

their original sleeping area, proving they were disoriented. In contrast, when the action was repeated 30 seconds later, the now fully-awakened animals instantly returned to the bottom, establishing the second requirement of sleep. To test how the creatures react to lack of sleep, they kept the jellyfish awake the entire night by blasting them with jets of water every twenty minutes, as predicted, they were less active the following day. The same behaviour was not observed when the animals were disturbed with the jets during the day.

While the study is impressive, not everyone is convinced that it proves the jellyfish were sleeping. A neuroscientist at the University of Copenhagen, says, "I would hesitate to call it sleep until you actually look at what happens in the nervous system." He believes there may be other factors, such as light, that could be causing the change in pulsating activity. A geneticist who studies sleep at the California State University, disagreed, saying, "These data strongly argue for the existence of sleep in this type of jellyfish."

The researchers, who published their findings in the journal *Current Biology*, next plan to test if humans and jellyfish share similar sleep genes. A preliminary experiment, done by exposing jellyfish to a sleep-inducing medicine used by humans, appeared to work on the animals as well. However, further research needs to be done to confirm the theory. If the team is able to prove **unequivocally** that the primitive jellyfish, which have been untouched by evolution, need to sleep, it will establish that sleeping serves a purpose even more complex than currently believed. Abrams thinks by studying the jellyfish, "We might be able to get at those core, fundamental components of why something sleeps."

31. Choose the best title or heading for the passage.
- A. To Nap or Not to Nap
  - B. No Rest for the Wicked
  - C. Fish that Never Sleep
  - D. Medication for Sleepless Fish Found

32. What makes jellyfish different to other animals?
- A. They haven't been studied before.
  - B. They have no mouth.
  - C. They have no need for sleep.
  - D. They have no brain.

33. What is one of the requirements of sleep that needed to be recorded?
- A. Anger at being woken
  - B. Confusion on being woken
  - C. Motionlessness while sleeping
  - D. Slowing down just before sleep

34. What is the next plan to prove that these fish sleep?
- A. Test them to see if they have small brains.
  - B. Try and keep them in the dark.
  - C. Repeat the experiment again to prove it.
  - D. Trial drugs on them.

35. What does the word 'unequivocally' mean in the last paragraph?
- A. Without science
  - B. Without reason
  - C. Without doubt
  - D. Without conclusion

FOR QUESTIONS 36 TO 40, READ THE PASSAGE AND ANSWER THE QUESTIONS THAT FOLLOW.

The next time your brain refuses to recall a simple fact or name, be thankful. That's because, according to two professors at the University of Toronto, this could be a sign that your brain is getting rid of unnecessary information so that it can operate more efficiently, and help you make better decisions.