1

Spontaneous positional release

CHAPTER CONTENTS

Positional release (PR)

This introductory chapter contains a review of a variety of ways in which the practical application of positional release methodology can be used therapeutically. The idea behind the techniques is very simple indeed, although the application itself can require great skill and delicacy of touch.

If tissues are inappropriately tense, indurated, hypertonic, shortened or contracted, the therapeutic intent is usually to release these undesirable states in order to encourage a retreat of restriction barriers.

The methods that can achieve this are commonly of a direct nature. The soft tissue in question may be stretched, massaged, mobilized and manipulated using any of dozens of perfectly appropriate techniques. However, if the tissues are painful, in spasm, inflamed, or have recently been traumatized, or if the available manual method induces discomfort, then an alternative approach is called for.

Ideally, an approach is required that causes little discomfort while allowing a spontaneous resolution of the tense, dysfunctional state of the tissues. The cluster of methods that can be grouped as *positional release techniques* (PRTs), and which this text attempts to describe, offer precisely these opportunities.

Positional release techniques belong mainly (not entirely as will be explained) to that class of modalities that *invite* change, rather than *forcing* change, when treating dysfunctional tissues.

Consider a muscle that has shortened due to overuse or misuse, and that harbors within it active trigger points.

A direct approach that enforces lengthening might involve – as examples – myofascial release, or muscle energy/proprioceptive neuromuscular facilitation (PNF) type stretching. These methods might well be appropriate and helpful in restoring a degree of normality to the tissues. There might also be circumstances when such methods would be inappropriate – for example, if the condition involved inflammation or tissue damage.

A positional release approach to treating a hypertonic, contracted dysfunctional condition would not enforce lengthening or stretching, but would attempt to find a way (depending on which PRT variation was selected) of offering an 'opportunity for change' to the tissues. This might involve disengaging from the barrier and holding or supporting the hypertonic, contracted tissues in a painless but even more shortened state, 'allowing' a spontaneous change to take place.

An even more obvious example would be to compare use of a high-velocity thrust to 'release' a blocked joint, with a positional release method that simply holds the joint in a balanced, unstressed position waiting for a change to occur.

Examples of these methods of the application of positional release methods to soft tissues and joints are described in Chapters 3, 4 and 5.

As will become clear, there are a number of different ways of incorporating such indirect, extremely gentle, methods into a treatment protocol.

- Osteopathic medicine has contributed three of the main positional release approaches – strain/counterstrain, functional technique and facilitated positional release (Johnstone 1997, McPartland & Zigler 1993). These are discussed extensively in Chapters 6 and 7.
- Chiropractic has developed its own positional release variations, many of them to be found in what is known as sacro-occipital technique; see Chapter 8.
- Physical therapy has produced a number of innovative concepts and methods that incorporate positional release methodology, such as aspects of Mulligan's mobilization with movement (MWM) approaches (NAGs, SNAGs, etc.) as discussed in Chapter 10.
- Also emerging largely from the physical therapy world are methods that unload soft tissues and joints, and support them in this unloaded state by taping them. These approaches are described in Chapter 11.
- The important work of McKenzie in managing some forms of back pain also has a background in physical therapy, and those aspects of the work that relate to positional release are to be found in Chapter 9.
- And, finally, a combination of these methods have been successfully applied to animals, most effectively in treatment of horses. Equine positional release is detailed in Chapter 12.

As this (growing) list of variations suggests, there are a number of different methods involving the positioning of an area of the body, or the whole body, in such a way as to evoke a therapeutically significant physiological response which helps to resolve musculoskeletal dysfunction.

The means whereby these beneficial changes occur seems to involve a combination of the neurological and circulatory changes that take place when a distressed area is placed into its most comfortable, its most 'easy', most pain-free position. The theoretical basis for the efficacy of positional release will be outlined in Chapter 3.

Terminology

The developer of functional technique, one of the major methods of spontaneous positional release (discussed in this chapter and in Chapter 6), was Harold V. Hoover. He used the term 'dynamic neutral' (Hoover 1969) to describe what was being achieved as the tissues relating to a structurally disturbed joint or area were positioned into a state of 'ease'. Charles Bowles (1969) has discussed 'dynamic neutral' further. He states:

> *Dynamic neutral is a state in which tissues find themselves when the motion of the structure they serve is free, unrestricted and within the range of normal physiological limits … Dynamic neutral is not a static condition … it is a continuing state of normal, during living motion, during living activity … it is the state and condition to be restored to a dysfunctional area.*

As explanations and descriptions are offered for the spontaneous physiological responses that take place when tissues are placed into a balanced state, in this and later chapters, the terms 'ease' and 'bind' will frequently be used to describe the extremes of restriction and freedom of movement. The term 'dynamic neutral' may be considered as being interchangeable with 'maximal ease'.

Jones's contribution

The impetus towards the use of this most basic and noninvasive of treatment approaches in a coherent, rather than a hit-and-miss, manner lies in the work of Lawrence Jones, who developed an approach to somatic dysfunction (Jones 1981) that he termed 'strain and counterstrain' (SCS) (described in detail in Chapter 3). Walther (1988) describes the moment of discovery in these words:

> *Jones's initial observation of the efficacy of counterstrain was with a patient who was unresponsive to treatment. The patient had been unable to sleep because of pain. Jones attempted to find a comfortable position for the patient to aid him in sleeping. After 20 minutes of trial and error, a position was finally achieved in which the patient's pain was relieved. Leaving the patient in this*

position for a short time, Jones was astonished when the patient came out of the position and was able to stand comfortably erect. The relief of pain was lasting and the patient made an uneventful recovery.

The position of 'ease' that Jones identified for this patient was an exaggeration of the position in which spasm was holding him, and this provided Jones with an insight into the mechanisms involved.

Over the years since Jones first made his observation that a position that exaggerated a patient's distortion could provide the opportunity for a release of spasm and hypertonicity, many variations on this basic theme have emerged, some building logically on that first insight, with others moving in new directions.

The positional release methods summarized in this chapter, and in Box 1.2, are as comprehensive as possible at the time of writing; however, new versions are regularly appearing, and the author acknowledges that it has been impossible to exhaustively detail all variations.

Common basis

One of the commonalities of many of these approaches is that they move the patient, or the affected tissues, away from any resistance barriers and towards positions of comfort.

The shorthand terms used for these two extremes are 'bind' and 'ease' – which anyone who has handled the human body will recognize as extremely apt descriptors.

The need for the many variations to be understood should be obvious.

Different clinical settings require the availability of a variety of therapeutic approaches.

An example described in more detail in Chapter 4 involves a group of severely ill pre- and post-operative, bed-bound patients who were treated for their current pain and discomfort, without leaving their beds. In such a setting, no rigid application of procedures can be adhered to, and flexibility can best be achieved by the practitioner/therapist having available a variety of ways of reaching the same ends (Schwartz 1986).

Jones's approach uses verbal feedback from the patient as to tenderness in a 'tender' point which is being used as a monitor, and which the practitioner/therapist is palpating while attempting to find a position of ease.

It is possible to imagine situations in which the use of Jones's 'tender points as a monitor' method (Chapter 3) would be inappropriate or actually impossible, for example, in the case of someone who had lost the ability to communicate verbally, or who did not speak the same language, or who was too young or too ill to offer verbal feedback. In such a case a need would be apparent for a method that allowed the practitioner/therapist to achieve the same ends without verbal communication.

This is possible, as will be demonstrated, using either 'functional' methods or facilitated positional release approaches, which involve the practitioner/therapist finding a position of maximum ease by means of palpation alone, assessing for a state of 'ease' in the tissues. This approach is described in later chapters in more detail.

As we examine a number of the variations on the same theme of positional release, release by placing the patient, or area, into 'ease', the diverse clinical and therapeutic potentials for the use of this approach will become clearer.

It is important to note that if positional release methods are being applied to chronically fibrosed tissue the result may well be expected to produce a reduction in hypertonicity, but would not result in any reduction in fibrosis.

Pain relief or improved mobility may therefore be only temporary or partial in such cases. This does not nullify the usefulness of PRT in chronic settings, but emphasizes the need to use PRT methods as part of an integrated approach. This will be seen to be of particular value in deactivation of myofascial trigger points, using a combination of manual methods in a sequence known as integrated neuromuscular inhibition technique – INIT (see below, and Chapter 5).

'Unlatching' restrictions

Upledger & Vredevoogd (1983) give a practical explanation of indirect methods of treatment, especially as related to cranial therapy. The idea of moving a restricted area in the direction of ease is, they say, 'a sort of "unlatching" principle. Often in order to open a latch we must first exaggerate its closure'. The application of positional release methods in cranial structures is explored further in Chapter 4.

In normal tissues there exists in the midrange of motion an area of 'ease' or balance, where the tissues are at their least tense.

When there is a restriction in the normal range of motion of an area, whether of osseous or soft-tissue origin, the now limited range will almost always still have a place, a moment, a point, which is neutral, of maximum comfort, or ease, usually lying somewhere between the new restriction barrier in one direction, and the physiological barrier in the other. Finding this balance point, also known as 'dynamic neutral', is a key element in PRT. Staying in this 'ease' state for an appropriate length of time (see below) offers restrictions a chance to 'unlatch', release, normalize.

In this way it can be seen that the positioning element of the process is the preparation for the treatment to commence, and that the 'treatment' itself is self-generated by the tissues (nervous system, circulatory system, etc.), in response to this careful positioning. This helps to explain Jones's original name for what became strain/counterstrain, which he first termed 'spontaneous release by positioning' (Greenman 1996).

All of the variations on the theme of positional release, described briefly below and in the summary at the end of this chapter (Box 1.2), are discussed in greater detail in later chapters.

What are 'tender points'?

Jones (1981) described the localized areas associated with distressed and dysfunctional tissues as 'tender points. The characteristics of these are discussed in Box 1.1.

PR VARIATIONS

1. Exaggeration of distortion

This is one aspect of SCS methodology.

Take the example of an individual bent forward in psoas spasm/lumbago. This would involve someone in considerable discomfort or pain, who was also posturally distorted – bent forward into flexion, together with rotation and side-bending. Any attempt by the person (or the practitioner) to straighten the individual towards a more physiologically normal posture would be met by increased pain and a great deal of resistance. Movement toward, or engagement of, the resistance barrier would therefore not be an ideal first option.

However, moving the area *away from* the restriction barrier in such a situation is not usually a problem. Clinical experience has shown that the position required to find the position of 'ease' for someone in this state normally involves painlessly increasing the degree of distortion displayed, placing the person (in the example given) into some variation based on forward bending (possibly supine or while side-lying rather than weight-bearing – see examples in Chapter 3) until pain is found to reduce or resolve.

After 60 to 90 seconds in this 'position of ease', a slow return to neutral would be carried out and theoretically – and commonly in practice – the patient would be somewhat or completely relieved of pain and spasm.

Box 1.1 What are 'tender points?

As tissues adapt and modify due to the effects of age, overuse, misuse, disuse, etc. (see Chapter 2 for discussion of the evolution of soft-tissue dysfunction), localized areas of ischemic, sensitized tissues develop.

A variety of biomechanical, biochemical, neurological, circulatory and psychological influences are associated with such changes, which gradually evolve from sensitivity to discomfort, and eventually pain (Mense & Simons 2001).

A general term that can be applied to such tissues, whatever level of the spectrum of dysfunction happens to be operating, is hyperalgesia (Lewit 1999).

A simpler, more user-friendly word, is 'tender' (Jones 1981).

Whether such points are in their early embryonic formative stages, or have reached the state of being active myofascial trigger points, they are tender, and this is the term given in SCS methodology to points used in the protocol of assessment and treatment (see Chapter 3).

2. Replication of position of strain

This is another element of SCS methodology.

Let us take an example of someone who is bending to lift a load when an emergency stabilization is required, as strain, and perhaps spasm, results (the person slips or the load shifts – see notes on the mechanisms involved in SCS in Chapter 3). The patient would then be locked into the same position of 'lumbago-like' antalgic distortion as described in variation 1 above.

If, as SCS suggests, the position of ease commonly equals the position of strain – then the patient needs to go back into flexion – in slow motion – until tenderness vanishes from the monitored tender point and/or a sense of ease is perceived in the previously hypertonic shortened tissues. Adding small 'fine-tuning' positioning to the initial position of ease achieved by flexion usually achieves a situation in which there is a maximum reduction in pain.

This position is held for 60 to 90 seconds before slowly returning the patient to neutral, at which time, as in example 1 above, a partial or total resolution of hypertonicity, spasm and pain should be noted.

It should be obvious that the position of strain, as just described, is probably going to be an exact duplication of the position of exaggeration of distortion – as in variation 1.

These two elements of SCS – 'exaggeration of existing distortion' and 'replication of the position of strain' –

are of limited clinical value, and are described as examples only, since patients can rarely describe precisely the way in which their symptoms developed. Nor is obvious spasm such as torticollis or acute anteflexion spasm ('lumbago') the norm.

Note: It is strongly recommended that attention be paid to chronic distortion patterns, where adaptive shortening and crowding have occurred over a period of years, rather than as a result of acute strains, as positional release of chronic holding patterns can be a valuable approach in patient management.

Alternative methods, other than 'exaggerated distortion' and 'replication of position of strain', are needed in order to be able to easily identify probable positions of ease.

3. Using Jones's tender points as monitors

(Jones 1981)

Over many years of clinical experience Jones compiled charts and lists of specific tender point areas, relating to every imaginable strain, involving most of the joints and muscles of the body.

These are his 'proven' (by clinical experience) points. The tender points that he described are usually found in tissues that were in a shortened state at the time of strain, rather than those that were stretched, and in tissues that have become chronically shortened over time.

New points – outside of the Jones lists and charts – are periodically reported in the osteopathic literature; for example, a group of sacral foramen points relating to sacroiliac strains were identified and described by Ramirez et al (1989); see Chapter 3.

Jones and his followers have also provided strict guidelines for achieving ease in any tender points which are being palpated (the position of ease usually involving a 'folding' or crowding of the tissues in which the tender point lies).

This method is described in detail elsewhere in the text (Chapter 3) and involves maintaining pressure on the monitor tender point, or periodically probing it, as a position is achieved in which:

- there is no additional pain in whatever area is symptomatic, and
- pain in the monitored point has reduced by at least 70%.

This is then held for an appropriate length of time (90 seconds, according to Jones; however, there are marked variations in the suggested length of time that tissues need to be held in the position of ease, as will become apparent in the discussions of the many variables available in positional release methodology).

In the example of the person with acute low back pain who is locked in flexion, the tender point will usually be located on the anterior surface of the abdomen, in the muscle structures that were short at the time of strain (when the patient was in flexion), and the position that removes tenderness from this point will, as in previous examples, usually require flexion and probably some fine-tuning involving rotation and/or side-bending.

If there is a problem with Jones's formulaic approach it is that, while he is frequently correct as to the position of ease recommended for particular points, he is sometimes wrong. Or, to put it differently, the mechanics of the particular strain with which the practitioner/therapist is confronted may not coincide with Jones's guidelines.

A practitioner/therapist who relies solely on Jones's 'menus' or formulae could find difficulty in handling a situation in which use of the prescribed tender points fails to produce the desired results. Reliance on Jones's menu of points and positions can therefore lead to the practitioner/therapist becoming dependent on them, and it is suggested that use of palpation skills, and other variations on Jones's original observations, offers a more rounded approach to dealing with strain and pain.

Fortunately, Goodheart and others have offered less rigid frameworks within which to work using positional release mechanisms.

4. Goodheart's approach

(Goodheart 1984, Walther 1988)

George Goodheart (the chiropractor who developed applied kinesiology) has described an almost universally applicable formula that relies more on the individual features displayed by the patient, and less on rigid formulae, as used in Jones's approach.

Goodheart suggests that a suitable tender point be sought in the tissues *antagonistic to* those active when pain or restriction is noted. If pain or restriction is reported, or is apparent on any given movement, the *antagonist* muscles to those operating at the time pain is noted will be those that house the tender point(s).

Thus, for example, pain (wherever it is felt) that occurs when the neck is being turned to the left will require that a tender point be located in the muscles that would turn the head to the right.

In the earlier example of a person locked in forward bending with acute pain and spasm, using Goodheart's approach, pain and restriction would be experienced as the person attempted to straighten up (i.e. moving into extension) from the position of enforced flexion.

The action of straightening up would usually cause pain in the back but, irrespective of where the pain is

noted, the tender point would be sought (and subsequently treated by being taken to a state of ease) in the muscles *opposite those working when pain was experienced* – i.e. it would lie in the flexor muscles (probably psoas) in this example.

It is important to emphasize that tender points that are going to be used as 'monitors' during the positioning phase of this approach are not sought in the muscles opposite those where pain is experienced, but in the muscles opposite those that are actively moving the patient, or area, when pain or restriction is noted.

Goodheart has added a number of modifications to the application of SCS that will be elaborated on in later chapters. These relate primarily to the confirmation of a muscle's 'suitability' for treatment by assessing its response to a short isometric contraction – if the muscle is likely to benefit from SCS, Goodheart suggests that it should 'weaken' following an isometric contraction. They also relate to the use of a neuromuscular stretch technique applied to the tissues around the apparently dysfunctional muscle spindle during the holding of the position of ease (see Chapter 5).

5. Functional technique *(Bowles 1981, Hoover 1969)*

Osteopathic functional technique ignores pain as its guide to the position of ease and relies instead on a reduction in palpated tone in stressed (hypertonic/spasmed) tissues as the body (or part) is being positioned, or fine-tuned, in relation to all potential directions of movement in a given region.

A position of combined ease is achieved using what is known as a 'stacking' sequence, explained and described in detail in a later chapter (Chapter 6).

One hand palpates the affected tissues (molded to them, without invasive pressure). This is described as the 'listening' hand, since it assesses changes in tone as the practitioner/therapist's other hand guides the patient (or part) through a sequence of positions that are aimed at enhancing ease and reducing bind.

A sequence of evaluations is carried out, each involving different directions of movement (flexion/extension, rotation right and left, side-bending right and left, etc.) with each new movement starting at the point of maximum ease revealed during the previous evaluation, or combined points of ease of a number of previous evaluations. In this way, one position of ease is 'stacked' onto another, until all directions of movement have been assessed for ease.

If the same patient with the low back problem, as previously discussed, was being treated using functional technique, the tense tissues in the low back would be the ones being palpated.

Following a sequence of flexion/extension, side-bending and rotating in each direction, translation right and left, translation anterior and posterior, and compression/distraction (so involving all available directions of movement of the area) a position of maximum ease would be arrived at. If this 'stacked' position of ease is held for 30 to 90 seconds, a release of hypertonicity and reduction in pain should result.

The precise sequence in which the various directions of motion are evaluated seems to be irrelevant, as long as all possibilities are included.

Theoretically (and usually, in practice) the position of palpated maximum ease (reduced tone) in the distressed tissues should correspond with the position that would have been found were pain being used as a guide, as in either Jones's or Goodheart's approach, or if the more basic 'exaggeration of distortion' or 'replication of position of strain' were being used as guides to positioning.

An exercise in this form of palpation (which, when complete, produces the 'combined' position of ease) will be found in Chapter 6.

6. Any painful point as a starting place for SCS *(McPartland & Zigler 1993)*

All areas that palpate as painful are responding to, or are associated with, some degree of imbalance, dysfunction or reflexive activity that may well involve acute strain or chronic adaptation. However, whether we can identify the complex strain pattern is an open question.

The Jones approach identifies the likely position of tender points relating to particular strain patterns (everted ankle, lumbar flexion strain, etc.).

However, it makes just as much sense to consider that any painful point identified during soft-tissue evaluation, massage or palpation (including a search for trigger points) can be treated by positional release, whether we know what strain produced it or not, and whether the problem is acute or chronic.

Experience, and simple logic, tells us that the response to positional release of a chronically fibrosed area will be less dramatic than from tissues held in simple spasm or hypertonicity. Nevertheless, even in chronic settings, a degree of release and ease can be produced, allowing for easier access to the deeper fibrosis.

This approach, of being able to treat any painful tissue using positional release, is valid whether the pain is being monitored via feedback from the patient (using reducing levels of pain in the palpated point as a guide – i.e. strain/counterstrain) or whether the functional technique concept of assessing a reduction in tone in the tissues is being used.

A period of 60 to 90 seconds is recommended as the time for holding the position of maximum ease – although some (such as Marsh Morrison – see variation 8 below) suggest just 20 seconds.

7. Facilitated positional release (FPR) *(Schiowitz 1990)*

This variation on the theme of functional and SCS methods involves the positioning of the distressed area into the direction of its greatest freedom of movement, starting from a position of 'neutral' in terms of the overall body position.

To start with, the seated patient's sagittal posture might be modified to take the body or the part (neck for example) into a more 'neutral' position – a balance between flexion and extension – following which, an application of a facilitating force (usually a crowding of the tissues) would be introduced. No pain monitor is used but rather a palpating/listening hand is applied (as in functional technique) which senses for changes in ease and bind in distressed tissues as the body/part is carefully positioned and repositioned.

The final 'crowding' of the tissues, to encourage a 'slackening' of local tension, is the facilitating aspect of the process, according to its theorists. This 'crowding' might involve compression applied through the long axis of a limb, perhaps, or directly downwards through the spine via cranially applied pressure, or some such variation.

The length of time the position of ease is held is usually suggested at around 5 seconds. It is claimed that altered tissue texture, either surface or deep, can be successfully treated in this way.

FPR will be evaluated and discussed in greater detail in Chapter 7.

8. Induration technique

Texan chiropractor Marsh Morrison (1969) suggested very light palpation, using extremely light touch, as a means of feeling a 'drag' sensation (see notes on palpation in Chapter 3) alongside the spine (as lateral as the tips of the transverse processes).

Drag palpation identifies areas of increased hydrosis, which is a physiological response to increased sympathetic activity and is an invariable factor in skin overlying trigger points, and other forms of reflexively induced or active myofascial areas ('hyperalgesic skin zones') (Lewit 1999). Once drag is noted, pressure into the tissues normally results in a report of pain.

- The practitioner/therapist stands on the side of the prone patient opposite the side in which pain has been discovered in these paraspinal tissues.
- Once located, tender or painful points (lying no more lateral than the tip of the transverse process) are palpated for the level of their sensitivity to pressure.
- Once confirmed as painful, the point is held by firm thumb pressure while, with the soft thenar eminence of the other hand, the tip of the spinous process most adjacent to the pain point is very gently eased towards the pain (ounces of pressure only), so crowding and slackening the tissues being palpated, until pain reduces by at least 70% (Fig. 1.1).
- Direct pressure of this sort (lightly applied) towards the pain should lessen the degree of tissue contraction and the sensitivity.
- If it does not do so, then the angle of push on the spinous process towards the painful spot should be varied slightly so that, somewhere within an arc embracing a half circle, an angle of push towards the pain will be found to abolish the pain totally and will lessen the objective feeling of tension.
- This position is held for 20 seconds, after which the next point is treated.
- A full spinal treatment is possible using this extremely gentle approach which incorporates the same principles as SCS and functional technique, the achievement of ease and pain reduction as the treatment focus.

9. Integrated neuromuscular inhibition technique (INIT)

INIT (Chaitow 1994) uses a 'position of ease' involving tissues housing a trigger point, as part of a sequence

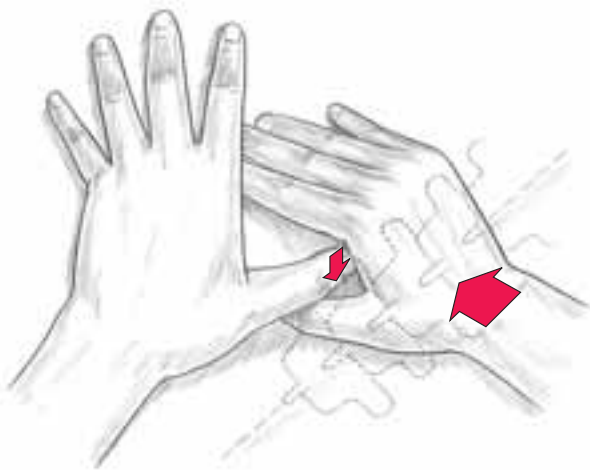


Figure 1.1 Induration technique hand positions. Pressure used on the spinous processes is measured in ounces (grams) at most.

for its deactivation ('trigger point release') (Mense & Simons 2001).

Note: A precise INIT protocol is given in Chapter 5; the outline below offers only a framework.

- The sequence commences with the location of a tender/pain/trigger point.
- This is followed by application of ischemic compression (this is optional and is avoided if pain is too intense or the patient too fragile or sensitive).
- Following the period of intermittent or constant pressure a positional release of the tissues is introduced (as in the SCS methodology described above).
- After an appropriate length of time, during which the tissues are held in 'ease', the patient is asked to introduce an isometric contraction into the affected tissues (muscle energy technique) for approximately 7 seconds.
- After the contraction the local tissues surrounding the trigger point are stretched for not less than 30 seconds.
- An isometric contraction and stretch involving the whole muscle is then performed – again for not less than 30 seconds.
- Methods to facilitate activation of the antagonists to the muscles involved are then introduced.

10. Proprioceptive taping

A quite different approach, practical aspects of which will be touched on in Chapter 11, is 'unloading' taping; a physiotherapy variant on PRT (Fig. 1.2).

This is a method that seems to incorporate many of the principles associated with PRT.

In recent years, for example, physiotherapists have treated specific conditions, commonly involving knee and/or shoulder dysfunction, by applying supportive taping to 'unload' the affected joints (spinal unloading is also used at times). Morrissey (2000) explains:

> *Proprioception is a critical component of co-ordinated shoulder movement with significant deficits having been identified in pathological and fatigued shoulders (Carpenter 1998). It is an integral part of rehabilitation programs to attempt to minimize or reverse these proprioceptive deficits. Taping is a useful adjunct to a patient-specific integrated treatment approach aiming to restore full pain-free movement to the shoulder girdle. Taping is particularly useful in addressing movement faults at the scapulo-thoracic, gleno-humeral and acromio-clavicular joints. The exact mechanisms by which shoulder taping is effective is not yet clear but the suggestion is that the effects are both proprioceptive and mechanical.*

It is interesting to note that some of the methods used in taping deliberately place distressed joints and tissues into ease positions for hours, or even days, with marked benefit. Additional information regarding this approach will be found in Chapter 11.

11. Mobilization with movement (MWM)

In Chapter 10, Ed Wilson et al have outlined the features of mobilization with movement (MWM) and its variants, as developed by New Zealand physiotherapist Brian Mulligan (1992).

The methodology of MWM has elements that equate closely with positional release principles. Features of the MWM methods as used in treatment of cervical and upper thoracic facet joint dysfunctions are as follows:

- The methods carry the acronym SNAGs, for 'sustained natural apophyseal glides'.
- SNAGs are used to treat restriction or pain experienced on flexion, extension, side-flexion or rotation of the cervical spine, usually from C3 and lower.
- It is essential to be aware of the facet angles of the segments being treated.
- Patient is weight-bearing, usually seated.
- Movements are actively performed by the patient, in the direction of restriction, while the practitioner passively holds an area (in the cervical and thoracic spine it is the segment immediately cephalad to the restriction) in anterior translation.
- This passive light pressure represents the positional release element of the method.

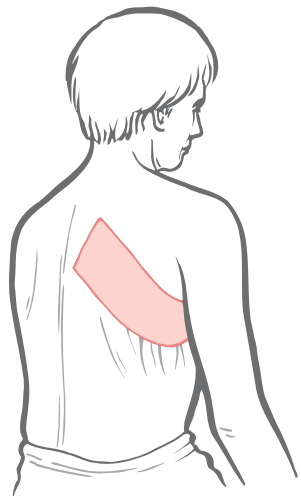


Figure 1.2 Proprioceptive taping for serratus anterior facilitation and inferior angle abduction.

- In the cervical spine the facet plane is towards the eyes.
- Residual stiffness/soreness is to be anticipated on the following day.
- The patient may usefully apply 'overpressure' to reinforce movement towards the restriction barrier.
- The same procedure is performed several times.
- Instant functional improvement is likely.
- At no time should pain be experienced.

The mechanisms whereby MWM methods achieve their effects are as yet uncertain.

Wilson hypothesizes that all joint abnormalities create afferent output which sensitizes (facilitates) the central nervous system (CNS), particularly the wide dynamic range (WDR) cells of the dorsal horn (Korr 1976). This creates efferent discharge to, and alters tone in, muscles controlling the joint, creating a vicious circle.

In the absence of intra- or extra-articular pathology, if the CNS can be offered normal afferent input for a period, muscle contractile power may alter, realigning joint biomechanics and helping to break into the cycle of dysfunction. By halting the excitatory barrage, a previously painful movement may become pain-free. Additionally, normal mechanoreceptor input from active muscles (as in SNAGs) should enhance normal function.

12. McKenzie's methods

By careful assessment of the effects of different movements and positions on existing pain (commonly involving extension of the spine), the McKenzie method attempts to identify those that effectively centralize pain (Fig. 1.3A, B).

Those movements or positions that centralize peripheral or extremity symptoms are prescribed as self-treatment (McKenzie 1990). For example, in a patient with sciatica (referred symptoms in the leg coming from the spinal S1 nerve root), movements or positions are explored in the hope of finding those which 'centralize' symptoms towards the low back. Symptom centralization is seen to be a good prognostic sign (Timm 1994).

The McKenzie concept is fully described in Chapter 9.

13. Sacro-occipital 'blocking' techniques (SOT)

In 1964 DeJarnette (1967) introduced the use of pelvic wedges (padded blocks, made from foam or wood) to allow gentle repositioning of the pelvis or spine.

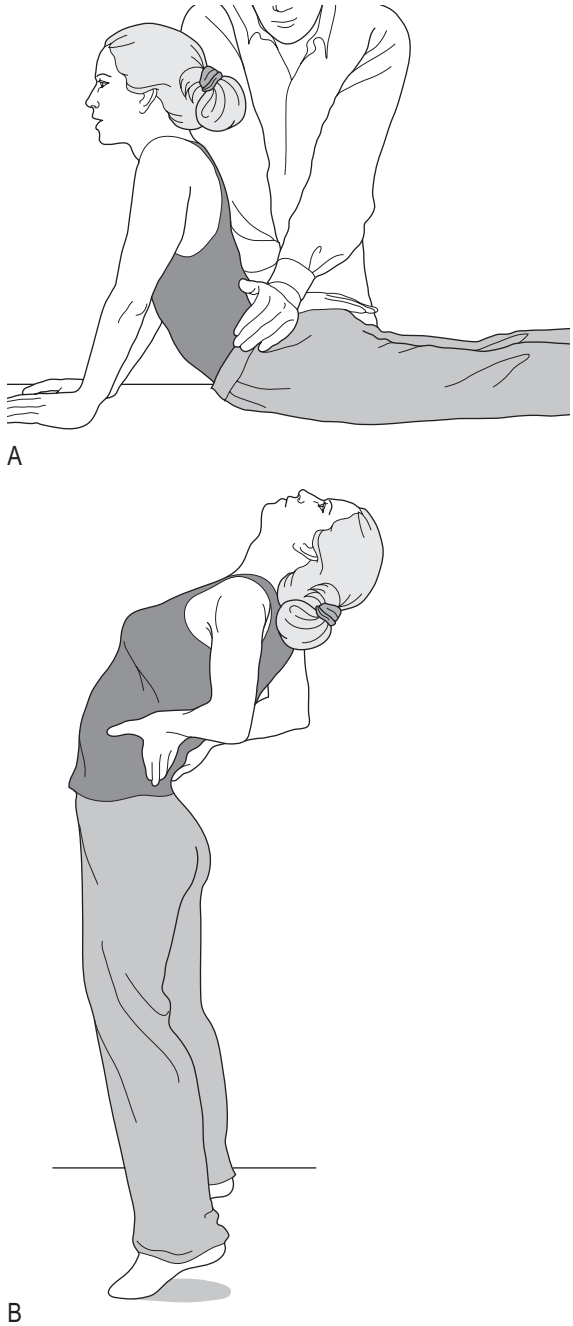
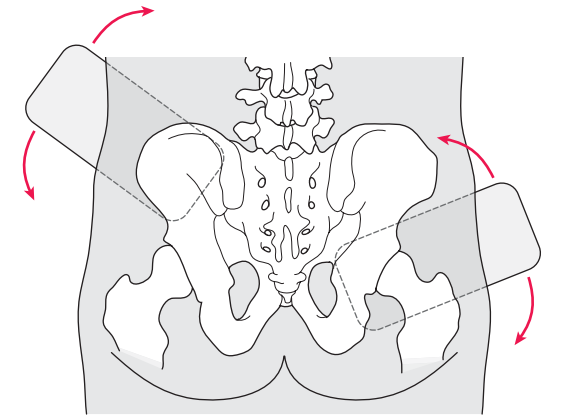
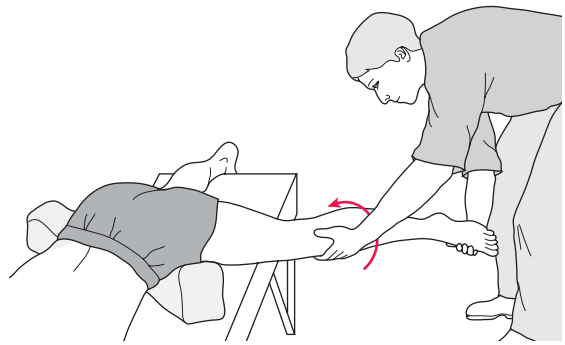


Figure 1.3 (A) McKenzie extension position with practitioner adding overpressure. (B) Patient self-application of extension.

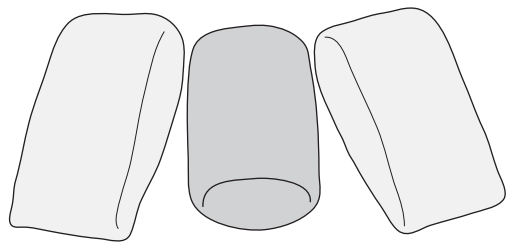
The supine or prone patient (this is decided based on establishment of 'categories' of dysfunction) is positioned and supported by the blocks to allow changes to take place spontaneously (Fig. 1.4A, B, C).



A



B



C

Figure 1.4 (A) Placement of blocks for particular positioning. (B) Treatment or assessment while positionally blocked. (C) Various solid and 'air' blocks.

DeJarnette is reported as saying that: 'the tableboard provided the foundation for the blocks, so that when the patient breathes this energy can be transmitted to motion for correction of the subluxation dysfunction' (Heese 1991).

Unger (1998) has demonstrated positive effects on muscle strength following use of 'blocking' techniques. These methods are described fully in Chapter 8.

14. Other approaches

There are a variety of methods involving positional release that do not quite fit into any of the categories listed above. These range from an effective rib-release technique devised by the founder of cranial osteopathy, W. G. Sutherland, and described by P. E. Kimberley (1980) to various cranial techniques described by John Upledger (Upledger & Vredevoogd 1983) and others, as well as fascial restriction techniques described by Jerry Dickey (1989) and variations modified by George Goodheart (Walther 1988). Some of these methods will be described in later chapters.

Commonalities and differences

Many of the PRT methods have in common an objective of reduction in the tone of distressed tissues associated with the dysfunction being treated.

The means whereby this is achieved vary, some (strain/counterstrain) using reduced pain levels as a guide to the comfort/ease position, and others using variations on palpated change (functional and facilitated positional release methods).

Some methods are entirely passive (SCS, functional, FPR, SOT blocks, taping), while some are active (McKenzie methods), and a few involve a combination of active and passive activity (mobilization with movement).

Apart from the technical differences of application, the differences between the various methods relate largely to details concerning how long the ease position should be held, including guideline timings such as:

- under 5 seconds for facilitated positional release
- 90 seconds for strain/counterstrain and functional technique
- 3 minutes or more for treatment of neurological conditions (Weiselfish 1993)
- up to 20 minutes with some aspects of positional release therapy (D'Ambrogio & Roth 1997)
- hours or days in physiotherapy taping.

These issues will be explored in later chapters.

In the next chapter an outline is offered of the ways in which dysfunction evolves as a process of (failed?) adaptation, and how positional release methods can offer some solutions.

Box 1.2 Summary of PR variations

All positional release methods require that positioning should be performed slowly, without introducing any additional pain to the patient.

In all variations, a slow return to neutral is advised following the holding of the position of ease.

Most of the positional release methods involve motion into ease, away from bind, using a slackening, crowding or 'folding' of dysfunctional tissues, in order (it is thought) to facilitate muscle spindle resetting and improved function.

Despite the gentleness of the methods there is commonly a reaction involving stiffness and possibly discomfort on the day following treatment, as tissues adjust to their new situation and adaptation processes accommodate these changes.

Strain–counterstrain (SCS)

- Seeks tender points that are then used (by being pressed) to monitor discomfort in tissues shortened at the time of acute or chronic strain.
- Tender points are used as guides to the 'ease' position, as pain reduces during positioning.
- SCS normally uses flexion to ease strains on the front of the body and extension to ease pain on the back of the body (see specific guidelines in Chapter 3).
- The position of ease once established (by achieving at least 70% reduction in pain from tender point) is held for 90 seconds as a rule.
- This position of ease commonly replicates the position of strain in order to find the position of ease.
- It also commonly exaggerates existing deviations, distortions, in order to achieve ease in tender palpated tissues.
- Tender points are usually situated in muscles antagonistic to those involved in movements that are painful or restricted.
- Goodheart (1984) adds various facilitating methods in order to reduce the time required for tissue release.
- Positional release therapy (D'Ambrogio & Roth 1997) suggests holding ease positions for up to 20 minutes to achieve enhanced tissue changes, but agree with Jones's '90-second rule' for simple musculoskeletal dysfunction treatment.

Functional techniques

- With one hand monitoring (listening) and the other acting to introduce movement, the tissues are taken to a position of maximal ease in all available directions of motion – a point of dynamic neutral – in which one position of ease has been 'stacked' on another.
- The process of stacking involves subsequent assessments for ease in different directions of movement, commencing at the point of ease revealed by the previous assessment.
- Following the holding of the position of dynamic neutral until a sense of warmth or pulsation or greater ease is noted (90-second minimum suggested), the whole sequence is repeated at least once more, with variations in the positions of ease being evident as a consequence of changes resulting from the previous 'treatment'.

Facilitated positional release

- In treating soft-tissue dysfunction, FPR uses a sequence involving neutralizing the anteroposterior curve, followed by creation of a position of ease, followed by crowding and/or torsion to produce a sense of greater ease in palpated tissues (note: this sequence can be varied).
- In treating joint restriction the same approach is used, but the joint involved is also guided towards its directions of most-free motion.
- The time the position of ease is held in FPR is 3 to 4 seconds only before retesting.
- If no improvement is noted, the condition is considered to require more direct approaches of treatment.

Fascial release

- Soft tissues are held in the direction of greatest ease until 'release' occurs.
- The process is repeated until there exists symmetry of motion in all directions.

Cranial manipulation (applicable anywhere on the body)

- The restricted structure/tissues are taken towards their direction of greatest ease, at which time this position is held until there is a sense of an attempt by the structure/tissues to return towards the direction from which they have been moved. This is resisted.
- Subsequently, the barrier usually retreats and the tissues are taken into greater ease. The process is repeated.

Proprioceptive taping

- Use of supportive taping to unload dysfunctional, stressed tissues and joints, for long enough to

Box 1.2 Continued

allow re-education processes to take place, as a result of proprioceptive modifications.

Mobilization with movement (MWM) including SNAGs

- Gentle short-term positioning of joints (involving involuntary ranges of joint play), including spinal (sustained natural apophyseal glides – SNAGs), in order to allow active pain-free movement to be performed by the patient, in order to restore normal function.

McKenzie's methods

Use of positioning or movement to establish an ideal protocol to assist in centralizing pain from periphery towards the spine. Once identified, home-management exercises are prescribed.

Sacro-occipital technique (SOT): blocks and wedges

Precisely determined use of padded wedges (blocks) to support pelvic and spinal tissues as the patient lies prone or supine, allowing the repositioning to encourage normalization of dysfunction.

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