

# Frozen Shoulder Study

## STUDY RESULTS

*Summary Report and Press Release by Helen Kinnear*

### TELL US ABOUT THE STUDY

We wanted to investigate the effect of the Bowen Technique on patients with long term shoulder pain and stiffness. We used qualified Bowen therapists and set up a clinical trial to monitor the effect of treatment over a six-week period. We also wanted to gather evidence that would clearly address the frequently expressed opinion of the medical profession that complementary medicine works purely as "a placebo".

### HAS THIS BEEN DONE BEFORE?

As far as we know, this is the first UK Bowen study to be completed. We started planning the protocol in late 1997. Bowen is a complementary soft tissue therapy and although it has been in use for some time, there seemed to be a shortage of data to quantify its effect. To rectify this, we decided to monitor the treatment process to investigate the effect of Bowen on a specific condition, in this case non-specific chronic shoulder pain with restricted range of motion – the "frozen" shoulder.

### WHO WAS INVOLVED?

The study was a collaboration between the Research Director Helen Kinnear and Julian Baker of the European College of Bowen Studies. Julian has been a Bowen practitioner and tutor for some time and has been instrumental in setting up a professional training structure for Bowen therapy within the UK. Helen has been interested in Bowen for the past three years and has been using Bowen within her busy sports injuries practice in South Wales. Helen is particularly interested in the use of Bowen for sports injuries and is currently working towards a Ph.D. investigating the effect of Bowen on hamstring injuries in professional football.

Helen says, "Bowen is a very valuable therapy and I was immediately intrigued by how effective it is. I seemed to be using it more and more, both in clinic and on the sports field, but I was a little curious about why it was working. There didn't seem to have been many studies or clinical trials on the effect of Bowen on soft tissue injuries and I was always searching for answers. In the end, Julian suggested we set up a research study to objectively assess its effects and here we are."

### SO WHAT IS BOWEN THERAPY?

The Bowen Technique is a remedial and holistic form of 'hands-on' bodywork, gentle and effective. The practitioner uses thumbs and fingers on precise points of the body to perform Bowen's unique sets of rolling-type moves which stimulate the muscles, soft tissue and energy within the body. These careful moves prompt the body to reset imbalances and heal from injuries and even long-standing complaints, promoting relief of pain and recovery of energy. The experience of a treatment is gentle, subtle and relaxing. There is no manipulation and no force is used. A very wide range of complaints can be resolved with The Bowen Technique. The body normally responds quickly to The Bowen Technique, making it a very time- and cost-effective treatment option.

### WHY STUDY THE "FROZEN" SHOULDER?

This particular shoulder condition was chosen because it is such a common problem and one that results in frustrating debilitation for its sufferers. There can be many reasons for the onset of shoulder pain but in many patients the initial complaint leads to a chronic condition with pain, loss of function and resulting stiffness. The initial pain could be a result of adhesive capsulitis, bursitis, tendonitis, referred cervical pain, etc. but the restricted range of motion can often be self-perpetuating and progressively debilitating. The pain causes an initial reluctance to use the shoulder and this perpetuates the condition, as the shoulder becomes stiffer and stiffer. Bowen therapists have found many patients presenting with these symptoms and it seemed a natural progression to study a condition that was so common. In fact, on requesting volunteers for the study the response was enormous and an incredible 3,000 patients applied for the programme. This shoulder condition was also chosen as its restricted range of motion could be objectively assessed both before and after treatment. This meant there would be no need to rely on the more subjective measure of pain level and any improvements could be measured directly.

### HOW IS IT USUALLY TREATED?

Conventional medical treatment can take many forms and might consist of anti-inflammatory medication, cortisone injections, physiotherapy and possible surgery to manipulate the joint under anaesthetic. There are also options within the complementary medicine field, including acupuncture, remedial massage, homoeopathy and aromatherapy.

### HOW IS THE BOWEN TECHNIQUE DIFFERENT?

Bowen is a gentle, non-invasive treatment and the study was designed to discover the improvement that could be gained without resorting to invasive treatment.

Julian Baker says: It is often described as physical homoeopathy. It allows the client's body to restore its own physical well-being without relying too much on the diagnosis or the intervention of the therapist. It is adaptable to any situation or circumstance with no contrs-indications.

### DID YOU TREAT THE RESEARCH VOLUNTEERS YOURSELF?

No. Due to the number of patients involved, we were unable to do the treatment ourselves. There were 100 patient volunteers in clinical trial. We used existing, experienced Bowen therapists around the country, who were all then specially trained in the research therapy itself and the assessment methods that were going to be used in the clinical trial.

### WHAT TREATMENT WAS GIVEN?

Patients were randomly assigned to either a treatment or placebo group and the actual treatment procedure depended on which group the patient was assigned to – treatment or placebo.

### WHAT IS A PLACEBO GROUP?

This group did not receive Bowen treatment but was given non-Bowen work in a way that would suggest a true treatment. The trial was blind and the patients did not know whether they were receiving treatment or not. This was absolutely crucial to the study.

### WHY WAS THIS SO CRUCIAL?

Complementary therapies are often described as having merely a placebo effect, so the research protocol was designed to distinguish between actual recovery resulting from Bowen and the recovery that could be expected due to the placebo effect, just by the patient believing they were being given treatment. It was also important to determine the strength of the placebo effect. The placebo moves had been previously tested and were known to have no effect on the shoulder condition. Equally important, the placebo moves were also tested to ensure they did not worsen the existing shoulder condition. All placebo patients were treated with Bowen therapy after the first three session.

### HOW MUCH TREATMENT WAS GIVEN?

Both groups of patients received three sessions over a six-week period, the normal Bowen protocol for shoulder pain. They were also given exactly the same aftercare advice. None of the patients had received Bowen therapy before and the therapists were told to give the same description of the technique to both groups. There was no deviation to treat any other conditions that may have been present and the therapists followed the strict protocol exactly.

### THIS MUST BE DIFFICULT. WHAT IF THERE ARE OTHER PROBLEMS?

Yes, it was difficult but all therapists and patients were aware of this before they became involved in the study. The research protocol needs to be kept as tight as possible to minimise the factors that could be thought to contribute to recovery.

Helen says: "It was particularly frustrating as a large proportion of shoulder pain can be linked to neck problems and we knew that treating the neck as well would lead to even better improvements in shoulder function. Again, for the short period of the clinical trials we had to be single-minded and have a certain "tunnel vision". Once the research period was over, patients were able to continue treatment for any other condition that may have been present."

#### HOW DID YOU ASSESS THE PATIENTS?

Patients were initially assessed for overall joint function and specific range of motion for six shoulder movements. The therapists noted the extent and quality of the movement and the patients conducted a self-assessment of their pain level throughout the movements. These assessments were repeated before each session.

#### SO WHAT WERE THE RESULTS?

The results are pleasing and provide a good indication of the effect of Bowen on non-specific chronic shoulder pain and its associated restricted range of motion. The actual results are shown in Table 1.

Helen says: "Although you never approach research with too many expectations, we know that Bowen is an effective therapy, we have seen it working, have seen the effects in our clinics every day. It's strange, you never really know how the results will turn out but they've echoed what we already knew. We know it works – now we can show it works and that feels good."

#### THE RESULTS SEEM A BIT COMPLICATED, GIVE US A SUMMARY.

Okay, basically they show that Bowen significantly improves shoulder function through increasing range of motion and reducing pain.

#### THAT'S GOOD ISN'T IT?

Yes. It shows that patients who had Bowen treatment improved significantly more than patients who received the placebo.

#### WHAT DOES 'STATISTICALLY SIGNIFICANT' MEAN?

This is a measure of our confidence limits and how sure we can be that the shoulder improvements are not due to chance. We have worked at a significance of  $p < 0.05$  or a probability of less than 5 in 100 of it being chance. For some shoulder movements this probability was reduced to less than 1 in 100 so we can be even more certain that the increase in joint function is not due to chance.

#### WHAT MOVEMENTS RESPONDED BEST?

Shoulder flexion (lifting your arm straight out in front of you) and shoulder abduction (lifting your arm out sideways). See the diagrams in the results box. These two results are particularly encouraging and provide enormous potential for the introduction of Bowen into nation-wide treatment programmes for this condition. Not only did we see an improvement in actual range of motion and function but a reduction in pain as well. We feel these results are particularly important as restriction in these movements is a particular problem with this condition.

Helen says: "Patients often complain about the loss of overhead arm movement and even simple tasks like putting a shirt or jumper on can be made very difficult. Also, the shoulder joint should be moved freely each day and lack of use can soon cause adhesions to form within the joint capsule. This perpetuates the pain and stiffness, a vicious circle – but one we know that Bowen can interrupt. It is pleasing that a large number of trial patients had achieved full range of motion after only 3 sessions."

#### COULD THERE BE ANY OTHER REASON FOR THE IMPROVEMENTS?

The protocol was carefully designed to reduce the number of other factors, e.g., it is standard practice for Bowen therapists to advise patients to drink plenty of water for a few days after treatment. Due to the difficulty in monitoring the patient's fluid intake there was no such advice given, to eliminate the possibility of the increased water intake being responsible for the improvement in joint function.

Similarly with rehabilitation. Due to the difficulty in quantifying aftercare, all therapists were instructed not to give any aftercare or exercise advice and although we would normally have recommended capsular stretching exercises, these were not prescribed, again eliminating the variables. Although we would expect even greater shoulder movement if the exercises had been completed, we were determined to eliminate all other factors. All patients were told not to change their lifestyle, activity or medication without informing the therapist. Every effort was made to reduce the likelihood of any lifestyle changes over the treatment period and any significant changes or the presence of any other therapy rendered the patient unsuitable to continue on the programme.

#### SO IN SUMMARY?

The improvement in shoulder function was significantly greater for the treatment group than the placebo group and placebo patients who had not responded showed considerable improvements once Bowen was administered.

#### IS IT BETTER THAN OTHER FORMS OF TREATMENT?

The study has not directly compared Bowen with other forms of therapy – simply against a placebo. Although other forms of treatment, e.g. cortisone injections and surgery may be as effective it is important to note the nature of Bowen. It is a non-invasive, gently "hands-on" treatment with little or no patient discomfort. It is also cost effective with patients showing significant improvements in only 3 sessions, often showing improvements of over 50% after just one treatment. We also need to emphasise that these results occurred with just the basic Bowen shoulder work and did not involve any advanced Bowen moves or exercise therapy. It is reasonable to assume that the results would be even better once these other variables are introduced.

#### SO, GOOD RESULTS. IT SEEMS BOWEN WORKS, SO WHERE NOW?

Although patients have been analysed for shoulder function, we need to have some awareness of the patient as an individual. Bowen is a complementary therapy and offers the patient a holistic treatment. Although the results are significant and have been well received there will be ongoing analysis of more subjective measures focusing on other aspects of the patient's health and well being. The physiological effect of Bowen also needs to be addressed.

Further work could investigate the effect of including stretching and mobilising exercises and more advanced Bowen moves, especially for patients who may have not responded to the basic treatment protocol. There is also need to determine the long-term effect of treatment and the incidence of any recurrence. Future follow-up studies are currently being planned.

Helen Kinnear, Julian Baker and the European College of Bowen Studies would like to thank all patients and therapists who took part in the study. Your contribution is greatly appreciated.

#### ACTUAL RESULTS

1. Following Bowen treatment, the treatment group showed a significant increase in overall range of motion and shoulder function compared to the placebo group.

The average range of motion improvement was 23° for the treatment patients and only 8° for the placebo group. This was the average improvement over all the shoulder movements and is indicative of some movements improving considerably and others not responding much at all.

2. Three shoulder movements showed the greatest improvement. These were the movements of shoulder abduction, flexion and horizontal abduction. These movements are shown below.

Most trial patients had achieved full range of motion in these movements after only three treatment sessions. We were particularly interested in the two movements of shoulder flexion and shoulder abduction which are most indicative of shoulder function. Patients with a chronically stiff and painful shoulder most often complain about loss of function, especially with regard to lifting the arm overhead.

#### SHOULDER ABDUCTION

The range of motion of shoulder abduction improved in 78% of patients compared to just 22% of the placebo patients. The actual improvement is even more exciting, as the treatment group improved by 40° while the placebo group only showed an improvement of 9°. These two results are statistically significant ( $p < 0.05$ ).

#### SHOULDER FLEXION

The shoulder flexion range of motion improved by 28° in the treatment group and only 7° in the placebo group. This was statistically significant at  $p < 0.05$  and shows that Bowen is an effective way to non-invasively increase functional range of motion in the stiff and painful shoulder.

The improvement in range of motion was statistically significant for the treatment group but for the placebo group the improvement, if present at all, was not statistically significant and was no more than would be expected due to chance alone. These two results are particularly encouraging and provide enormous potential for the introduction of Bowen into nation-wide treatment programmes for this condition. Not only did we see an improvement in actual range of motion and function but a reduction in pain as well and, after all, as therapists these have to be our aims.

3. The placebo improvements were higher than expected with 50% of patients showing some improvements. This was in comparison to 67% of treatment patients showing an improvement. However, the extent of the improvement was not statistically significant and was no more than would be expected due to chance alone.

4. Placebo patients were treated with Bowen at the end of the placebo period. This produced unexpected results as, although the patients' range of motion increased significantly, there was not such a great reduction in pain levels. This was compared to the patients who hadn't experienced the placebo period first. This could be due to the fact that pain level is a subjective assessment and the fact that the patients had seen no initial improvement may have led to them subjectively assessing the pain to be more than those who got an initial improvement and therefore felt good about the treatment.

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