to be happy and joyful, and to smile often. Peace of mind is the best medicine to prevent disease. Hence, emotion does have a significant effect on health.

The three scientists who won the 2017 Nobel Prize in Physiology and Medicine-Jeffrey C. Hall, Michael Rosbash and Michael W. Young, have developed the "molecular mechanism that controls the circadian rhythms" which is of great concern to the public. Dr. David C.P. Chen commented that "the molecular mechanism that controls the circadian rhythm" which is commonly known as the "biological clock", is responsible for regulating essential functions of the body such as hormone levels, sleep, behaviour and so on. When to get sleepy, when to wake up, when the hormone levels rise, and when the change of the body temperature happens in a day....., they are all managed by the biological clock. Staying up late at night will damage the biological clock, causing disease to follow, and will cause the brain to begin devouring itself, allowing the essential genes that regulate the rhythm to fail, causing tumour growth.

He said to restore the life span of the cell, avoid staying up late, so as not to disrupt the biological clock. It is ideal to go to bed before 11 pm, otherwise, the brain cells will be devoured. If you can't sleep during the night, new cells cannot be replenished. One million cells die during the day, and only half a million can be replaced in one night. The more the situation prolonged, the more harm it is going to cause the body.

Sleep at night can generally be divides into 5 to 6 recurrent cycles. Each sleep cycle is about 60 to 90 minutes. The sleep cycle consists of the non-rapid eye movement cycle and the rapid eye movement cycle. The non-rapid eye movement cycle is further divided into shallow sleep stage, light sleep stage, mid-sleep stage and deep sleep stage. 'Deep Sleep" in the mid-sleep stage and deep sleep stage has a significant effect on relieving fatigue.

He does not recommend the use of sleeping pills, in which the dosage needs to be increased after a long period of consumption, and may also lead to depression. Besides that, the electric potential medical mattress which can repair cell metabolism and enhance the body's immunity is also an excellent choice. He concluded that happy days are: smile and laughter in the day and restful sleep in the night.