

Let the children sleep

adapted from an article by Josh Gabbatiss, Science Correspondent

- 1 A new study has shown delaying school start times for teenagers can have major benefits. When students in their mid-teens started school at 10am instead of the usual 8:30am, rates of illness decreased by more than half over a two-year period, and they got significantly better grades, according to Dr Paul Kelley of the Open University, the lead author of this new paper. "Conditions as diverse as obesity and depression have been linked with excessively early school times and lack of sleep, and a growing body of scientific evidence backs callings for change," he added.

- 2 "There is an increasing amount of research coming out showing similar effects from around the world," said Dr Guy Meadows, who is co-founder of The Sleep School and was not involved in the study. He noted that British schoolchildren are the sixth most sleep-deprived in the world, with American children topping the rankings. Earlier this year, the American Academy of Sleep Medicine



- issued a position statement declaring that "delaying school start times positively impacts student achievement, health and safety." They have joined other major US organisations such as the American Medical Association in calling on all schools to implement start times of at least 8:30am. As it stands, many schools in the US currently start as early as 7am.
- 3 Teenagers have different sleep requirements compared to older people. Adults might only require seven hours of sleep, but according to a TED talk given by neuroscientist Professor Russell Foster of the University of Oxford, teenagers "need nine hours for full brain performance." Besides, as we go through puberty, the rhythms that control the daily cycle of our bodies become delayed by a couple of hours. As a result, teenagers have a natural tendency to go to bed later than their parents. This, combined with the higher sleep requirement for teenagers, results in widespread sleep deprivation.

- 4 Further complications come from individual variation in sleep requirements. Some are 'larks' who like to rise early, and some are 'owls' who prefer to stay up late. Dr Meadows said that recognition of individual sleep requirements was growing, with workplaces increasingly likely to offer 8. "The world is recognising that individual timing is important," he said. As for schools, Dr Kelley thinks it is vital that pressure is applied to encourage schools to make significant changes to their schedules. "Students themselves, and their parents, should realise that there is a problem," he said. "This is a big issue that isn't just about sleep, but the mistiming of our society."

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Tekst 4

- 1p 5 Geef aan of de volgende voordelen van latere schooltijden worden genoemd in alinea 1.
Omcirkel 'wel' of 'niet' achter elk nummer in de uitwerkbijlage.
- 1 gemiddeld hogere cijfers
 - 2 verbeterde gezondheid
- 1p 6 'with American children topping the rankings' (paragraph 2)
Which possible reason for this top ranking is mentioned in paragraph 2?
- A American schools tend to start even earlier than schools in Great Britain.
 - B American society is very competitive and focused on scoring high.
 - C In America schooldays are often longer than eight hours a day.
 - D In America there is more research into sleep going on than elsewhere.
- 2p 7 Welke **twee** verklaringen voor het gevonden slaapttekort bij tieners worden in alinea 3 genoemd?
Geef antwoord in het Nederlands.
- 1p 8 Kies bij 8 in alinea 4 het juiste antwoord uit de gegeven mogelijkheden.
- A basic sleeping facilities on their premises
 - B extra breaks to give people time to recharge
 - C flexible hours based on their staff's needs
 - D four-day working weeks to address the problem
 - E therapy for employees who need help

Bronvermelding

Een opsomming van de in dit examen gebruikte bronnen, zoals teksten en afbeeldingen, is te vinden in het bij dit examen behorende correctievoorschrift, dat na afloop van het examen wordt gepubliceerd.