

Mental relaxation improves long-term incidental visual memory.

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Researchers at University Hospital in Basel, Switzerland, find that a single session with a 20-minute relaxation audio can significantly improve long-term, visual memory and help to further consolidate and enhance those memories over time. Researchers at University Hospital of Basel, Switzerland, studied the effects of a single session of relaxation training on incidental visual long-term memory. Thirty-two subjects, new to relaxation training, viewed 280 slides without being told that there would be subsequent memory testing. Afterwards, they listened to a 12 minute relaxation tape - sixteen subjects relaxed by following the instructions (relaxation group), and the other 16 subjects pressed a button whenever a body part was mentioned (control group). While listening to the relaxation tape, high frequency heart rate variability (HRV) was greater and low frequency HRV was lower in the relaxation group, implying effective relaxation and increasing parasympathetic activation.

The study found that the relaxation group had significantly superior memory retention 4 weeks later ($p = .004$), indicating enhancement of long-term memory performance. This effect could not be explained by retroactive interference experienced in the control group, because short-term memory performance immediately after the tape was slightly better in the control group. Retention of materials acquired after the relaxation session remained unaffected, suggesting relaxation has retrograde effects on memory consolidation.

The researchers concluded that their data demonstrated a favorable influence of relaxation on at least this aspect of learning - longterm incidental visual memory. In addition, the data also extended previous knowledge on the beneficial effects of ascending parasympathetic stimulation on memory retention, in that enhanced long-term memory consolidation may also occur in the presence of central and descending parasympathetic activation triggered by willful psychomotor activity.

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