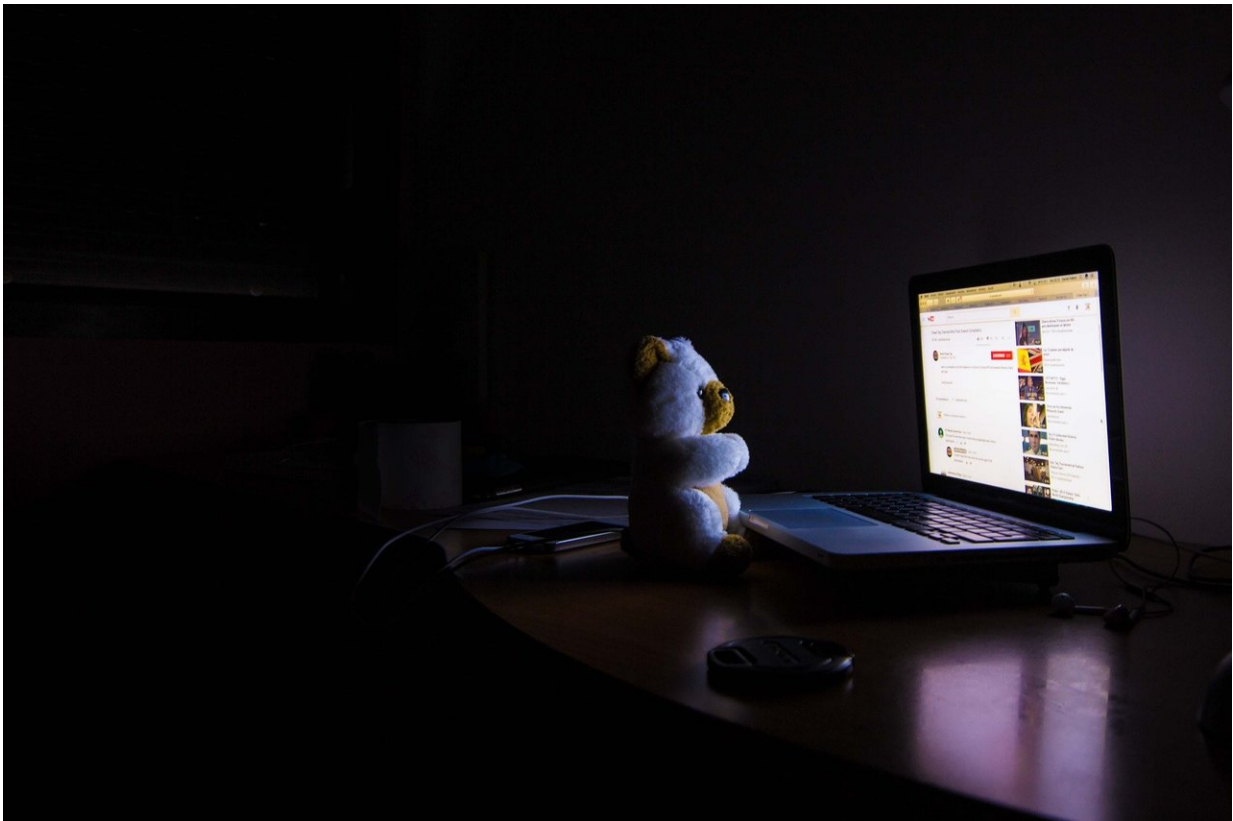


Insomnia symptoms, overall health improve with online insomnia program

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Treating insomnia with digital programs can improve insomnia symptoms, daytime functioning and overall health, a new study from the University of Oxford and Northwestern Medicine has found.

In a year-long study involving 1,711 people, researchers found online [cognitive behavioral therapy](#) (CBT) improved not only [insomnia](#) symptoms, but functional [health](#), psychological well-being and sleep-related quality of life.

The study was published Sept. 25 in *JAMA Psychiatry*.

A major limitation of insomnia treatments is the lack of providers to deliver CBT, but this study used an online platform that made it easily accessible to users. It also automated and tailored the treatment based on the user's sleep patterns.

Study co-author Jason Ong said there is a four-to-six month wait for an insomnia patient to get an appointment in his sleep clinic.

"We can reach many more patients with insomnia by using a digitally based program," said Ong, associate professor of neurology in [sleep medicine](#) at Northwestern University Feinberg School of Medicine.

Insomnia has been identified as a risk factor for the development of [mental health disorders](#), cardiovascular disease and type 2 diabetes.

"Sleep ranks with air, water and food as one of the essentials of life, yet 10 to 12 percent of the population doesn't get enough of it due to insomnia," said lead study author Colin Espie, Oxford University professor of sleep medicine and chief medical officer of Big Health, a provider of automated and personalized behavioral medicine programs for mental health. "Our study suggests that digital medicine could be a powerful way to help millions of people not just sleep better, but achieve better mental and physical well-being as a result."

The study provides new evidence that the clinical benefits of digital CBT extend beyond sleep to also improve a person's daytime functioning.

"Typically, what leads patients to seek treatment is when their insomnia begins to impact their quality of life or daytime functioning," Ong said. "The fact that we saw improvements in both of these areas shows that the digital program has benefits around the clock."

Though insomnia has traditionally been treated with pharmaceuticals, new guidelines published in 2016 by the American College of Physicians recommend that CBT be used first-line, ahead of sleeping pills.

Study participants received treatment using the Sleepio program and an associated iOS app. Sleepio, a digital sleep improvement program featuring CBT techniques designed by Espie, is a product of Big Health.

Delivery was structured into six sessions lasting an average of 20 minutes each, with participants having access to the intervention for up to 12 weeks. Researchers assessed the [study participants](#) online at 0 weeks (baseline), four weeks (mid-treatment), eight weeks (post-treatment), and 24 weeks (follow-up). Program content was based on CBT manuals and included behavioral, cognitive and educational components.

Additional study findings were as follows:

- In the digital CBT (dCBT) group, 689 participants (80.8 percent) logged on for at least one session, 491 participants (57.6 percent) completed at least four sessions, and 413 participants (48.4 percent) completed all six sessions.
- At weeks four, eight and 24, dCBT was associated with significant improvement in global health and mental wellbeing. Improvements in insomnia mediated these outcomes.
- Symptoms of depression, anxiety, sleepiness and cognitive failures all demonstrated significant differences in favor of dCBT at weeks four, eight and 24. While the degree of change was relatively small, the changes were statistically significant.

- The degree of change for fatigue was moderate to large at weeks four, eight and 24.
- Regarding productivity at work due to sleep problems, results showed a small to moderate improvement after dCBT.
- A small but significant effect in terms of reduced absenteeism attributed to poor sleep and increased job satisfaction was observed at week 24.
- There were no significant effects at any time on relationship functioning.

"In clinical studies, dCBT has repeatedly achieved statistically significant and clinically meaningful results for outcomes including sleep, [mental health](#) and daytime functioning," Espie said. "Our latest results indicate that dCBT can be an effective, inexpensive way to help insomnia sufferers achieve better health over the long term through behavior change."

More information: Colin A. Espie et al, Effect of Digital Cognitive Behavioral Therapy for Insomnia on Health, Psychological Well-being, and Sleep-Related Quality of Life, *JAMA Psychiatry* (2018). [DOI: 10.1001/jamapsychiatry.2018.2745](https://doi.org/10.1001/jamapsychiatry.2018.2745)

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