Appendix. Trial interventions

Alexander Technique

Alexander Technique is a taught approach: anyone taking Alexander Technique lessons is regarded as learning the technique, not as a patient; lessons are not a form of passive therapy or treatment. The teacher's aim is to teach the Technique and how to make use of it to reduce the intensity and frequency of poor habits and facilitate improvements in co-ordination, muscle tone and musculoskeletal use.[1-3]

Teachers first investigate whether there is something – perhaps a particular habitual way of standing, sitting or moving – that is underlying or exacerbating the problem. Habits that restrict freedom of movement of the head and neck, that cause stiffening and shortening of the spine and commonly result in pain, are given priority of attention and progressively reduced.

How is the AT taught?

During lessons, teachers use frequent hand contact to observe and interpret subtle changes in muscle tone and co-ordination and also to convey non-verbal information. This is integrated with oral and written advice and information.

Hand contact is also used to:

clarify the meaning of verbal explanations and advice

help people:

- direct their attention where needed
- become aware of and release unwanted head, neck and spine muscle tension
- gain immediate feedback
- allow lengthening of the spine
- improve axial muscle tone and coordination
- facilitate the dynamic interrelationships of the head, neck and back
- improve musculoskeletal use
- maintain improvements during activity

Other teaching aids include diagrams, models and the example of the teacher's own manner of use.

The Alexander Technique is taught through practical application to the way of going about simple activities:

initially quiet standing, quiet sitting, then moving from one to the other; or lying semi-supine (see below) on a firm surface;

preparation for and carrying out activity such as walking, crawling, turning, raising a hand, speaking;

later, other activities of general value or of particular interest, such as playing a musical instrument, writing or using a computer.
Difficulties are discussed and resolved.

The content of each lesson varies according to the observed and reported needs and limitations of each individual. All are encouraged to spend some time each day (15-20 minutes) practising the AT while in a semi-supine position (lying on the back with head supported, knees bent and feet flat on supporting surface), and to use the Alexander Technique in their everyday activities.

Lesson pattern in Trial

All lessons were one-to-one.

Participants were usually asked to remove shoes, but otherwise remained fully clothed.

The Society of Teachers of the Alexander Technique (STAT) recommends that 20-30 lessons are normally required for someone to learn enough about the Alexander Technique, and how to make use of it, to gain lasting benefit. No special 'short course' or 'longer course' was devised for the trial. Lessons lasted 30-40 minutes and each participant was encouraged to record the time between lessons dedicated to practising the Alexander Technique. They were provided with a book on the Technique – either *Illustrated Elements of Alexander Technique* (Glynn Macdonald) or *Body Learning* (Michael Gelb).

6 lessons: The first four lessons were at twice-weekly intervals and subsequent lessons weekly. Participants were free to assess their own progress and choose whether to fund further lessons themselves.

24 lessons: 22 lessons were spread over 5 months (6 weeks @2 per week, 6 weeks @1per week, 8 weeks @at 1 per 2 weeks), followed by two revision lessons, one at 7 and one at 9 months.

In practice these schedules were sometimes difficult to achieve. The practical activities used, what was taught, and the pupil's progress and difficulties were recorded on forms designed for the trial.

Alexander Technique teachers

All Alexander Technique teachers in the trial had successfully undergone a three-year training at a STAT-approved course; were current registered members of STAT; and had at least three years' post-qualification experience. Lessons took place at the teacher's

normal place of work, either their home or in a private clinic. Teachers had to agree to using both frequent hand contact and detailed verbal explanation in their lessons.

Therapeutic massage

All Massage therapists were taken from the list of registered practitioners of the Massage Training Institute, had a minimum of two years post-qualification experience and engaged in CPD (Continual Professional Development).

Therapeutic massage is credible to patients and therapists, provides attention and touch but little or no educational element in contrast to Alexander Technique lessons, and was important to assess since it probably provides benefit in its own right[4]. Patients received 6 sessions in accordance with current normal clinical practice, thus providing a comparator for the 6 lesson group. As with the 6 lesson group patients were free to have further sessions of massage at their own discretion, as would happen in normal practice.

The initial consultation involved taking a case-history and drawing up a treatment plan between client and therapist. Assessment was made through postural and mobility observation, dialogue, and palpation. These established the benchmarks such as degree of mobility; suppleness; location, severity, and frequency of pain; associated emotional stress and sleep patterns.

Therapists drew on techniques as appropriate:

from classical Swedish Massage – such as effleurage, kneading, petrissage, and percussion
soft tissue release, including neuromuscular trigger point release
passive and active stretching, including proprioceptive neuromuscular facilitation

Therapists evaluated the short-term and long-term effectiveness of their work by referring back to that particular client's benchmarks.

GP Exercise Prescription

Patients were offered an appointment with a GP and follow-up nurse consultations. The GP appointment was scheduled 6 weeks into the trial to maximise the likely benefit for those groups where exercise and Alexander Technique were combined. The exercise 'prescription' from the GP specified the nature, amount and frequency of exercise, and the date to start. The 'prescription' was given to the participant to display in a prominent place in their house. The GP briefly discussed a structured list of points based on previous behavioural literature[5]: the importance of exercise; finding a regular exercise to incorporate into daily life (either walking or equivalent); aiming for a target of 30

minutes' exercise 5 times per week according to current national guidelines; and anticipating relapse. The patient and GP agreed a suitable form of exercise, which was practical and appealing for that person. Up to 3 follow-up 15-20 minute appointments with a practice nurse (i.e. 4 in total) dealt with the same issues as in the GP advice, provided reinforcement and encouraged maintenance. The nurse used a series of structured written prompts to discuss a checklist similar to that given to the GP and, in addition, had a structured motivational discussion with the patient based on the Theory of Planned Behaviour[6 7-9]: asking about their attitudes to exercise and perceived behavioural control, such as their confidence in being able to exercise. The patient was encouraged to find their own solutions (e.g. if the patient did not feel confident in being able to exercise, the nurse would ask them to think about what would make them more confident). The nurse then ran through a 'behavioural rehearsal' with the patient i.e. where and when exercise was likely to take place to increase the likelihood of implementation. An agreed target and contract to exercise was signed by the patient, witnessed by the nurse, and the patient given a diary to record sessions of exercise.

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