

Research Studies Into Sleep Deprivation – What Does It Show Us?

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<p>Patrick & Gilbert 1898</p>	<p>They deprived three "healthy young men" of sleep for 90 hours. The men reported a gradually increased desire to sleep, and from the second night onwards, 2 of them experienced illusions and other perceptual disorders. When they were allowed to sleep normally, all three slept for longer than they usually did, and the psychological disturbances they reported disappeared.</p>
<p>Peter Tripp 1959</p>	<p>A New York DJ staged a charity "wakeathon" in which he did not sleep for 8 days. Towards the end of this time, Tripp showed, some disturbing symptoms, including hallucinations and delusions. The delusions were so intense that it was impossible to give him any tests to assess his psychological functioning.</p>
<p>Randy Gardner 1965</p>	<p>A 17 year old student stayed awake for 264 hours and 12 minutes, aiming to get himself into the Guinness Book of Records. For the last 90 hours he was studied by Derment. Although Gardner had difficulty in performing some tasks, his lack of sleep did not produce any severe disturbances. Afterwards, Gardner spent 14 hours and 40 minutes asleep and when he awoke he appeared to have recovered completely.</p>
<p>Huber-Weidman 1976</p>	<p>Huber-Weidman summarised the findings of controlled sleep deprivation studies as follows:</p> <ul style="list-style-type: none"> • Night 1 – most people are capable of going without sleep for a night. The experience may be uncomfortable but it is tolerable. • Night 2 – the urge to sleep becomes much greater. The period between 3-5am when body temperature is at its lowest in most of us is crucial. It is during this period that sleep is most likely to occur. • Night 3 – tasks requiring sustained attention and complex forms of information processing are seriously impaired. If the task is interesting, or the experimenter offers encouragement, performance is less impaired. • Night 4 – from this night onwards periods of micro-sleep occur. We stop what we are doing and stare into space for up to 3 seconds. The end of micro sleep is accompanied by a return to full awareness. Confusion, irritability, misperception and a feeling of a tightening around the head is felt as though a hat that was too small was being worn. • Night 5 – as well as the effects of night 4, delusions may be experienced. • Night 6 – symptoms of depersonalisation occur, and a clear sense of identity is lost. This is called sleep deprivation psychosis.
<p>Rechtschaffen et al. 1983</p>	<p>A rat was placed on a disc protruding from a small bucket of water with an EEG monitoring its brain activity. Every time brain activity indicated sleep, the disc rotated. This forced the rat to walk if it wanted to avoid falling into the water. A second rat, also connected to an EEG was on the disc. This was allowed to sleep normally. After 33 days, all sleep-deprived rats had died.</p>
<p>Lugassi 1986</p>	<p>Case study of man who abruptly began to lose sleep at age 52. He became increasingly exhausted and eventually developed a lung infection from which death resulted. A post-mortem revealed that neurons in areas of the brain linked to sleep and hormonal circadian rhythms were almost completely destroyed.</p>