

# EVIDENCE SUMMARY

## Rapid Review of Non-NHS Treatments for Smoking Cessation

### Background

The NHS stop smoking service (SSS), which provides evidence based treatment for smokers who seek help, is achieving long-term abstinence rates of approximately 15%. There are many commercial smoking cessation treatments available outside SSS that quote success rates many times higher. There are also numerous treatments not yet fully established which may hold promise.

This review assesses the current evidence for the effectiveness of nine smoking cessation interventions that are not provided by the NHS: acupuncture, Allen Carr's Easyway, hypnosis, NicoBloc, Nicobrevin, St. Johns Wort, aversive smoking, cytisine, and glucose.

The National Institute for Health and Clinical Excellence (NICE) has been asked to produce public health programme guidance on the optimal provision of smoking cessation services to all smokers, but in particular to specific population groups (manual working groups, pregnant smokers and hard to reach communities). The present review of the evidence of the effectiveness of non-NHS treatments for smoking cessation is a part of this project.

### Objective

- The objective of the evidence review is to assess the available evidence for the effectiveness of nine smoking cessation interventions not currently used within the NHS SSS.

### Methods

#### Selection Criteria

Treatments were included based on awareness among the reviewers of the existence of reviewable literature, and their knowledge of the literature. The three best known and most widely advertised treatment approaches commercially available within the UK (hypnosis, acupuncture, and Allen Carr's Easy Way) were included. Commercial medications and devices where there is at least some published research available on their effects (NicoBloc, Nicobrevin, and St. John's Wort) were included, as were pharmacological treatments not commercially disseminated in the UK but considered promising (cytisine and glucose) and the behavioural treatment with the largest volume of controlled trials which also has some evidence of efficacy (rapid smoking).

#### Data sources

The searchable databases included Cochrane Database of Systematic Reviews, Cochrane Controlled Trials Register (CENTRAL), DARE, ASSIA, AMED, British Nursing Index, Embase, Cinahl, PsycINFO, Sociological Abstracts, and Controlled Clinical Trials. Google Scholar was also used where there was paucity of data from these sources. Unpublished data were also considered. Where limited evidence was available the search limits were removed to include all literature contained in the

databases that were searched. The evidence base for this review was sourced from reviews and trials published between 1990 and 2005.

### **Data extraction and quality assessment**

The titles and abstracts of papers identified from the literature search were screened by one reviewer to screen out papers that had no relevance to the review. The selected papers were then independently assessed for inclusion by two other reviewers (except for Nicobrevin and NicoBloc where only one reviewer made the assessment). No discrepancies in identifying relevant papers occurred between the reviewers.

Reviews were excluded if they were not conducted systematically. Where there was uncertainty the full paper was obtained and its inclusion resolved by discussion. Full papers were also obtained where there was no abstract and the relevance could not be assessed by the title alone. Trials were excluded if they did not report the results of a randomised trial unless only non-randomised controlled trials were available, in which case these are described but not included in meta-analysis. Trials included in relevant reviews were not reassessed. Other relevant publications were considered where no controlled trials were available.

Studies were evaluated by assessing the methods used in relation to the research question(s) being addressed. They were assessed for their methodological rigour and quality against a number of criteria using the critical appraisal checklists provided by NICE (Appendix B of the *Public Health Guidance. Methods Manual – version 1*).

A critical appraisal form was completed for each review and trial. Data were extracted using a standardised data extraction sheet. Data were extracted about the intervention/programme's: aim, objectives, setting, target population, intervention, content, method and duration.

The completed critical appraisal and data extraction forms were used to produce evidence tables.

### **Research questions**

1. What is the aim of the treatment?
2. What is the content of the treatment?
3. Does the treatment have any effect on at least six months continuous abstinence?

If there was an effect on abstinence:

4. What is the estimated cost of the treatment?
5. How does the structure and content of the treatment/ intervention influence effectiveness?
6. Does effectiveness vary with site/setting or intensity/ duration of the intervention?
7. What are the views of those receiving and delivering the intervention?
8. Is there evidence of unintended or harmful effects?
9. Are there barriers to replication of effective interventions?

## Results

### **Evidence Statement 1**

A body of level 1+ evidence from meta-analyses of randomised controlled trials suggests that acupuncture, acupressure, laser therapy and electrostimulation do not improve long-term abstinence rates over that of a placebo effect. (White, A. R., H. Rampes, et al. (2006); Docherty, G., D. Gordon, et al. (2003))

### **Evidence Statement 2**

There are no controlled data available on the efficacy of Allen Carr's Easyway Programme.

### **Evidence Statement 3**

A body of level 1+ evidence from a meta-analysis of randomised controlled trials suggests that hypnotherapy does not improve long-term continuous abstinence rates over that of attention control. A body of level 1- evidence suggests that hypnotherapy may be more effective than no treatment. (Abbot, N. C., L. F. Stead, et al. (2006); Carmody, T., C. Duncan, et al. (2006); Tindel, H., N. Rigotti, et al. (2006); Casmar, P. V. (2003); Valbo, A. and T. Eide (1996))

### **Evidence Statement 4**

One good quality trial (level 1+) indicates that NicoBloc has no effect on long-term smoking cessation rates. (Gariti, P., A. I. Alterman, et al. (2004))

### **Evidence Statement 5**

There is level 1- evidence that Nicobrevin may have a short-term effect but no data are available on its long-term efficacy. (Dankwa, E., L. Perry, et al. (1988); Schmidt, F. (1974))

### **Evidence Statement 6**

A body of level 1+ evidence from meta-analyses of randomised controlled trials suggests that rapid smoking improves 6-month abstinence rates. (Hajek, P. and L. F. Stead (2006))

### **Evidence Statement 7**

Level 1+ evidence from one randomised controlled trial shows that cytisine improves 6-month abstinence rates. Scharfenberg, G., S. Benndorf, et al. (1971); Paun, D. and J. Franze (1968); Schmidt, F. (1974)

### **Evidence Statement 8**

A body of level 1+ evidence from one randomised controlled trial shows that glucose on its own does not increase long-term abstinence rates. Post hoc analyses suggest that it may increase the efficacy of other smoking cessation medications. West, R. and N. Willis (1998). West, R., S. May, et al. (Unpublished).

### **Evidence Statement 9**

There are no data available on long-term effects of St John's Wort, but level 1-evidence from one randomised controlled trial shows lack of efficacy at one month. Becker, B., B. Bock, et al. (2003)

### **Conclusions**

This review assessed the current evidence for the effectiveness of nine smoking cessation interventions that are not provided by the NHS: Acupuncture, Allen Carr's Easyway, hypnosis, NicoBloc, Nicobrevin, St. Johns Wort, aversive smoking, cytisine, and glucose.

Because there is variation in the proportions of smokers in different groups that are able to stop smoking without help, demonstration of efficacy of a class of intervention designed to aid smoking cessation requires experimental studies involving a comparison group, ideally with random allocation to the treatment of interest and to the comparison group. In addition, the definition of 'success' can vary widely depending on the criteria adopted, so it is essential to specify clearly the basis on which it is calculated. Finally, for a smoking cessation method to be regarded as effective, it has to increase abstinence over an extended period of time, with 6-months after stopping smoking date considered as the benchmark.

On this basis, this rapid review suggests that acupuncture, St. John's Wort and NicoBloc are probably not effective. There is insufficient evidence to determine the effectiveness of Allen Carr's Easyway Programme and Nicobrevin. Hypnosis has not been found to be more effective than simple advice. Studies of glucose show mixed evidence of efficacy. Rapid smoking may have some efficacy, but its implementation within the contemporary treatment formats is problematic. Cytisine (Tabex) also shows evidence of efficacy.

### **References to Included Studies**

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