## **BBC LEARNING ENGLISH**

## Take Away English 随身英语 Health in space

太空旅行对健康的影响



## 词汇: space travel 太空旅行

**Astronaut** Frank Rubiales has returned to Earth after 371 days in space. It was only supposed to be 180, but a **technical fault** stopped him from returning as planned. Unlucky for him, but very lucky for scientists who want to see what effects spending an extended time in space has on the human body.

Being in space can affect both **physical** and **mental health**. **Weightlessness** caused by a **lack of gravity** can lead to a loss of bone and **muscle mass**. Astronauts are recommended 150 minutes of exercise per day to counteract this. Also, space traveller's eyes can be affected by the way that fluids act in zero-gravity. Outside the protection of the Earth's atmosphere, astronauts are **exposed to** much higher levels and different forms of **solar radiation**. This can potentially cause long-term health problems, such as **cancer**.

It's not just physical health that is affected by being in space. Our mental health can be damaged if we don't get enough sleep. On earth, our bodies respond through circadian rhythms to the Sun rising and setting to help us sleep, but astronauts on board the International Space Station see 16 sunsets and sunrises every day. This means that avoiding sleep deprivation is a challenge. Isolation, and spending all your time with a small group of people can also affect mental health. Along with isolation, is the pressure that comes from being constantly monitored by experts back on Earth. With possible future missions to Mars predicted to last three years, tensions within the crew could become heightened. Astronaut Harry Hartfield reports an example of this where a colleague threatened to open the airlock and drain the oxygen from the spacecraft.

Developing new techniques and technology to support astronauts' health will enable more ambitious future missions. It can also help those of us who are staying on Earth. The Canadian Space Agency is using its expertise to improve health care for people living in remote regions. The technology that supports robots used in space is now being used in surgery in normal hospitals, while **pressure suits** are being used to treat **post-pregnancy complications**.

### 词汇表

astronaut	宇航员
technical fault	技术故障
physical health	身体健康
mental health	心理健康
weightlessness	失重状态
lack of gravity	失重
muscle mass	肌肉量
exposed to	使暴露于
solar radiation	太阳辐射
cancer	癌症
circadian rhythm	昼夜节律
International Space Station	国际空间站
sleep deprivation	睡眠不足
isolation	与世隔绝
monitored	被监测
tension	紧张关系,人际矛盾
airlock	气闸舱
spacecraft	宇宙飞船
pressure suit	加压服
post-pregnancy complication	产后并发症

测验与练习					
1. 阅读课文并回答问题。					
1. How long was Frank Rubiales' mission originally planned to be?					
2. Why was the technical fault lucky for scientists?					
3. How much exercise should astronauts do per day?					
4. How many sunrises does an astronaut see every day on the International Space Station?					
5. What equipment from space missions is now being used in healthcare on Earth?					
2. 选择意思恰当的单词或词组来完成下列句子。					
1. Oh no! The computer has developed a					
lack of gravity	technical fault	monitor	tension		
2 help our body regulate sleep patterns.					
Sleep deprivations	Isolations	Circadian rhythms	Weightlessness		
3. Astronauts are often to dangerous situations.					
monitored	deprived	pressured	exposed		
4. The keeps oxygen on board the spacecraft.					
airlock	technical fault	pressure suit	monitor		
5. Exercise can help build					
circadian rhythm	isolation	muscle mass	weightlessness		

#### 答案

- 1. 阅读课文并回答问题。
- 1. How long was Frank Rubiales' mission originally planned to be?

#### It was supposed to last 180 days.

2. Why was the technical fault lucky for scientists?

#### Because they could learn about the effects of spending a long time in space.

3. How much exercise should astronauts do per day?

#### They are recommended 150 minutes of exercise per day.

4. How many sunrises does an astronaut see every day on the International Space Station?

# An astronaut sees 16 sunsets and sunrises every day on the International Space Station.

5. What equipment from space missions is now being used in healthcare on Earth?

#### Pressure suits are being used to treat post-pregnancy complications.

- 2. 选择意思恰当的单词或词组来完成下列句子。
- 1. Oh no! The computer has developed a **technical fault**.
- 2. **Circadian rhythms** help our body regulate sleep patterns.
- 3. Astronauts are often **exposed** to dangerous situations.
- 4. The airlock keeps oxygen on board the spacecraft.
- 5. Exercise can help build **muscle mass**.