

The Use of Essential Oils to Treat Snoring

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Snoring is a very common social inconvenience. This double-blind study suggests a significant reduction in snoring reported by bed partners in a group of snoring volunteers using either an essential oil spray or gargle formulation. Possible modes of action of the essential oils are discussed. Copyright © 2004 John Wiley & Sons, Ltd.

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INTRODUCTION

The treatment of many conditions using essential oils has become more and more popular over the last few decades. The popularity of complimentary and alternative medicine (CAM) type treatments is ever increasing as patient awareness of alternative styles of medical therapy to compliment the traditional approaches are becoming more readily available. This unconventional therapy can be defined as medical practices which are not in conformity with the standards of the general medical community (Gevitz, 1988). Historically, some treatments have been available for centuries whilst newer remedies are now being tested on an ever-willing population demanding an alternative approach.

Most patients, however, use unproven therapies in conjunction with mainstream treatment rather than just as an alternative. In one survey only 2% of patients used unconventional treatments as a replacement for mainstream therapies (Druss and Rosenheck, 1999). In a survey of Consumer Reports up to 9% of patients used alternative therapies – possibly before seeking conventional advice (The Mainstreaming of Alternative Medicine, 2000).

Patients are becoming increasingly concerned with quality of life issues and thus the side effects of a disease or condition such as snoring, its treatments and resultant changes in functional status. CAM appears to offer a cure without associated morbidity. Patients receive a 'psychological and social support' in using CAM that may be lacking in mainstream medicine. CAM also provides a sense of personal control: over body and disease process.

Usually patients find out about alternative therapy from a variety of sources – often by word of mouth from friends or relatives. The media also plays a large role. Consumer Report surveys also suggests that readers who tried CAM did so on the recommendation of a doctor or nurse (The Mainstreaming of Alternative Medicine, 2000).

Essential oil/herbal therapies hold great promise for the treatment of medical illness and have been the

basis of many pharmacological drugs (NCCAM, 2004). Herbal remedies play a large role in traditional Chinese medicine and native American healing practices.

Snoring is a serious social inconvenience to both men and women. 40% of men and 25% of women aged 60+ + snore. A small proportion of snorers also suffer with obstructive sleep apnoea which, if untreated, can possibly contribute to serious long-term illness such as increased risk of developing angina and stroke (Prichard and Wilson, 2000). The social and marital consequences of untreated snoring are vast, ranging from minimal night-time disruption to marital disharmony or even to irritation to adjoining households. The snoring sound is highly irritative to the bed partner, not surprisingly, as volumes have been recorded exceeding 110 dB – the levels approaching that of a jet engine!

Attempts at controlling snoring have ranged from a tennis ball sewn into the back of the pyjama jacket avoiding the back sleep position, to electric shock therapy for the unfortunate snorer, to various surgical procedures on the pharynx. We report a preliminary study of a new method that possibly has a place in snoring treatment – namely the use of an essential oil gargle/spray 'Helps Stop Snoring' applied to the oropharynx that seems to reduce the irritation of snoring to the bed partner. These oils are lightly fragrant volatile substances, which can occur in various leaves, petals, fruit and roots of plants. Volatile oils have been reported to possess anti-inflammatory, anti-microbial and anti-viral actions. Other possible effects seem to be to reduce stress and emotional excitability. 'Helps Stop Snoring' contains *Mentha Arvensis*, *Mentha Piperita*, *Citrus Limonum*, *Eugenia Caryophyllus*, *Citrus Limonum*, *Melissa Officinalis*, *Pinus Mugo* var. *Pumilio*, *Foeniculum Vulgare*, *Salvia Officinalis*, *Thymus Serpyllum*, *Cymbopogon Vinterianus*, *Eucalyptus Globulus*, PEG-40 Hydrogenated Castor Oil, *Lavandula Angustifolia*, *Pistacia Lentiscus*, *Pinus Sylvestris* and Oil of Mastic (Table 1).

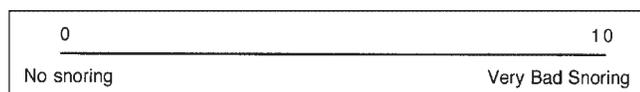
METHODS

140 adult snorers were recruited to the study via a snoring clinic. Snorers were randomly allocated to receive a metered dose of gargle, spray or placebo (gargle). Spray

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Table 1. Essential Oils in 'Helps Stop Snoring'

Essential Oil	Common Name	Possible Mode of Action	Some common usages
Mentha Arvensis	Mint, cornmint	Antispasmodic, expectorant	Cough medication, lozenges, flavouring
Mentha Piperita	Mint, peppermint	Antiinflammatory, Antimicrobial, antispasmodic	Flavouring, skin care, asthma, coughs, colds
Citrus Limonum	Lemon	Antispasmodic, antimicrobial, antiseptic	Throat infection, various drinks
Melissa Officinalis	Balm, lemon	Antidepressant, antihistaminic, antispasmodic	Toiletries, cosmetics, skin conditions
Eugenia Caryophyllus	Clove Oil	Expectorant, spasmolytic	Acne, athletes foot, various dental preps.
Pinus Mugo var. Pumilio	Pine Oil	Antispasmodic, antimicrobial, antitussive, expectorant	Fragrance, flavouring, coughs, colds, various drinks
Foeniculum Vulgare	Fennel	Antispasmodic, expectorant, antiinflammatory	Cough, mixtures/lozenges, foods, alcoholic drinks
Salvia Officinalis	Sage	Antiinflammatory, antimicrobial	Mouthwashes, gargles
Thymus Serpyllum	Thyme	Antispasmodic, antiseptic, antimicrobial	Coughs, sore throats, cystitis, insomnia
Thymus Vulgaris	Thyme, common	Antimicrobial, antiseptic, antispasmodic	Mouthwash, fragrances
Cymbopogon Winterianus	Citronella	Antispasmodic, antiseptic	Skin care, mosquitos repellent, colds, headaches, migraine
Eucalyptus Globulus	Eucalyptus	Antispasmodic, analgesic, antiseptic	Asthma, bronchitis, catarrh, cough, sinusitis, colds, aches and pains, burns
Lavandula Augustifolia	Lavender	Antispasmodic, antidepressant, anticonvulsive	Skin care, catarrh, laryngitis, depression, headache
Pistacia lentiscus	Mastic	Antispasmodic, antimicrobial, expectorant	In dentistry, perfumes
Pinus Sylvestris	Pine, scotch	Antimicrobial, antineuralgic	Fragrance, flavouring, asthma, sinusitis

**Figure 1.** Visual analogue score.

was applied to the oropharynx in two 'three-puff' measures with a swallow in between. The gargle mixture was diluted with six drops in half a glass of water and gargling for 20 sec until the glass was fully used, i.e. approx. 2–3 minutes of gargling. The snorers tested had no prior knowledge of whether they were to receive the product or placebo. Each snoring volunteer together with partner completed a questionnaire and Epworth Sleepiness Score (to exclude those with severe symptoms of daytime sleepiness and possibly obstructive sleep apnoea).

The snorers' partners were then instructed in the completion of a 'snoring record' using a visual analogue score each morning (VAS scale 0–10; Fig. 1) recording the disturbance from the previous night's snoring. The partners would record a 14 day period prior to using the spray, gargle or placebo to obtain a baseline measurement then a 14 day period as the product was taken each night prior to sleep. The record was made using a visual analogue score with a zero value of 'no snoring' and a 10 value for 'very bad snoring' and partners invited to place an X at any point on the line.

A simple comparison was made between the 14-day control period and the 14-day period of 'treatment' either with product or placebo. Statistical analysis was performed using the Wilcoxon non-parametric test.

Ethical approval was sought and obtained from the Royal Shrewsbury Hospital ethical committee.

RESULTS

98 of 140 subjects attending the snoring clinic returned their 'snoring scores' (70%). 85 were suitable for analysis – 68 male, 17 female, mean age 52.7 years. (Table 2). There was no significant difference between the BMI's of the three groups of subjects.

82% of patients using the 'Helps Stop Snoring' spray had partners reporting a reduction in snoring (Fig. 2), 71% using the gargle had a reduction (Fig. 3) whereas only 44% of placebo users (Fig. 4). Statistical significance in a snoring reduction was noted with both spray and gargle but not with the placebo (Table 3).

DISCUSSION

This preliminary study suggests a drop in snoring as recorded by the bed partner after taking a metered dose of either 'Helps Stop Snoring' gargle or spray. Snoring is obviously a severe irritant to the partner of the snorer – the partner is therefore most suited to reveal a possible change in snoring after treatment. Recording the sound of snoring by a sound level meter might give a dB level of the snore but would not be able to measure the irritating nature of the snore to a

Table 2. Patient analysis

	No. Patients	Male	BMI (kg/m ²) Av. Male	Female	BMI (kg/m ²) Av. Female	% With snoring reduction <i>n</i>
Gargle	41	32	27.8	9	29.8	71 <i>n</i> = 29
Placebo	16	11	27.1	5	35.3	44 <i>n</i> = 7
Spray	28	25	27.9	3	31.9	82 <i>n</i> = 23

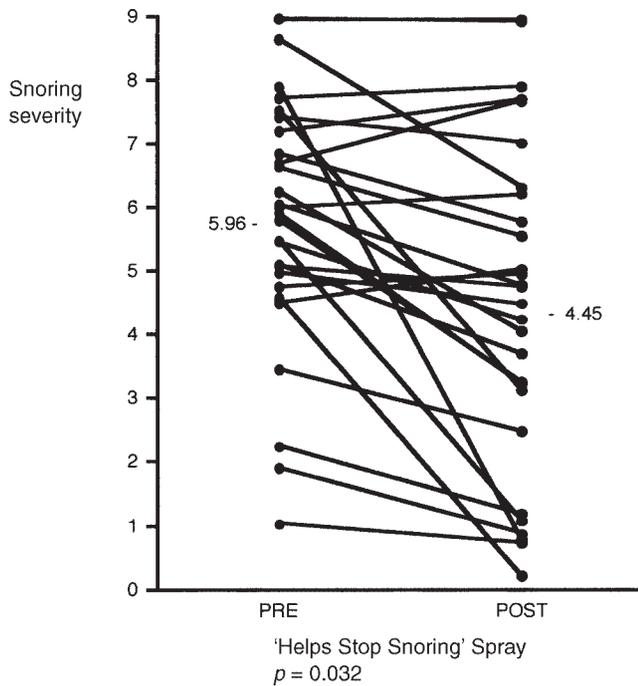


Figure 2. Spray results.

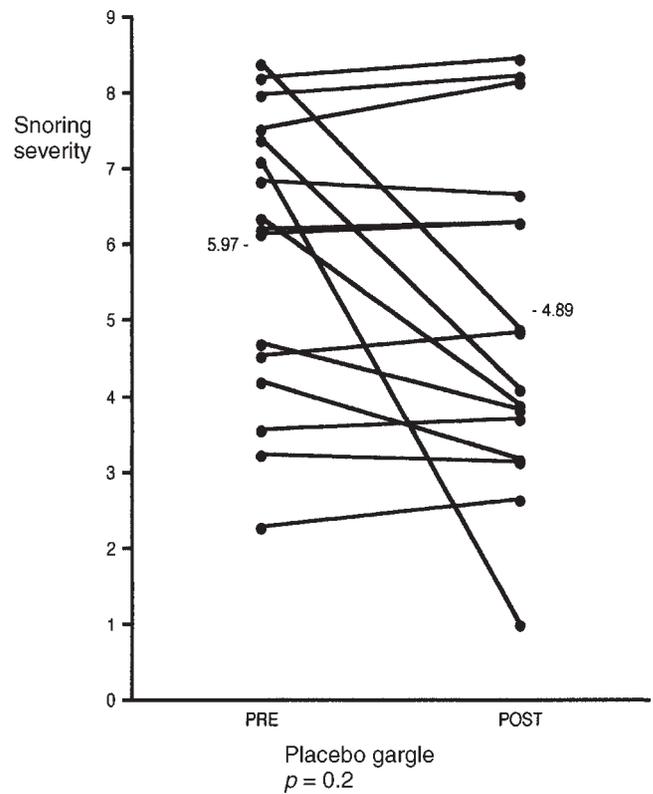


Figure 4. Placebo results.

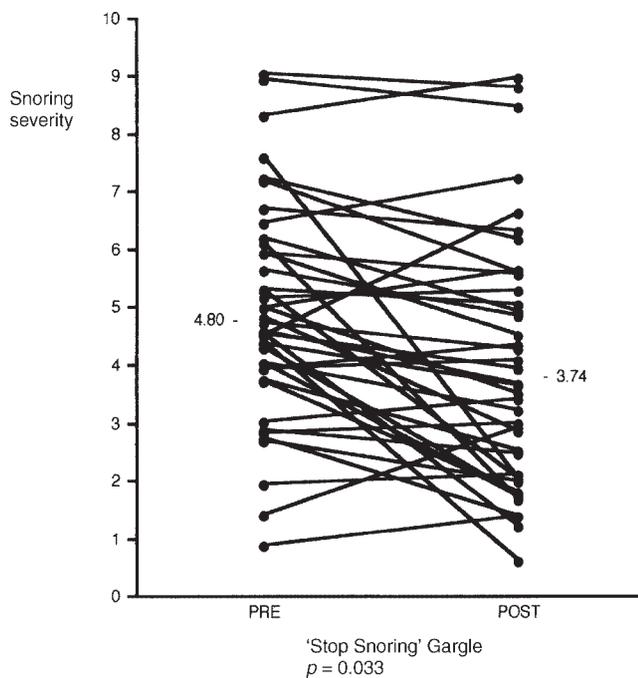


Figure 3. Gargle results.

Table 3. Statistical significance

	VAS median pre-treatment	VAS median post-treatment	Significance
Spray	5.96	4.45	<i>p</i> = 0.032
Gargle	4.8	3.74	<i>p</i> = 0.033
Placebo	5.97	4.89	<i>p</i> = 0.2

particular partner. Using a visual analogue score is a tested and reliable way of being as objective as possible when making a subjective measurement.

'Helps Stop Snoring' may have an action on the soft palate (and even the greater area of the pharynx) via an antispasmodic action altering the tone of the musculature such as to reduce palatal flutter thus reducing the noise to the bed partner. The essential oils might also increase blood flow to the palate thereby causing even a modest increase in 'stiffness' and again reducing flutter and noise. Even if the action of the oils is short-lived

this is long enough to allow the partner to get to sleep thereby giving the partner the impression of a better night.

Many snoring studies simply register the subjective changes pre- and post- a particular treatment such as surgery to the pharynx. More detailed studies have even objective measurements. However a strong case can be made that suggests the most important factor is the irritation of the snore to the partner, especially in the early part of the sleep process. Whether the actual level of the snore is reduced by 5 or 25 dB is only of academic interest to the partner who might be pleased by even the slightest reduction in irritation. The fact that the 'Helps Stop Snoring' spray is as effective as the gargle seems to suggest that the act of gargling alone is not the reason for a perceived drop in snoring but that the essential oils stimulate the pharynx and palate directly.

A more detailed study may be required including a greater number of patients. The length of the study may also be increased with each subject taking both placebo and product over a longer period with a wash-out phase in between. However the 'Helps Stop Snoring' product causes a reduction in snoring and whether there is also a 'psychological suggestion effect' that plays a part is of course quite conceivable. The fact is snoring is reduced and the essential oils in 'Helps Stop Snoring' may well have a part to play by adding to the armamentarium currently available for the treatment of snoring.

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