

Better memory at ideal temperature

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People's working memory functions better if they are working in an ambient temperature where they feel most comfortable. That is what Leiden psychologists Lorenza Colzato and Roberta Sellaro conclude after having conducted research. They are publishing their findings in Psychological Research.

Studied for the first time

Everyone knows from experience that climate and temperature influence how you feel. But what about our ability to think? Does [ambient temperature](#) affect that too? The little research that has been done on this question shows that cooler environments promote [cognitive performance](#) when performing complex thinking tasks. Colzato and Sellaro are the first to investigate whether a person's working memory works better when the ambient temperature perfectly matches his or her preference.

N-back test

To study the influence ambient temperature has on cognitive skills, Colzato and Sellaro performed tests on two groups of participants. One group had a preference for a cool environment, the other group preferred a warm one. The [test subjects](#) had to carry out thinking tasks in three different spaces. In the first the temperature was 25 degrees Celsius (77 Fahrenheit), in the second it was 15 degrees (59 Fahrenheit), and in the third the thermostat was set to 20 (68 Fahrenheit). The thinking task that the subjects had to perform was the so-called N-back task. Different letters would appear one after the other on the computer

screen. Subjects had to indicate whether the letter that they saw was the same as the one they had seen two steps earlier.

Idea confirmed

Test subjects proved to perform better in a room with their preferred temperature. The conjecture is that working in one's preferred temperature counteracts 'ego depletion': sources of energy necessary to be able to carry out mental tasks get used up less quickly. 'The results confirm the idea that temperature influences cognitive ability. Working in one's ideal [temperature](#) can promote efficiency and productivity,' according to Colzato and Sellaro.

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