

# Is a mobile phone app delivering cognitive behavioural therapy effective at helping people quit smoking?

<b>Submission date</b> 13/12/2018	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered
<b>Registration date</b> 18/12/2018	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 18/01/2023	<b>Condition category</b> Mental and Behavioural Disorders	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Smoking continues to be the largest cause of preventable death and disease across the world. Therefore, providing effective treatment to help smokers quit is a major public health goal. The most effective way to help people quit smoking is using medications (i.e. nicotine replacement therapy; NRT) together with high intensity behavioural support. However, behavioural therapy offered on the NHS is low intensity, and is only being accessed by 5.9% of smokers looking to quit.

In this study we will test a mobile app that delivers high intensity behavioural support to smokers looking to quit. The form of therapy delivered is cognitive behavioural therapy (CBT), which works by changing the way one thinks, and therefore, how one behaves, in challenging situations. More than 500,000 users have already downloaded the app over the past year, and we have published three pilot studies using results from this programme (PMID: 29907557, 29669708, 27777216).

The aim of this study is to investigate the effectiveness of this novel digital CBT mobile app in helping individuals to quit smoking, compared to participants receiving “very brief advice” (<https://www.nice.org.uk/guidance/ng92/chapter/recommendations#very-brief-advice>).

### Who can participate?

Adults, (male and female), aged 18 years and over who have been smoking at least 5 cigarettes a day for the past one year and would like to quit smoking in the next 30 days.

### What does the study involve?

Eligible participants will attend an initial meeting for consent and baseline questionnaires. They then receive the intervention and are monitored for smoking status and secondary outcomes at 4 weeks, 26 weeks, and 52 weeks after their quit date. Each participant will also be offered free NRT.

What are the possible benefits and risks of participating?

There are no general risks to participants associated with digital CBT, the type of therapy involved in this research study. Participants may feel emotionally uncomfortable at times as they can explore feelings and experiences. However, therapy is delivered on a positive note; participants are taught useful coping skills to manage uncomfortable feelings, and have access to a chatbot and human support with a doctor or psychologist via the app. People that quit smoking experience a withdrawal period that may include cravings, anxiety, irritability, depression, and weight gain. Participants in the treatment group are taught techniques to deal with these symptoms through cognitive behavioural therapy, and those in the control group are given advice on how to deal with such symptoms and to seek support if they feel it is needed. All participants are made aware that they can contact the research team at any point, and to contact their GP if they are at all concerned about their health as a result of their smoking cessation attempt.

Lastly, there may be some burden as a result of participants having to travel to the research centre for the initial session. However, we will primarily recruit from the area close to the research centre, and appointments will be scheduled at a convenient time for participants.

Where is the study run from?

N/A - participants will attend for their baseline visit at a number of community settings across London

When is the study starting and how long is it expected to run for?

February 2018 to January 2021 (updated 03/07/2019, previously: July 2020)

Who is funding the study?

Digital Therapeutics Inc.

Who is the main contact?

Sarrah Peerbux, sarrah@digithera.ai

## Contact information

**Type(s)**

Public

**Contact name**

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**Contact details**

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## Additional identifiers

**Protocol serial number**

## Study information

### Scientific Title

Randomised controlled trial assessing efficacy of a novel cognitive behavioural therapy app for smoking cessation for healthy adults

### Study objectives

A mobile phone app-enabled cognitive behavioural therapy intervention for smoking cessation is superior to the current treatment standard ("very brief advice") as measured by the 4-week success rate in quitting.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

HSC REC A, Northern Ireland. REC, 23/10/2018, ref. 18/NI/0171.

### Study design

Single-blind, randomized, controlled, concealed allocation, clinical trial

### Primary study design

Interventional

### Study type(s)

Treatment

### Health condition(s) or problem(s) studied

Tobacco use

### Interventions

Randomisation: Participants are randomly assigned into the treatment and control arm at a 50:50 ratio.

Group 1 (Intervention): Participants in the intervention arm receive access to a behavioral intervention (cognitive behavioral therapy; CBT) delivered through a mobile application. This consists of several sessions per week completed by the participant on their phone at their convenience, and without involvement of a healthcare professional.

Group 2 (control): Those in the control arm receive a session of "very brief advice" delivered by a trained professional immediately after randomisation. More information is available at [http://www.ncsct.co.uk/publication\\_very-brief-advice.php](http://www.ncsct.co.uk/publication_very-brief-advice.php).

Duration of treatment: 4-weeks

Duration of follow-up: 1 year

We confirm that there is no wash-out period between the two trial conditions as this is not a crossover trial.

## **Intervention Type**

Behavioural

## **Primary outcome(s)**

Current primary outcome measure as of 24/07/2019:

Self-reported 7-day point prevalence abstinence at 4-weeks post quit date

Previous primary outcome measure:

Abstinence at 4 weeks post agreed quit date confirmed as self-reported "no puff of smoke" (using a questionnaire) in the past 2 weeks.

## **Key secondary outcome(s)**

Current secondary outcome measures as of 24/07/2019:

1. 7-day point prevalence abstinence at week 26 and 52
2. Number of quit attempts at week 4, 26, and 52
3. Client Satisfaction with the intervention at week 4 (treatment only)
4. Participant changes in confidence levels, knowledge, attitudes and perceptions related to smoking cessation at week 4
5. Participant changes in self-efficacy at week 4, 26, and 52
6. Participant changes in self-reported health and wellbeing at week 4, 26, and 52
7. Self-reported abstinence at 4-weeks post quit date confirmed by 'no puff of smoke' in the past two weeks
8. Sustained abstinence at 24 and 52 weeks, defined as a self-report of smoking no more than five cigarettes from 2 weeks after the target quit date

Previous secondary outcome measures:

All outcomes are assessed using questionnaires completed by the participant.

1. Successful quit attempt as defined in the primary outcome at 26 and 52 weeks
2. 7-day point prevalence abstinence at week 4, 26, and 52
3. Number of quit attempts at week 4, 26, and 52
4. Client Satisfaction with the intervention at week 4 (treatment only)
5. Participant changes in confidence levels, knowledge, attitudes and perceptions related to smoking cessation at week 4
6. Participant changes in self-efficacy at week 4, 26, and 52
7. Participant changes in self-reported health and wellbeing at week 4, 26, and 52

## **Completion date**

31/01/2021

## **Eligibility**

### **Key inclusion criteria**

1. Aged 18 or older
2. Has been smoking at least five cigarettes a day for at least one year
3. Desires to quit in the next 30 days
4. Can attend appointments at one of several locations around London
5. Using Apple iPhone (5th generation or higher) or Android phone (version 18 or higher)
6. Working proficiency in English language

### **Participant type(s)**

Healthy volunteer

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Sex**

All

**Total final enrolment**

531

**Key exclusion criteria**

1. Currently using any other form of support for smoking cessation (including Bupropion, Varenicline, behavioural support) or any other stop smoking applications
2. Has a serious health condition (as decided by the study team)
3. Currently pregnant
4. Has a diagnosed mental health condition for which medication is currently being prescribed

**Date of first enrolment**

17/01/2019

**Date of final enrolment**

20/11/2019

**Locations****Countries of recruitment**

United Kingdom

**Study participating centre**

N/A

United Kingdom

N/A

**Sponsor information****Organisation**

Digital Therapeutics Inc.

# Funder(s)

## Funder type

Industry

## Funder Name

Digital Therapeutics Inc.

# Results and Publications

## Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study will be made available on request. Data can be requested from Sarrah Peerbux (sarrah@digithera.ai).

## IPD sharing plan summary

Available on request

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	06/10/2020	08/10/2020	Yes	No
<a href="#">Results article</a>	Secondary outcomes	26/10/2022	18/01/2023	Yes	No
<a href="#">HRA research summary</a>			28/06/2023	No	No
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes