

How cold affects the body
寒冷對身體的影響

字彙 : *temperature* 氣溫

When we think of low temperature as a danger, we often imagine people working outside in **polar** regions in the **depths of winter** or in **cold storage** facilities, layered in **thermal** clothing to help them deal with **freezing** temperatures. But do we also need to protect ourselves when it's just a bit **chilly** as well as in **arctic conditions**?

As mammals, our bodies have to maintain an internal temperature in a narrow **range** between 37 and 37.5C. If that temperature **drops**, the effects can be serious. Below 35C, people can develop **hypothermia**, with symptoms such as **shivering**, confusion, and slurred speech. If body temperature drops below 29C, it can lead to loss of consciousness. Fortunately our bodies can **regulate** their internal temperature, but there are some negative side effects which come with this process.

Ten degrees **Celsius** is hardly **biting cold**, but that's the temperature that BBC journalist James Gallagher was made to **endure** in an experiment at the University of South Wales. As the test room was **cooled** from 21 degrees, his blood pressure, heart rate and breathing rate all increased, while the flow of blood to his brain decreased by 20%. What are the consequences of this? Immediately, it meant that Gallagher took longer to solve some simple puzzles. As a longer-term risk, Professor Damian Bailey points out that increased blood pressure puts us at greater risk of stroke and heart attacks.

Professor Bailey suggests that in the cold, people should wear clothing that provides good **insulation**, eat more carbohydrates, and be more active. Another approach is suggested by Professor Christopher Minson. He believes that people are too reliant on being able to control the temperature around them, and that we can gradually train ourselves to cope with a lack of **warmth** and be **comfortable** at lower temperatures. So, while moderately low temperatures can have an effect on us, there are steps we can take to cope with them.

字彙表

polar	極地的
depths of winter	隆冬
cold storage	冷藏
thermal	保暖的
freezing	(天氣) 極冷的
chilly	寒冷的
arctic conditions	天氣極其寒冷
range	範圍
drop	下降
hypothermia	體溫過低
shivering	(因寒冷) 發抖
regulate	調節
Celsius	攝氏度
biting cold	嚴寒
endure	忍受
cool	(使) 冷卻, (使) 變涼
insulation	防禦寒冷, 保暖
warmth	溫暖
comfortable	舒適的

測驗與練習

1. 閱讀課文並回答問題。

1. In what range should our internal body temperature be?
2. What are the symptoms of hypothermia?
3. What happened to James Gallagher's heart rate during the experiment?
4. What can be consequences of high blood pressure?
5. True or false? *Professor Minson believes it is good that people can control temperature easily.*

2. 選擇意思恰當的單字或片語來完成下列句子。

1. Antarctica and the Arctic are _____ regions.

biting	polar	chilly	thermal
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2. January is in the _____ of winter.

drops	ranges	depths	warmths
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3. Below zero degrees Celsius, it is _____.

thermal	cool	polar	freezing
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4. It's important to have clothing that provides _____.

comfortable	insulation	thermal	temperature
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5. _____ is something our body does to keep us warm.

Insulation	Hypothermia	Running	Shivering
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答案

1. 閱讀課文並回答問題。

1. In what range should our internal body temperature be?

Between 37 and 37.5C.

2. What are the symptoms of hypothermia?

Symptoms of hypothermia include shivering, confusion and slurred speech.

3. What happened to James Gallagher's heart rate during the experiment?

His heart rate increased.

4. What can be consequences of high blood pressure?

Professor Bailey said that high blood pressure could increase the risk of stroke and heart attack.

5. True or false? *Professor Minson believes it is good that people can control temperature easily.*

False. He believes that people are too reliant on being able to control the temperature around them.

2. 選擇意思恰當的單字或片語來完成下列句子。

1. Antarctica and the Arctic are **polar** regions.

2. January is in the **depths** of winter.

3. Below zero degrees Celsius, it is **freezing**.

4. It's important to have clothing that provides **insulation**.

5. **Shivering** is something our body does to keep us warm.