

How to get a good night's sleep: Earplugs in the intensive care unit ward off confusion

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Patients in an intensive care unit (ICU) often become confused or delirious soon after, or within a few days of, admittance to the ICU. New research published in BioMed Central's open access journal *Critical Care* shows that use of earplugs can result in better sleep (as reported by the patients), lower the incidence of confusion, and delay the onset of cognitive disturbances.

Patients in the ICU are thought to suffer confusion and delirium due to sensory overload. Part of this is due to the physical injuries and sensations of the patients and part due to their environment.

Sound in the ICU has been a subject of research for several years. There is constant noise due to equipment and people coming and going. However, patients complain that it's not so much the level of noise but the interruptions due to phones ringing and people talking which is the most disturbing. Not surprisingly studies have shown that the sleep of patients in ICU is severely fragmented with a corresponding lack of slow wave and REM sleep.

While it is not practicable to have silent equipment (and patients need checking at regular intervals), researchers from the University of Antwerp and Antwerp University Hospital investigated the use of earplugs to reduce the amount of noise experienced by the patients as they slept.

As a result of this simple solution the researchers found that starting to

use earplugs within the first 24 hours of entering ICU decreased the patient's risk for delirium or confusion by over 50%. They also noticed that patients sleeping with earplugs developed confusion and delirium later than patients without. After the first night more of the patients with earplugs reported a better night's sleep.

Prof Bart van Rompaey, who led this study, explained, "The greatest improvement was observed in the risk of confusion, and seems to be strongest within the first 48 hours of admittance to the ICU. [Delirium](#) is a multifactorial process and, in our study, was also influenced by age, smoking, and severity of disease. Nevertheless the beneficial effect of earplugs in the ICU, especially in the first few days, clearly demonstrates the advantage of using them. [Earplugs](#) are a cheap and easy to use means of improving a patients sleep and preventing confusion."

Provided by BioMed Central

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