



# ONLINE CBT FOR INSOMNIA

Cognitive-behaviour therapy (CBT) provided online is an emerging intervention for the treatment of chronic insomnia. Clinical trials indicate online CBT to be safe and effective for chronic insomnia.<sup>1-4</sup> Advantages over in-person CBT include: greater accessibility, lower cost, and scheduling flexibility.<sup>1</sup> **Several online CBT programs for insomnia exist and it is not easy to determine which are evidence-based or which include components critical for the program to be effective.**

Here we provide information for health providers and patients about online CBT. We review the online options to **support informed treatment decisions.**

The following elements have been identified as essential characteristics for any CBT for insomnia program:<sup>1,2</sup>

- sleep hygiene
- stimulus control
- relaxation training
- sleep restriction
- cognitive restructuring

Online CBT for insomnia may be useful in patients that:<sup>1-4</sup>

- have chronic primary insomnia
- experience daytime impairment
- have 3 or more days per week in which sleep onset is delayed for at least a half hour
- have experienced sleep problems for over 3 months
- have access to the internet and email and are comfortable using a computer

Online CBT for insomnia may not be useful in patients that:<sup>1-4</sup>

- have other sleep disorders such as sleep apnea, restless leg syndrome, etc.
- have a mental or physical health problem causing insomnia
- work shifts
- are currently undergoing psychotherapy
- are pregnant
- have an irregular medication schedule

This pamphlet summarizes several of the online insomnia resources and services. The level of therapist contact varies for each program. The minimal amount of therapist contact has not been established. Most of the programs have 'tailored advice' that use algorithmic responses to users' entries. Other programs offer support and direct therapist contact through emails, live chats, telephone calls and text messages.

Program	Website	Cost	Duration	Sleep Hygiene	Stimulus Control	Relaxation Techniques	Sleep Restriction	Cognitive Restructuring	Type of interaction with therapist	Research support
Conquering Insomnia*	www.cbtforinsomnia.com	\$30-50	5 weeks	✓	✓	✓	✓	✓	Email and phone consults available at additional cost	Indirect*
Go! To Sleep*	www.clevelandclinicwellness.com/Programs/Pages/Sleep.aspx	\$40	6 weeks	✓	✓	✓	✓	✓	Daily emails	Indirect*
Selfhelp-Insomnia	Visit the iTunes store for the mobile app	\$5	n/a	✓	✓	✓	✓	✓	None	Indirect*
Online CBT Insomnia*	www.online-therapy.com/insomnia-online-therapy-c-171.html	\$350*	8 weeks	✓	?	✓	?	?	Live-chat, daily feedback, online forums	Indirect*
Restore CBT or Return/Sleep***	www.restorecbt.com/	Requires MD referral	5 weeks	✓	✓	✓	✓	✓	Daily feedback and text messaging	1 RCT
SHUTi****	shuti.me/	\$ 130*	6 - 16 weeks	✓	✓	?	✓	✓	Tailored feedback and emails	2 RCTs
Sleep Training System*	www.sleeptrainingsystem.com	\$30*	6 weeks plus 1 year access	✓	✓	✓	✓	✓	Additional cost for individualized feedback	Indirect*
Sleepio ?	www.sleepio.com	\$80-130	6 weeks plus 6-18 weeks support	✓	✓	✓	✓	✓	Tailored feedback, live group sessions	1 RCT
Slumber PRO*	www.sleeptherapy.com.au/	\$40	4-8 weeks	?	?	?	?	✓	Comment boxes	Indirect*

\* Benefits assumed from in-person CBT research.  
 \*\* money back guarantee  
 ? information unavailable

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## Online CBT for Insomnia

Cognitive-behavioural therapy (CBT) has been shown to effectively treat persistent and recurrent forms of insomnia. Studies demonstrate CBT is more effective than sleeping pills and can provide long lasting benefits on sleep. Most research comes from in-person, therapist-based CBT. This form of treatment can also be accessed online and in books. There are a few studies, with positive findings, on the effectiveness of online formats.

There are now several online CBT programs for treating insomnia. To determine which are likely effective (that is, worth your investment of time and money), we first determined what are the key ingredients of effective CBT for insomnia. We then examined the online programs for these ingredients. When there is specific research evaluating the online program we have summarized it.

By comparing the online programs by their key CBT elements, this pamphlet is designed to **support your informed choice regarding online CBT for insomnia** programs. Before you click "buy", we recommend that you read the overviews provided and take a close look at the table to help identify a program that suits your situation and preference. The options are presented in no particular order.

\*As these online programs change this information will become dated. Look at the version date of this pamphlet to estimate relevancy.

**Conquering Insomnia**<sup>5</sup> (CI) methodology was developed by a U.S. sleep researcher and psychologist (Dr. Gregg Jacobs) and is available in various formats (CD, MP3). It offers individualized interactive CBT guidance based on personal needs identified through weekly sleep diaries. Various packages are available, some listed here, which range in cost (\$30-50 USD):

- ▶ CI plus relaxation techniques (RT)
- ▶ CI plus RT and Email Q&A
- ▶ CI plus Email Q&A
- ▶ 20 minute phone consults with Dr Jacobs

No randomized trials were identified that have evaluated this specific approach. A related in-person CBT vs. sleeping pills study has been started by the program's developer.<sup>16</sup>

**SlumberPRO**<sup>6</sup> is a self help program based out of Queensland Australia that requires about 30 minutes to an hour each day. Trained practitioners are able to track the participants progress and they are available for questions by way of comment boxes. The program is currently in the early planning stages for a RCT.

**Go! To Sleep**<sup>7</sup> is a 6 week program developed by sleep psychologist Dr. Michelle Drerup that is available through the Cleveland Clinic of Wellness. For optimal results users are encouraged to login daily to complete the sleep diary. There are weekly lessons and activities. Progress is tracked graphically. Emails with motivational tips are sent by the program coach daily to enhance adherence. A mobile app is in development.

The **SHUTi**<sup>10</sup> program was developed by a group of U.S. psychologists. It provides tailored guidance, graphical progress reports, and online diaries to be completed throughout the program. Participants are provided with tailored feedback at the beginning of each new core component. To advance through the program requires completion of each component. This and emails are provided to support participation. This program also covers relapse prevention strategies. SHUTi has been evaluated in 2 randomized trials, one involving adults with primary insomnia (n=45) and the other cancer survivors with insomnia (n=28).<sup>3,4</sup> Waitlisted patients served as controls in both. ISI scores dropped from ~16 to 7 over 9 weeks of online CBT and remained there at 6 month follow up.<sup>3</sup> Controls' ISI was essentially unchanged. 73% (16/22) achieved insomnia remission (ISI score less than 8) after completing SHUTi whereas no one in the control group achieved remission. Findings were similar in the study of cancer survivors.<sup>4</sup>

**Restore CBT for Insomnia**<sup>11</sup> (a.k.a **Return2Sleep**) was developed by Canadian psychologist Dr. Norah Vincent. Initiation requires a physician to contact the program on behalf of their patient. The program mirrors a 6 week in-person CBT program, with some aspects abbreviated (cognitive therapy, sleep restriction, relaxation training). Advice on reducing sleep medications is offered. Participants complete weekly tasks. Adherence is supported by daily graphical feedback and text messages. The program was evaluated in a 5-week randomized trial (n=118) that used a waitlist control group.<sup>12</sup> Improvements in the sleep quality, insomnia severity, and daytime fatigue favoured the program. Pre-treatment insomnia severity index (ISI) scores of 18 per group improved by 5.6 with the program vs. 1.1 in the control group. This advantage was maintained 4 weeks after the study ended. Self rated as much or very much improved were 35% and 4% per group, respectively. About 1/3rd of participants dropped out early (higher if physician- vs. self-referred).

**Sleep Training System**<sup>8</sup> is a 6 week online program that provides a step-by-step manual, sleep tips, and encouragement for the participant. Access to a printer is required for the participant to print out sleep logs. While the program schedule does not emphasize relaxation techniques the program offers additional modules on controlling stress and managing anxiety. The program also focuses on long-term maintenance and participants have full access to the program for 1 year. Personalized feedback is available for an additional \$25. Personal testimonials are provided by the site to support the program. No formal research has independently evaluated its effectiveness.

**Sleepio** is a 6 week online program developed by Colin Espie in Scotland. It has been studied in a RCT with 164 participants randomized to either Sleepio, an online placebo program, or a waitlist. Participants randomized to the Sleepio program had decreased time to fall asleep, decreased time spent awake during the night, and ranked the quality of their sleep as higher than the other two groups. The benefits were maintained at a 2 month follow up. This program requires the participant to log-in weekly for 20 minutes and track their sleep habits daily with a sleep diary. Once a week there is a live group session with a sleep expert available via live chat. The participant can use this program on a personal computer or iPad, and they can access tools and relaxation audio on smart phones.

**iSelfHelp Insomnia**<sup>1</sup> is a mobile app available at the iTunes store. Developed in Sweden, the program is primarily text based. It is up to the individual to complete the program and apply the skills learned. It is not individualized. There is no sleep diary and no interactions with therapists or coaches. The user sets their own goals and action plans with the lessons learned from the program. The user has unlimited access to the program once downloaded. The program touches briefly on the core components of a CBT program for insomnia offering only general suggestions and techniques on how to implement them.

**Online CBT for Insomnia**<sup>9</sup> offers 8 sessions in 8 weeks and connects users with one of over 300 therapists located globally. Therapists provide daily feedback and live chat is available weekdays. Users work through various worksheets that are monitored and commented on by therapists. There is an online forum where participants can seek encouragement and help from other participants and/or therapists. Mobile apps for smart phones and tablets are available.