

# 'Louder at the back, please': White noise improves memory in schoolchildren

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Playing white noise in class can help inattentive children learn. Researchers writing in BioMed Central's open access journal *Behavioral and Brain Functions* tested the effect of the meaningless random noise on a group of 51 schoolchildren, finding that although it hindered the ability of those who normally pay attention, it improved the memory of those that had difficulties in paying attention.

Göran Söderlund from Stockholm University, Sweden, worked with a team of researchers to carry out the experiments at a secondary school in Norway.

He said, "There was significant improvement in performance for the children rated as inattentive by their teachers, and a significant decline in performance for those rated as attentive as noise levels were increased. This finding could have practical applications offering non-invasive and non-pharmacological help to improve school results in children with attentional problems".

The [children](#) were challenged to remember as many items as possible from a list read out either in the presence or absence of white noise. The researchers speculate that a phenomenon called 'stochastic resonance' may explain the improved performance of inattentive pupils seen in the test.

According to Söderlund, "When a weak signal is presented below the hearing threshold it becomes detectable when random or white noise is

added to the signal. Our study is the first to link noise and stochastic resonance to both higher cognitive functions and attention".

**More information:** The effects of background white noise on memory performance in inattentive school children Goran B. W. Soderlund, Sverker Sikstrom, Jan M. Loftesnes and Edmund J. Sonuga-Barke Behavioral and Brain Functions (in press)

[www.behavioralandbrainfunctions.com/](http://www.behavioralandbrainfunctions.com/)

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