

词汇: *sleep* 睡眠

After a long winter, the arrival of spring can be a welcome **relief**. The days grow longer, the temperatures increase, and the natural world around us **comes to life** again. But when the seasons change, our **sleep patterns** change with them.

New research suggests that humans may need more sleep in the winter than they do in the summer. A German study found that participants slept an hour longer in December than in June, regardless of their **exposure to** light. "Our study shows that even while living in an urban environment, with just **artificial light**, humans [experience] **seasonal sleep**," says Dieter Kunz, one of the study's lead authors and head of the clinic of sleep and **chronomedicine** at St Hedwig Hospital in Berlin, Germany. The study found that the participants experienced seasonal **variations** in their **rapid eye movement sleep**, also known as REM sleep, as well as in their **slow wave sleep**, also known as **deep sleep**. REM sleep, which is when we dream and our heart rate increases, was 30 minutes longer in the winter than during the summer. Slow wave sleep, which is when our muscles are **repaired**, our **immune system** is strengthened and our memory is **consolidated**, was 30 minutes shorter in September than in February.

But why do our bodies and brains need more **rest** at certain times of year? The answer could lie in our evolutionary past. That's according to Neil Stanley, who's a sleep expert at Sleep Station, an online provider of **cognitive behavioural therapy** for **insomnia**. "We have **evolved to dark-light cycles**, so when we wake up on a winter's morning and it's dark, our brain is going 'I can't do anything... there's no point **leaping out of bed**.'" Particularly in summer, temperature also plays a role – our bodies require a skin temperature of between 31-35 degrees centigrade [Celsius] for a good night's sleep, but this can be harder to control during the warmer months.

Of course, nowadays, it is our school and work times – not the Sun – that determine when we get up in the morning. But, as autumn approaches, it seems we now have a good excuse for an **early night**.

词汇表

relief	(不快后的) 解脱
come to life	复苏, 恢复生机
sleep pattern	睡眠模式
exposure to	接触
artificial light	人造光
seasonal sleep	季节性睡眠
chronomedicine	时间医学
variation	变化
rapid eye movement sleep	快速眼动睡眠
slow wave sleep	慢波睡眠
deep sleep	深度睡眠
repair	修复
immune system	免疫系统
consolidate	加强, 加固
rest	休息
cognitive behavioural therapy	认知行为疗法
insomnia	失眠
evolve	逐渐进化
dark-light cycle	(昼夜) 光暗循环
leap out of bed	跳下床, 起床
early night	早睡

测验与练习

1. 阅读课文并回答问题。

1. Is seasonal sleep affected by light?
2. True or False? *Participants experienced seasonal variations only in REM sleep.*
3. In total, how much longer do we need to sleep in winter compared to summer, according to the study?
4. How does our past influence our sleep patterns?
5. Why can it be harder to sleep in the summer months?

2. 选择意思恰当的单词或词组来完成下列句子。

1. I think photographs look better when taken in natural light, not _____.

relief	sleep pattern	exposure to	artificial light
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2. We are studying the global temperature _____ over the past 100 years.

artificial lights	variations	dark-light cycles	early nights
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3. It took a long time to _____ the damage after the flood.

come to life	repair	consolidate	rest
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4. The idea for the business _____ from a small coffee stand to a bakery.

came to life	consolidated	evolved	leapt out of bed
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5. You look exhausted! You should get an _____ if you can.

sleep pattern	seasonal sleep	deep sleep	early night
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答案

1. 阅读课文并回答问题。

1. Is seasonal sleep affected by light?

No. According to Dieter Kunz, "even while living in an urban environment, with just artificial light, humans [experience] seasonal sleep."

2. True or False? *Participants experienced seasonal variations only in REM sleep.*

False. Participants experienced seasonal variations in REM sleep, as well as in slow wave sleep.

3. In total, how much longer do we need to sleep in winter compared to summer, according to the study?

One hour. Both REM and slow wave sleep were 30 minutes longer in the winter months.

4. How does our past influence our sleep patterns?

Humans evolved to dark-light cycles, says Neil Stanley.

5. Why can it be harder to sleep in the summer months?

Because our bodies require a skin temperature of between 31-35 degrees centigrade [Celsius] for a good night's sleep, and this can be harder to regulate when it's hot.

2. 选择意思恰当的单词或词组来完成下列句子。

1. I think photographs look better when taken in natural light, not **artificial light**.

2. We are studying the global temperature **variations** over the past 100 years.

3. It took a long time to **repair** the damage after the flood.

4. The idea for the business **evolved** from a small coffee stand to a bakery.

5. You look exhausted! You should get an **early night** if you can.