



WONDERFUL WORLD
空中美语世界博览系列丛书

Science

科学

读世界博览
学地道英语
看精彩世界

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中国出版集团
东方出版中心

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前 言

如果你希望读到地道的英语,在享受英语阅读乐趣的同时又能增长知识、开拓视野,这套“空中美语世界博览系列丛书”正是你的选择。

“空中美语世界博览系列丛书”共有7个分册,它们分别是《动物》、《旅游》、《健康》、《体育》、《科学》、《建筑》和《人物》。该套丛书的内容是从风靡台湾二十余载的《空中美语》杂志中精选而来,秉承杂志图文并茂的特色,书中配有大量精美的图片,文字通俗易懂,深入浅出,将科学性和趣味性完美结合,称得上是一套精致的小百科。而且本系列丛书的版式设计不同于以往的书籍,绝对让你一饱眼福——贯穿全书的精美图片、别具一格的栏目设置,加上精良的印刷技术,定会让你感叹:原来读书也能如此惬意!

本丛书内容兼顾知识性与趣味性,因此,可作为广大英语学习爱好者的精读或泛读材料。为了帮助读者培养英文思维能力,本丛书的~~文章全部不~~设中文翻译,但是为~~难词和~~重点词汇做了~~详尽的~~注解。此外,编者在每篇文章的最后还精心准备了一个~~资讯加油站~~,里面是对文章的背景知识介绍或补充知识点,体贴的设计能让读者从阅读中获取更多的知识。

总之,一套“空中美语世界博览系列丛书”在手,世界万象尽收眼底。本套丛书是适合大学以上英语水平读者以及英语爱好者的知识读物。

由于编写时间有限,难免出现漏洞,有不足之处敬请各位读者指正。

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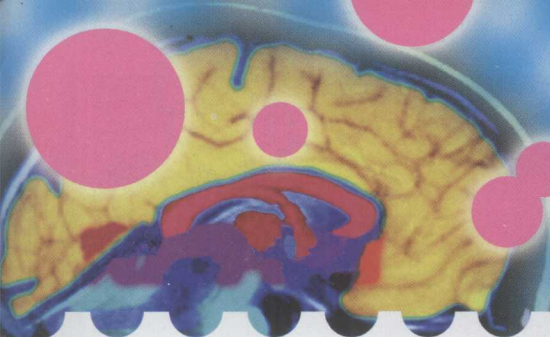
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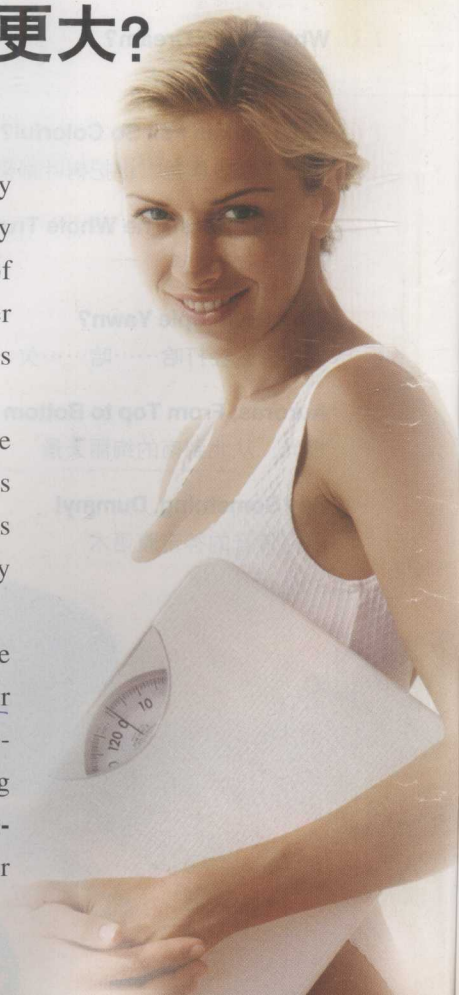
Why Does Alcohol Affect Women More?

为什么酒精对女性的影响更大?

Many people assume that women are more greatly affected by **alcohol**¹ than men because they generally weigh less and have lower rates of drinking. While this is true, researchers have found other ways in which women are more **vulnerable**² to the effects of alcohol.

One important finding is that the enzyme responsible for **breaking down**³ alcohol is less active in women. This means that more alcohol **winds up**⁴ in a woman's bloodstream. Additionally, a woman's higher ratio of body fat makes alcohol spread through her body more slowly.

This greater **sensitivity**⁵ to alcohol leaves women more **prone**⁶ to alcohol-related illnesses like cirrhosis of the liver and alcohol-induced brain damage. Other **worrisome**⁷ results show a **correlation**⁸ between heavy drinking among women and their rate of sexual **victimization**⁹ and **domestic**¹⁰ violence. While there have always been reasons for



Alcohol

women to be careful when drinking alcohol, this new research gives them even more cause to be aware and play it safe.

However, a few drinks a week may slightly reduce a woman's chance of developing high blood pressure, or hypertension, but consuming more than a drink a day puts her at increased risk, Harvard researchers report.

"Women who drink on average about 3 drinks a week had a 15% reduced risk of developing chronic hypertension, but women who drank 10 to 20 drinks a week had a 30% increased risk of developing chronic hypertension," Dr. Ravi Thadhani, an assistant professor of medicine at Harvard Medical School in Boston, Massachusetts, told Reuters Health.

He also noted that moderate amounts of alcohol may relax blood vessels, thus reducing the chance of developing high blood pressure, while high levels of alcohol may injure those vessels, boosting high blood pressure risk. The investigators also examined whether the type of alcohol consumed made a difference. They found that the higher consumption of beer, wine and hard liquor seemed equally harmful. Light beer drinking seemed to be the most beneficial form of alcohol in reducing the risk of high blood pressure.

Vocabulary

- | | | |
|------------------|--------------------|--------------------------|
| 1. alcohol | ['ælkəhɒl] | n. 乙醇, 酒精 |
| 2. vulnerable | ['vʌlnərəb(ə)] | adj. 脆弱的, 敏感的 |
| 3. break down | | v. phr. 起化学变化, 分解 |
| 4. wind up | | v. phr. 最后到达 (某种状态或某个地方) |
| 5. sensitivity | ['sensɪ'tɪvɪti] | n. 灵敏度, 敏感, 过敏性 |
| 6. prone | [prəʊn] | adj. 倾向的, 易于……的(to) |
| 7. worrisome | ['wʌrɪsəm] | adj. 使人焦虑的, 烦恼的 |
| 8. correlation | ['kɒrɪ'leɪʃən] | n. 关联, (相互)关系 |
| 9. victimization | ['vɪktɪmaɪ'zeɪʃən] | n. 迫害 |
| 10. domestic | [də'mestɪk] | adj. 家庭的 |



过量饮酒的危害

喝酒在有些地方极为普遍，有些人一日三餐，顿顿不离酒。饮酒过度是不良生活习惯，应该改变。

喝酒可以损害消化系统，尤其是损害肝脏。酒的主要成分是酒精，有90%~95%的酒精都要通过肝脏解毒，因此饮酒对肝脏的损害特别大。酒精能损伤肝细胞，引起肝病变，连续过量饮酒者易患脂肪肝、酒精性肝炎，进而可转变为酒精性肝硬化，最后导致肝癌。

一次饮酒量过大，不仅会引起急性酒精性肝炎，还可能诱发凶险的急性坏死型胰腺炎，并致人于死地。酒精还能刺激食管和胃粘膜，引起消化道粘膜充血、水肿，导致食管炎、胃炎、胃溃疡等。过量饮酒也是导致消化系统癌症的影响因素之一，嗜酒者消化道癌症的发病率比不饮酒者高出许多倍，患肝癌及其他消化系统癌症的可能性也比一般人高。

长期、大量饮酒能增加患高血压和中风的危险。酒精影响脂肪的代谢，它使血液中的胆固醇和甘油三酯升高，从而发生高血脂症或导致冠状动脉硬化、血液中的脂质沉积在血管壁上，使血管腔变小引起高血压。

怀孕前后要避免饮酒。酒在妊娠的任何时期，不论多少都对胎儿有影响。因为酒精可以通过胎盘进入到胎儿的血中，损害胎儿的内脏和器官发育，引起各种畸形。更重要的一点就是即便外貌正常，受酒精影响的孩子，其智力也很可能无法达到正常孩子的水平。





Is Cloning the Future?

克隆一个你?

Saving lives has always been an important mission of science. Now science, and indeed all society, is facing a new **dilemma**¹: whether or not to try and save more lives through human cloning.

The first cloning experiments in the 1950s involved frogs and toads. It was not until 1997 that scientists successfully cloned the first mammal, the now world-famous sheep known as Dolly. Cloning techniques have continued to improve since then, and today there are cloned mice, **salmon**², and cattle.

Some scientists want to **apply**³ the methods used in cloning animals to produce skin, organs, and other body parts for humans. One of these methods involves taking adult cells from the brain or blood and growing them into new tissues. Another, more complex, technique takes **embryo**⁴ cells and develops them into a wide variety of cell types and tissues. It is this planned use of human embryos that has resulted in **controversy**⁵ and criticism.

The cloning of human cells provides the potential to find cures and **eliminate**⁶ diseases. Some technicians dream of obtain a “**utopian**”⁷



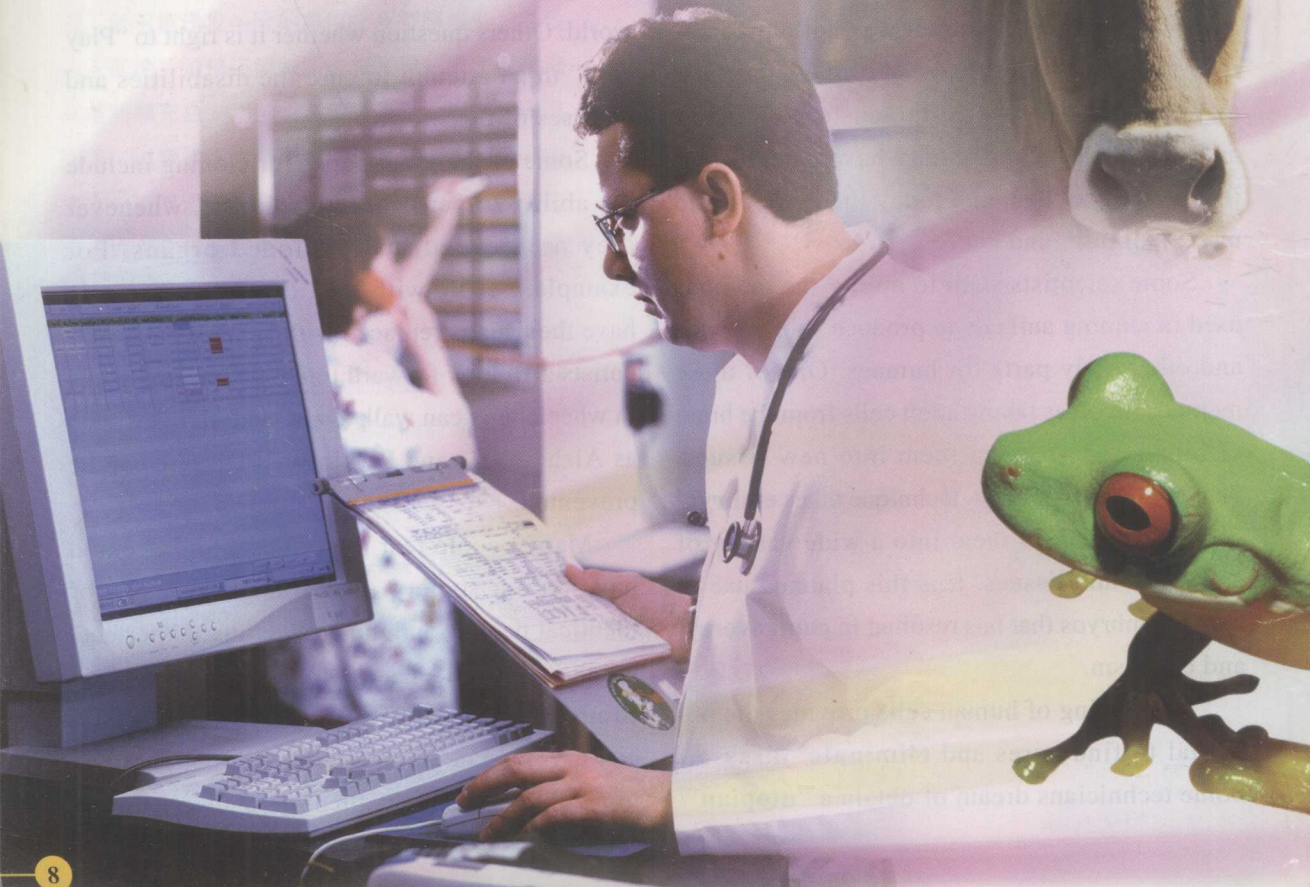
world. Others question whether it is right to “Play God” in an attempt to cure the disabilities and diseases of this world.

Some of the great hopes for cloning include the ability to perform **transplants**⁸, whenever they are needed, using cloned organs. For example, people with lung cancer may simply have their lungs replaced with healthy ones. Scientists also look forward to the day when people in wheelchairs can walk again, and illnesses such as Alzheimer’s and Parkinson’s Disease can be prevented.

Many people fear the effects cloning could have on our society. They imagine masses of identical people, and the production of “perfect” humans for warfare or slave labor. With such **thought-provoking**⁹ possibilities for the 21st century, human cloning will no doubt continue to receive widespread attention and **scrutiny**¹⁰.

Vocabulary


1. dilemma	[di'lemə, dai-]	n.	左右为难的状况, 窘境
2. salmon	['sæmən]	n.	鲑鱼
3. apply	[ə'plai]	v.	应用, 运用
4. embryo	['embriəu]	n.	胚胎
5. controversy	['kɒntreɪvə:si]	n.	争论, 辩论
6. eliminate	[i'limineit]	vt.	消除, 排除
7. utopian	[ju:'təupjən]	adj.	乌托邦式的, 理想化的
8. transplant	[træns'plɑ:nt]	vt.	移植器官, 皮肤等
9. thought-provoking	[θɔ:tpre,vəukɪŋ]	adj.	引起思考的, 发人深省的
10. scrutiny	['skru:tɪni]	n.	审查, 审视



克隆技术

克隆，原是英文clone的音译，意为生物体通过细胞进行的，无性繁殖形成的，基因型完全相同的，后代个体组成的种群，简称为“无性繁殖”。克隆一词于1903年被引入园艺学，以后逐渐应用于植物学、动物学和医学等方面。广义意义上的“克隆”其实在我们的日常生活中经常遇到，只是没叫它“克隆”而已。

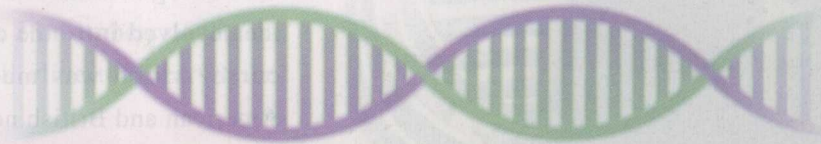
春天里，人们剪下植物枝条，扦插到土里，不久就会发芽，长出新的植株。这些植株是遗传物质组成的完全相同的植株，这就是“克隆”。还有将马铃薯等植物的块茎切成许多小块进行繁殖，由此而长出的后代也是“克隆”。所有这些都是植物的无性繁殖，或称为“克隆”。它非常普遍，几乎每个人都曾见过。



在动物界也有无性繁殖，不过多见于非脊椎动物，如原生动物的分裂繁殖、尾索类动物的出芽生殖等。但对于高级动物，在自然条件下，一般只能进行有性繁殖，所以要使其进行无性繁殖，科学家必须经过一系列复杂的操作程序。在本世纪50年代，科学家成功地无性繁殖出一种两栖动物——非洲爪蟾，揭开了细胞生物学的新篇章。

1997年2月23日，英国苏格兰罗斯林研究所的科学家宣布，他们的研究小组利用山羊的体细胞成功的“克隆”出一只基因结构与供体完全相同的小羊“多莉”（Dolly），世界舆论为之哗然。

克隆是人类在生物科学领域取得的一项重大技术突破，反映了细胞核分化技术、细胞培养和控制技术的进步。值得注意的是，克隆技术在带给人类巨大利益的同时，也会给人类带来困惑和问题。



What Is the Truth Behind the Mummies?

都是法老诅咒搞的鬼？



For over a century, tales of Egyptian mummies seeking **revenge**¹ over their disturbed tombs have excited the **curiosity**² of people around the world. However, according to British archaeologist Dominic Montserrat, **urses**³ that protect the remains of ancient Egyptians are simply an invention of storywriters.

Montserrat has found that the idea of a curse was created 180 years ago by novelist Jane Loudon. In 1821, Loudon got the idea for a horror novel while watching an exhibition of mummies being unwrapped in London. Her novel featured a mummy coming back to life and seeking revenge against an archaeologist.

During the late 1860s, the vengeful mummy idea **evolved into**⁴ the concept of the mummy's curse, which was made popular by several American and British novelists. Another author, Marie Corelli, **issued**⁵ a warning after the dis-

Why's Curse?

discovery of King Tutankhamen's (King Tut) tomb that anyone who dared enter would be severely punished.

Stories of mummy curses were widespread in the early 20th century. Some **journalists**⁶ even said that the Titanic sank in 1912 because an ancient Egyptian coffin was **on board**⁷. Later, in 1923, the discovery of King Tut's tomb added new life to the legend. The unexpected death of Lord Carnarvon, who led the exploration of the tomb, **propelled**⁸ the curse story onto the front pages of newspapers around the world.

According to Dominic Montserrat, however, there was nothing unusual about Carnarvon's death, since he was in poor health anyway. Moreover, almost all the 26 members of the exploration team were still alive ten years later. Some curse!

Montserrat actually sees the discovery of the

tomb as beneficial to King Tut's soul. Ancient Egyptians believed that the soul of the **departed**⁹ survived only as long as the name was remembered. If that is true, then the discovery of King Tut's tomb and those of other Egyptians **ensures**¹⁰ that their souls will survive for many years to come.



Vocabulary

1. revenge	[ri'vendʒ]	n.	报复, 雪耻
2. curiosity	[kjuəri'ɒsiti]	n.	好奇心
3. curse	[kɜ:s]	n.	符[诅]咒, 咒骂
4. evolve into		v. phr.	演变成……
5. issue	['iʃu:]	vt.	发布, 发行
6. journalist	['dʒɜ:nəlist]	n.	新闻记者
7. on board		phr.	在船上, 在飞机上
8. propel	[prə'pel]	vt.	推动, 推进
9. departed	[di'pɑ:tɪd]	adj.	死的, 已故的
10. ensure	[in'ʃuə]	vt.	确保, 保证

资讯加油站

揭示古埃及木乃伊 不朽秘密

古埃及人把木乃伊看得很神圣, 所以它的制作过程是严格保密的。他们没有留下任何关于这项技术的记录。考古学家们一直认为古埃及人只是把已经风干的尸

体包起来制成木乃伊, 但最近的一项关于古埃及香料的研究发现, 考古学家远远低估了这种葬礼的复杂性。

据《自然》杂志报道, 研究者们利用现代化学技术研究了不同时期的几个木乃伊。木乃伊是非常珍贵的人类遗产, 是受法律保护的, 所以要得到试验品并非易事。而现代化学技术只需要很小的一块样品就足够了, 这对木乃伊的破坏是很小的。通过对木乃伊香料的组成成分的研究能够了解古埃及人的经济发展程度, 而不同时期的不同组成成分又可以反映古代世界贸易路线的变化。

科学家们研究了从第12埃及王朝到罗马时代的13个木乃伊。他们发现一种“干油”。这些物质在使用时应该是液体, 然后它们逐渐地自动聚合硬化。研究者认为, 古埃及人可能是把这种“干油”用作密封剂以防止潮气的进入, 这种防水涂料使墓穴中的水汽无法接触到尸体, 以免尸体腐烂。研究者们还发现了一种能够杀死细菌的树脂, 这说明古埃及人已经会使用天然抗菌剂, 只有这样他们才能够把尸体保存到现在。蜂蜡作为抗菌剂只有在较晚的木乃伊中才出现, 而且它的抗菌作用越来越受到古埃及人的认同。埃及语中“蜂蜡”这个词就源于“木乃伊”。





Why Do We Dream?

梦里乾坤知多少?

To sleep, perchance to dream.” When Hamlettered these words, the **tortured**¹ prince wasn’t far off the mark. Studies over the past several decades all point to the same thing: We sleep in order to dream, and dream in order to learn.

Humans experience REM sleep, which is characterized by fluttering eyelids and an increased heart rate. Ninety-five percent of people woken in the middle of REM sleep report having been dreaming. Though dreams may seem randomly formed, research has shown that while we sleep, our brains are learning: They are **processing**² new experiences into our memories.

The first evidence that the brain is at work while we dream came in the 1960s: Brainwaves

recorded during REM sleep were found to be exactly like those of a wakeful brain. This suggests that dreaming is not, as Freud said, a playtime for subconscious desires. Rather, it is a tool that enables us to learn from our experiences and **solidify**³ memories.

The Australian spiny anteater lives its life without taking so much as a nap. So if dreaming is **integral**⁴ to learning, how can this animal survive? Scientists have found that this anteater learns, or stores memories, because its brain is big enough to handle the task of solidifying memories while it is awake.

If humans did not sleep, we would need impossibly large brains. Since we don’t have brains the size of bathtubs, we have had to become more



Vocabulary

1. torture	['tɔ:tʃə]	vt.	(使受) 折磨
2. process	[prə'ses]	vt.	处理
3. solidify	[sə'lɪdɪfaɪ]	vt.	使坚固
4. integral	['ɪntɪgrəl]	adj.	应有的, 必备的
5. efficient	['ɪfɪjənt]	adj.	有效率的
6. speculate	['spekju.leɪt]	vt.	揣测 (about, on, upon)
7. take advantage of sth.		v. phr.	利用
8. monitor	['mɒnɪtə]	vt.	监控
9. novice	['nɒvɪs]	n.	新手
10. counterpart	['kauntəpɑ:t]	n.	相对的人(物)

efficient⁵ with what little we have. REM, some **speculate**⁶, is our brains' way of **taking advantage of**⁷ the downtime of sleep to store memories.

Other animals have developed this efficient kind of brain, too. Research done on rats at MIT has shown that the rodents relive the same mazes they have run through in the daytime while they sleep. Electrodes **monitoring**⁸ brain activity in waking and sleeping states seem to indicate that the animals are learning how to interact better with their environment as they dream.

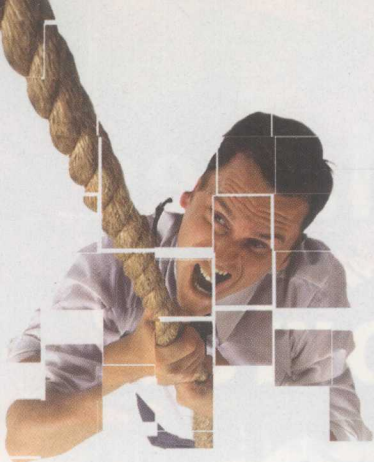
Because a rat cannot tell you about its dreams, studies like MIT's have their detractors. Scholars such as Michael Stickgold, an assistant professor of psychiatry at Harvard Medical School, prefer investigating the mysteries of dreaming by working with human subjects.

Instructing **novices**⁹ and experts to play Tetris, Stickgold found that the novices frequently dreamed of falling blocks as they went to sleep, whereas the experts did not.

Interestingly, among the novice players, the ones who were bad at playing Tetris dreamed more about falling blocks than their more skillful **counterparts**¹⁰. This led Stickgold to the conclusion that the brain is actively learning from waking experiences when the body goes to sleep.

Stickgold speculates that the brains of the Tetris players are just like those of the rest of us: designed to take waking experiences and incorporate them into memory during sleep. This all goes to prove that we are sleeping not just perchance to dream, but perchance to learn.





资讯加油站

梦的由来

几乎每个人都有过这样的经历：自己做了一个情节曲折的梦，在梦中大脑清醒，逻辑清晰，可是第二天醒来后就很困惑，“这些乱七八糟的东西是从哪儿来的？我怎么会计做这样的梦呢？”

由于我们梦境中的许多内容与自己最近的经历有关，因此有的科学家推测，大脑是从“说明性记忆”系统中提取做梦的素材的。“说明性记忆”系统包括了大脑最新获得的信息，储存着你可以说明自己知道的东西。例如9的平方根是多少，爱犬的名字是什么等。健忘症患者由于大脑中海马状突起受伤，失去了“说明性记忆”的能力。因此如果我们的梦来自“说明性记忆”，健忘症患者就不应该做梦，或者与其他人做梦的方式不一样。

许多人以为，做梦是不好的，简单的理由是：“它影响睡眠”。可现代医学的观点正相反：“做梦有益。只要做了梦，人的头脑就会灵敏”，英国的克里克这样说。这位荣获1962年诺贝尔医学—生理学奖的科学家解释：做梦可以消除大脑中无用的信息，并使脑力得以恢复。如果不做梦，不对白天接收到的万千信息进行筛选整理、去粗取精，那么，充满一堆乱麻似的信息的脑子是没有

多大用处的。加拿大的研究者发现，做梦时间长的学生，的确学得快、记得牢。日本科学家则注意到：痴呆者是极少做梦的，故智力甚差。这些科学家还发现，如果动物做梦的时间延长，他们的寿命也就增高——据此推论，做梦还能延年益寿。

总之，各国学者都承认，做梦是人类自身的一种需要，做梦有诸多好处。不管你感觉到没有，你是每晚都做几次梦的。因此，除极少数情况外，我们不必为多梦而不安。

