Report

THE EFFECT OF "HEALING WITH INTENT" ON PEAK EXPIRATORY FLOW RATES IN ASTHMATICS

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Abstract

This study was conducted in order to determine whether "healing with intent'" (HWI) could be demonstrated to exert a beneficial effect on peak expiratory flow rates (PEFR) in diagnosed asthmatics. In 22 asthmatics who received HWI, for a ten-minute period, their PEFR was found to improve significantly (p = 0.009), while 18 of these subjects who returned a week after the first session showed still further improvement (p = 0.003). No significant change was observed in the 26 non-asthmatics that received HWI following either the treatment or control session. These results suggest that the delivery of HWI, for ten minutes, to people with asthma, produces a significant improvement in breathing efficiency, using peak expiratory flow rate as an indication of lung function.

KEYWORDS: Asthma, healer, complementary medicine, bioenergy, bioelectromagnetism, therapeutic touch, alternative therapies

INTRODUCTION

Despite our advances in the diagnosis and treatment of asthma, the incidence of mortality is increasing in developed countries.[1] One study comments that asthma patients are prime candidates to employ complementary medicine (CM) for their conditions, yet little hard data exist on the prevalence of CM use by these patients.[2] The study concluded that this area of healthcare would seem to warrant more rigorous investigation.

Lewith & Watkins state that positive findings to date, regarding the clinical benefit to selected groups of patients provided by unconventional therapies in asthma, warrant further investigation in larger and better designed and controlled studies performed in skeptical centres of excellence.[3]

Research by the National Asthma Campaign in Britain shows that more than a third of doctors in general practice will not recommend complementary medicine to their patients, mainly because there is little scientific evidence that it works. In addition, the number of deaths from asthma, a controllable disease, is increasing.

With much evidence now available to suggest that HWI is supported by a valid mechanism, the possible effect of HWI on peak expiratory flow rates was deemed to be a worthy area of study.[4-12]

HWI has been shown to exert various effects on the physiology of the body. Krieger examined the effect of the laying-on of hands on hemoglobin values of ill persons (N = 46) compared with a comparable control group (N = 29).[9] The study found that hemoglobin values in the group that received NCTT (HWI) were greater than those in the control group at a statistically significant level.

Redner *et al.* examined the effect of a bioenergy healing technique (HWI) on chronic pain and found a significant reduction in the severity of sensory and affective aspects of the pain experienced, to a greater degree than the placebo treatment.[11] An effect was observed to manifest either immediately after the treatment and maintained for one week, or manifested sometime after the treatment and maintained for that week. This latter point is interesting as the

asthmatics in this study demonstrated an even greater increase in respiratory efficiency one week after receiving HWI.

A double blind study was conducted to examine the effect of non-contact therapeutic touch (NCTT, synonymous with HWI) on the rate of surgical wound healing.[13] Subjects who had sustained upper-arm full thickness dermal puncture wounds were exposed to five minutes of either a hidden therapeutic touch practitioner or a sham (imitation) healing session. The results produced showed that treated subjects experienced a significant acceleration in rate of wound healing as compared to non-treated subjects at day eight. The study was well-controlled and eliminated the influence of suggestion, expectation and the placebo effect.[13] It was later successfully replicated.[14]

Chien *et al.* observed that "facilitating 'Qi'" emitted from the hands of a Qigong master caused 1.8% increase in human fibroblast FS-4 growth in 24 hours, a 10-15% increase in DNA synthesis and a 3-5% increase in protein synthesis of the FS-4 cell in a 2-hour period.[15] "Inhibiting 'Qi,'" on the other hand, caused a 6% decrease in cell growth, a 20-23% decrease in DNA synthesis and a 35-48% decrease in protein synthesis over the same time periods. "Facilitating 'Qi'" was accompanied by a large amount of infrared waves detected by a temperature rise in the vicinity, while "inhibiting 'Qi'" resulted in infrared waves being absorbed from the environment with a cooling of the air. The effects of 'Qi' are mentioned here as HWI and "facilitating 'Qi'" are thought to be very similar in their mode of action and effect on the body.

HYPOTHESIS

The hypothesis of this study is that HWI, a complementary therapy, will have a beneficial effect on breathing efficiency, in people suffering from asthma.

METHOD

The aim of the study was to determine the effectiveness, if any, of HWI as a complementary therapy for the treatment of asthma. The study was conducted double-blind, defined here as patient and evaluator/assessor blind. The alloca-

tion procedure was appropriate, participants in the study being self-selecting and comprised mainly of university students who responded to an advertisement asking for volunteers for a research study, with no further details.

Ethical requirements were satisfied in accordance with National Health Service (NHS) regulations. Each participant was asked to sign a form giving consent to the possible use of one or more of three non-invasive complementary therapy treatments. This procedure served the additional purpose of reducing the expectation factor to a minimum, as each subject was not aware which therapy they might be receiving, or indeed if they would receive a therapy at all.

Both diagnosed asthmatics and non-asthma sufferers took part in the study, the non-asthmatics forming a control group. Each person also served as their own control and the procedure was identical for each individual.

There were 48 subjects participating in the study, with ages ranging from 18 to 60. There were 22 asthmatics, (four male and 18 female), and 26 non-asthmatics (eight male and 18 female). The higher incidence of females was due to the greater numbers of females studying nursing, the university department where the study was conducted and volunteers were recruited. In no instance had any participant received previous exposure to holistic therapies, including HWI. Also, no medication was taken by participants immediately prior to, or during, the ten minute experimental sessions. Any asthmatics on medication continued to take it as normal during the week between the first experimental session, when HWI was delivered, and the second experimental (control) session. This adherence to taking prescribed medication outside of the experimental sessions is in keeping with ethical requirements.

Peak expiratory flow rate (PEFR) was measured in 48 subjects. The peak expiratory flow rate (PEFR) is defined as the maximum flow rate maintained for at least 10 milliseconds during a forced expiration from full inspiration. The easily portable Wright peak flow meter has been the instrument most widely used, (based upon a report to the Medical Research Council by their committee on the etiology of chronic bronchitis).[16]

Peak expiratory flow rate is an index of airway obstruction influenced by the sex, age, musculature and body-build of a subject and is measured in liters per

minute. The peak expiratory flow rate has been shown to be one of the most sensitive spirometric indices to decreasing tracheal diameter and hence was chosen as a correlate of tracheal diameter in this study.

The level of breathing efficiency was assessed prior to and following every control and treatment session using a Wright Peak Flow Meter. The subject was asked to inhale to total lung capacity and then insert the mouthpiece of the flow meter in their mouth. The mouthpiece was inserted between the teeth and an airtight seal achieved with the lips. They then produced a strong sharp burst of exhalation using maximum available force. Three forced peak expiratory flow measurements were taken in every instance and the best of the three used, as with standard clinical procedure. PEFR measurements are commonly taken in clinical settings to ascertain the expiratory reserve volume and hence, in turn, lung function, of asthmatics experiencing breathing difficulties.

Three PEFR readings were taken before and after a ten-minute study period during which HWI was delivered. One week later, the greater majority of the subjects returned and three more PEFR readings were taken before and after a control session. A nomagram was used to provide expected values for peak flow readings in men and women, based on their age and height. Pulse rate was recorded using a Cateye Heartbeat Counter (model PL-6000).

During the initial 10-minute study period, the subject received non-contact HWI, delivered by a trained and practicing healer sitting behind the subject at a distance of one meter. The healer sat facing the back of the subject (the healee) with both feet on the ground and hands resting on the thighs with the palms facing upwards. Both the healer and healee kept their eyes closed throughout the ten-minute study period.

The procedure adopted when a person delivers HWI (the healer) involves them closing their eyes and relaxing into a calm, meditative state. This state is achieved with practice by attempting to clear the mind without falling asleep. The mere act of closing the eyes increases the relative frequency of alpha brainwaves. The meditative state has been shown to result in a higher than normal preponderance of alpha brainwaves, with a subsequent increase in alpha waves in the subject receiving HWI (the healee).[17,18] A theory has been described for how HWI might work.[5]

During the control session the "healer" assumed the same position as in the healing session but did not adopt the "healing mindset" previously described. To prevent the healer from producing the brainwave patterns commonly associated with healing, they read an article situated close by. Having to concentrate on reading would help to ensure that the healer's brainwaves were predominantly in the beta frequency range, generally thought to be not conducive to healing. Should the healer accidentally slip into the "healing mindset," this would only serve to reduce any differences which might be observed between PEFR readings obtained from the "healing" and control sessions.

Data were collected as follows (Table I):

1. Three PEFR measurements taken before a ten-minute period of HWI [PEFR 1]. PEFR 1 serves as the control measurement prior to delivery of HWI.

2. Three PEFR measurements taken after a ten-minute period during which HWI was delivered without the subject's knowledge, i.e., double blind study [PEFR 2].

3. Three PEFR measurements taken approximately one week after the initial session [PEFR 3] when HWI was not delivered (double blind study, as before).

4. Three PEFR measurements taken after a ten-minute control session [PEFR 4].

N.B. Measurements PEFR 3 + PEFR 4 were intended to provide data for a control session when no HWI was delivered. The control session took place about one week after the initial treatment session when HWI was delivered and measurements PEFR I and PEFR 2 were recorded. It was anticipated that any differences between PEFR 1 and PEFR 2 (in asthmatics) could be attributed to the effects of HWI, particularly as no medication was taken by any participants during the 10-minute experimental sessions (either treatment or control). No differences were expected to be seen between PEFR 3 and PEFR 4 recorded during the control sessions. A period of one week was thought to be sufficient to allow PEFR readings to return to normal in asthmatics who may have benefited from the initial HWI session (PEFR 1 and PEFR 2 readings).

Table I
Number of participants participating in each stage of study

Status	PEFR 1	PEFR 2	PEFR 3	PEFR 4
Asthmatics	16	16	16	16
Asthmatics	2	2	2	
Asthmatics	4	4		
Non-asthmatics	20	20	20	20
Non-asthmatics	26	26		

RESULTS

Table I shows the number of asthmatics and non-asthmatics participating in the study. Figures 1 and 2 illustrate readings for peak expiratory flow rates in asthmatics and non-asthmatics before and after receiving HWI. The data were analyzed using the paired *t* test and probability values obtained for asthmatics and non-asthmatics shown in Tables II and III respectively.

It was found that when 22 asthmatics received HWI over a 10-minute period, their peak expiratory flow rates (PEFR) increased significantly (n = 22, PEFR 1+2: p = 0.009) (Table II). Out of these 22 asthmatics, 16 also received a control session one week later (when HWI was not delivered). When considering these 16 participants only, a statistically significant increase in PEFR was still shown following delivery of HWI over a 10-minute period (n = 16, PEFR 1 + 2: p = 0.023) (Table II).

The same 16 subjects also showed a further increase in PEFR one week following the HWI session (compared with their initial reading) and prior to commencement of the control session (n = 16, PEFR 1+3: p = 0.005) (Table II). There was no significant change in PEFR following the control session when HWI was not delivered (n = 16, PEFR 3+4: p = 0.074) (Table II).

When considering the data from the 16 asthmatics that received the HWI and the control session (together with the two subjects who received the HWI

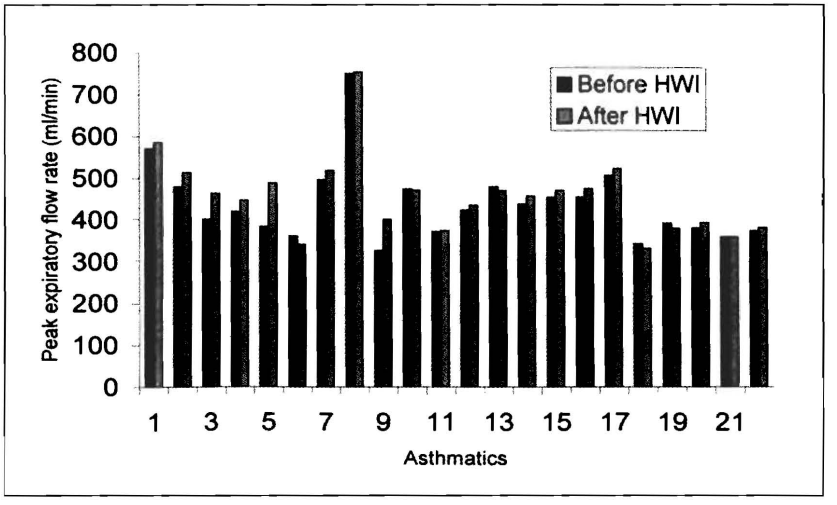

Figure 1. *Peak expiratory flow rate in asthmatics before and after delivery of HWI.*

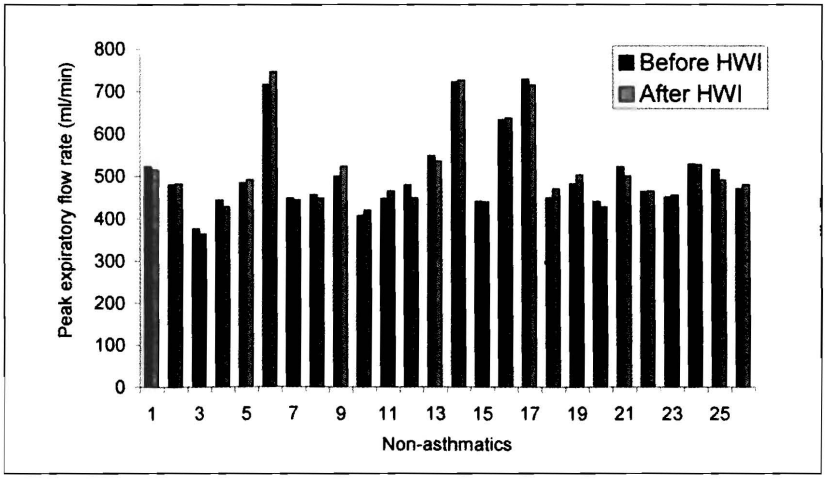

Figure 2. *Peak expiratory flow rate in non-asthmatics before and after delivery of HWI.*

session and provided a further PEFR reading one week later but did not complete the control session) the increase in PEFR a week after receiving HWI becomes even more significant (n = 18, PEFR 1+3: p = 0.003) (Table II).

Table II
Probability (p) values for asthmatics

Asthmatics	PEFR 1+2	PEFR 2+3	PEFR 1+3	PEFR 3+4
16	0.023*	0.256	0.005**	0.074
18	0.022*	0.174	0.003**	
22	0.009**			

$p^* < 0.05$
$pp^{**} < 0.01$

Table III
Probability (p) values for non-asthmatics

Non-asthmatics	PEFR 1+2	PEFR 2+3	PEFR 1+3	PEFR 3+4
20	1.00	0.558	0.622	0.724
26	0.961			

Non-asthmatics showed no significant change in PEFR readings whether receiving HWI or taking part in a control session (Table III).

Table IV shows percentage changes in PEFR in asthmatics and non-asthmatics following delivery of HWI (PEFR 2 - PEFR 1). Of the 22 asthmatics, 16 demonstrated a significant increase in PEFR (p = 0.009), while of the 26 non-asthmatics, 13 showed an increase in PEFR and 13 a decrease (not significant).

DISCUSSION

It would appear then, that the delivery of HWI to diagnosed asthmatics for a period of ten minutes significantly improves breathing efficiency (p = 0.009) as indicated by PEFR readings. The results obtained for the non-asthmatics were as expected, showing no significant change following HWI.

The reasons for no change in PEFR being anticipated in non-asthmatics are that they typically experience no problems breathing and, consequently, PEFR

Table IV

Percentage differences in PEFR in asthmatics and non-asthmatics.

Subject	% change in PEFR after HWI in asthmatics (PEFR 2 - PEFR 1)	% change in PEFR after HWI in non-asthmatics (PEFR 2 - PEFR 1)
1	+ 2.63	- 1.53
2	+ 7.11	+ 0.42
3	+ 15.50	- 3.20
4	+ 6.44	- 3.61
5	+ 27.15	+ 1.66
6	- 5.56	+ 4.20
7	+ 4.44	- 0.90
8	+ 0.40	- 1.76
9	+ 23.08	+ 4.81
10	- 0.63	+ 3.20
11	+ 0.81	+ 4.03
12	+ 2.84	- 6.47
13	- 1.88	- 3.10
14	+ 4.35	+ 0.55
15	+ 3.75	- 0.23
16	+ 4.64	+ 0.63
17	+ 3.37	- 1.92
18	- 3.23	+ 4.91
19	- 3.08	+ 4.35
20	+ 3.43	- 2.95
21	0	- 4.21
22	+ 2.15	+ 0.43
23		+ 1.11
24		- 0.20
25		- 4.66
26		+ 2.13

does not generally vary much from one reading to the next, or indeed from one day to the next. In addition non-asthmatics are considered to be breathing optimally for their individual age, weight and gender, as indicated when data are compared with expected PEFR readings shown on a nomagram.

People suffering from asthma, on the other hand, can demonstrate great variability throughout a 24-hour period, from one day to the next, and between

seasons. The lack of variability between PEFR readings taken with non-asthmatics, compared with the typical variability seen in asthmatics over three consecutive PEFR readings, is one of the features that distinguishes non-asthmatics from asthmatics. PEFR readings in asthmatics are generally much lower than expected values provided by the nomagram therefore, a significant increase in PEFR in asthmatics over a ten-minute period, that is not induced by medication, is worthy of note.

The National Asthma Campaign have commented that a third of GPs will not recommend complementary medicine to their patients, mainly because there is little scientific evidence that it works. In addition, a third of GPs consider it crucial to know whether such therapies work simply by relaxing people, or whether they result in a physical change to the symptoms of asthma. It could be argued, however, that producing a relaxation response in a person is actually a physical effect.

This study has shown that HWI improves breathing efficiency in asthmatics although, as with orthodox treatment, it is not effective for every individual (Table IV). However, as resistance to certain drugs becomes an ever-increasing problem, evidence-based complementary treatments, which have been shown by rigorous scientific testing to be effective, can only help to improve matters. This is particularly important with asthma where mortality from status asthmaticus has been on the rise since 1980, with 1 to 2% of patients dying during an exacerbation.[1]

The mechanism(s) by which HWI exerts its effect on the body can only be speculated upon, though various models have been postulated. These models are essentially based on the effect of the close proximity of one human being to another in a relaxed situation, while one person adopts a compassionate ("healing") mind set directed towards the other.

In previous studies, healers have been shown to produce 70-V surges of electricity in addition to anomalously large magnetic fields from their hands.[19,20] One study demonstrated that during non-contact therapeutic touch (NCTT, which is synonymous with HWI) sessions with patients, the therapists produced body-potential surges ranging from 4 to 190 v.[21] The majority of surges were of negative polarity. In people who regularly meditated, yet were

not experienced in NCTT, no body-potential surges reached 4 v. Zimmerman, while observing magnetic fields produced by a healer's hand, recorded a pulsed signal of variable frequency ranging from 0.3 to 30 Hz, with most of the activity in the range of 7 - 8 Hz.[22] This compounded earlier research by Zimmerman when he identified signals several hundred times larger than background noise that appear while a healer works.[23] It was noticed that some signals seem to be associated with frequencies in the range of alpha and theta waves as seen in the brain.[23]

Sugano *et al.*, noted that EEG changes observed in healers during healing are predominantly an increase in alpha waves across the brain.[24] Increased changes of brain waves from baseline to healing periods were recorded in experienced (effective or expert) healers compared to those less effective. Healers also tend to evidence increased activation of the right hemisphere during healing. Receivers of healing show increased synchronicity of alpha waves as well as increased EEG amplitude in the frontal areas. This observation and that of another study is in agreement with later studies demonstrating that, during healing, the healer's alpha brainwaves synchronize with those of the healee, so that both will be resonating at the same frequency, known as sympathetic resonance.[18,23,24] In addition, healing has been shown to have an effect on enzyme activity, eliminating any possibility of the existence of a placebo effect.[4-8,10,12]

Berden *et al.*, investigated whether electromagnetic field emission from living beings could modify the physical characteristics of water.[25] The results showed that two groups of people existed. One group was capable of imprinting some form of highly reproducible radiation into water, while the other group was capable at most of imprinting only some type of highly variable radiation. They concluded that their results demonstrated further indirect evidence for a form of electromagnetic emission from living beings and that such emission alters water in an as yet unknown way.

The above study also raises the issue that while the ability to deliver HWI may be innate in human beings, it is probable that it varies from one individual to another.

One possible mechanism of action for HWI on breathing efficiency could be the effect of the large magnetic field generated by the healer, which would

encompass the healee, causing sympathetic resonance of magnetite, tiny crystals which exist in the brain cells.[19,20] As the healer's brain waves would be predominantly in the alpha state, the magnetic field, traveling in a vortex, could result in sympathetic resonance between the alpha brainwaves of the healer, the healee and a particular frequency in the earth's geomagnetic field known as the Schumann Resonance (7.8 Hz).[5] It is speculated that this resonance could serve to amplify the magnetic field generated by the hands of the healer by way of constructive interference.[19,20]

The alpha brainwaves of the healee have been shown to synchronize with those of the healer during healing, resulting in an increase in alpha brainwave frequency in the healee.[18,23,24] This, in turn, could exert its effect on the respiratory system of an asthmatic by causing an improvement in airway capability and hence an improvement in breathing efficiency as recorded using peak expiratory flow readings.

CONCLUSION

The results obtained in this study suggest that the delivery of "healing with intent," for a ten-minute period, produces a significant improvement in breathing efficiency in the majority of asthmatics, using peak expiratory flow rate as an indication of lung function. As such, it would appear to be a valid complementary therapy for use with prescribed medication.

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