

Part 3

You are going to read a newspaper article about sleep. Seven paragraphs have been removed from the article. Choose from the paragraphs **A–H** the one which fits each gap (27–33). There is one extra paragraph which you do not need to use.

Mark your answers on the separate answer sheet.

Enough Sleep?

Tiredness, it is often claimed, has become the modern condition. As the richer, busier countries have grown, so sleeplessness and anxiety have also grown in the popular psyche. Research in the USA has found 40 million Americans to be chronically affected, and some recent best-selling novels in Britain have featured insomniacs as protagonists, or sleep-research laboratories as their settings.

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Recently, a sleep researcher tried an experiment. He offered his subjects the opposite of the modern routine. 'I allowed them to sleep for up to 14 hours a night for a month. It took them three weeks to reach an equilibrium of eight-and-a-quarter hours. That indicates a great rebound of sleep – sleep that they hadn't been getting.'

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For guinea pigs, they advertise in the student newspapers. Subjects are picked up by taxi, paid £5 an hour, and asked to adjust their sleeping patterns according to instructions. Dr Louise Reyner provides reassurance: 'Some people are quite worried, because you're putting electrodes on their heads, and they think you can see what they're dreaming or thinking.'

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The young men all deny they are going to fall asleep. Dr Reyner has a video recording of one

trying not to. At first the person at the wheel is very upright, wet and bleary eyes determinedly fixed on the windscreen. Then he begins to blink briefly, every now and again; then for longer, and more often, with a slight drop of the head. Each nod grows heavier than the last. The blinks become a 10-second blackout. Every time, he jerks awake as if nothing has happened. But the car, by the second or third occasion, has shot off the carriageway.

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But apart from these findings, what else do we know about human sleep with any kind of certainty? It is known that humans sleep, like other mammals, according to a daily cycle. Once asleep, they switch between four different stages of unconsciousness, from stage one sleep, the shallowest, to stage four, the deepest. When dreams occur, which is usually during the lightest sleep, the brain paralyses the body except for the hands and eyelids, thus preventing injuries.

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However, there is a strong degree of certainty among scientists that women sleep for half an hour longer than men, and that older people require less sleep, though they don't know why. When asked what sleep is for, some sleep researchers reply in cosmic terms: 'Sleep is a tactic to travel through time without injury.'

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The interlude was a haven for reflection, remembering dreams, or even night-time thieving. The poorest were the greatest beneficiaries of this quiet time, fleetingly freed from the constraints and labours that ruled their day-time existence.

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- A** Beyond this, certainties blur into theories. It is often suggested, for example, that sleep repairs body tissue, or restores muscles, or rests the frontal section of the brain that controls speech and creativity. But all of this may happen more quickly during relaxed wakefulness, so no one is really sure.
- B** Part of this interest is in sleep in general: in its rhythms, its uses and in problems with sleeping. But a central preoccupation remains. 'People need more sleep,' says one leading sleep researcher. 'People cut back on sleep when they're busy. They get up too early to avoid the rush hour.'
- C** By the 17th century, however, as artificial light became more common, the rich began to switch to the more concentrated, and economically more efficient, mode of recuperation that we follow today. Two centuries later, the industrial revolution pushed back the dusk for everyone except some country-dwellers, by making most people work longer hours in lighted buildings.
- D** The sleep researchers seem interested in this theory. But the laboratory is not funded to investigate such matters. Its sponsors want its research to lead to practical solutions such as deciding where *Take a Break* signs should be placed on motorways, and how different kinds of food and drink can affect driving and sleepiness.
- E** A coffee might have helped. Two cups, Dr Reyner says, even after no sleep at all,

Yet beyond Europe and America, the old pattern was widespread until quite recently, and according to a leading anthropologist, in some non-western settings there are still no rigid bedtimes. People go to bed for a few hours, and then get up again. The idea of a night's solid sleep does not apply. For certain tribal societies, human and animal noises and the need to supervise the fire and watch out for predators combine to make continuous sleep impossible. It seems that people all round the world are badly in need of sleep.

- can make you a safe driver for half an hour or more. She recommends a whole basket of alertness products: tablets, energy drinks, caffeinated chewing gum. Shift workers, she is quite sure, could probably use them.
- F** Moreover, people may have had different sleep patterns in the past. A history professor has investigated nocturnal British life between 1500 and 1850 and discovered that sleeping routines were very different. People went to bed at nine or ten, then woke up after midnight, after what they called their 'first sleep', stayed awake for an hour, and then had their 'morning sleep'.
- G** In fact, the laboratory's interest is more physical. In a darkened room stands a motorway simulator, the front section of a car facing a wide projection screen. The subjects are always told to arrive at 2pm, in the body's natural mid-afternoon lull, after a short night's sleep or no sleep at all. The projector is switched on and they are asked to drive, while answering questions. An endless road rolls ahead, sunlight glares; and the air is warm.
- H** In Europe, such propositions are perhaps most thoroughly tested in a small, unassuming building on a university campus in the English Midlands. The university sleep research laboratory has investigated, among many subjects, the effects of fatigue on sailors, the effects of airport noise on sleepers, and the dangers of motorway driving for flagging drivers.