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Facilitated positional release (FPR)

CHAPTER CONTENTS

The nature of FPR

(Schiowitz 1990, 1991)

Stanley Schiowitz has described the method known as facilitated positional release (FPR), which incorporates elements of both SCS and functional technique, and appears to produce an accelerated resolution of hypertonicity and dysfunction.

He explains that FPR is in line with other indirect methods which adopt positional placement towards a direction of freedom of motion, and away from restriction barriers.

What is 'special' to this approach is that FPR adds to this absolute requirement (movement away from the barrier of restriction), the need for a prior modification of the sagittal posture – so that in a spinal area, for example, a balance would first be achieved between flexion and extension.

FPR then adds to this the 'facilitating' elements, which might involve either compression or torsion, or a combination of both, inducing an initial soft-tissue release, relating to hypertonicity or restriction of motion.

In spinal terms, the placing of regions into a neutral state, somewhere between extension and flexion, has the effect of releasing facet engagement.

The neurophysiology that Schiowitz describes in order to explain what happens during the application of FPR is based on the work of Korr (1975, 1976) and Bailey (1976) and correlates with facilitation and sensitization mechanisms suggested in earlier chapters (see Chapter 2 in particular) of this book in relation to the onset of somatic dysfunction. FPR appears to modify increased gamma motor neuron activity that may be affecting muscle spindle behavior. 'This (reduction in gamma motor neuron activity) allows the extrafusal muscle fibers to lengthen to their normal relaxed state' (Carew 1985).

The placement of involved tissues or joints into a position of ease involves the practitioner fine-tuning the neurological feedback process, ensuring that the relaxation response is specific to the muscle fibers involved in the problem.

Do muscles cause joint problems or vice versa?

Janda (1988) stated that it is not known whether dysfunction of muscles causes joint dysfunction or vice versa. However, he pointed to the undoubted fact that they massively influence each other, and that it is possible that a major element in the benefits noted following joint manipulation derives from the effects that such methods (high-velocity thrust, mobilization, etc.) have on associated soft tissues.

Steiner (1994) has specifically discussed the role of muscles in disc and facet syndromes and describes a possible sequence of events as follows:

- A strain involving body torsion, rapid stretch, loss of balance, etc., produces a myotatic stretch reflex response in, for example, a part of the erector spinae.
- The muscles contract to protect excessive joint movement, and spasm may result if there is an exaggerated response and the tissues fail to assume normal tone following the strain.
- This limits free movement of the attached vertebrae, approximates them and causes compression and, possibly, bulging of the intervertebral discs and/or a forcing together of the articular facets.
- Bulging discs might encroach on a nerve root, producing disc-syndrome symptoms.
- Articular facets, when forced together, produce pressure on the intra-articular fluid, pushing it against the confining facet capsule, which becomes stretched and irritated.
- The sinuvertebral capsular nerves may therefore become irritated, provoking muscular guarding, initiating a self-perpetuating process of pain–spasm–pain.

He continues:

From a physiological standpoint, correction or cure of the disc or facet syndromes should be the reversal of the process that produced them, eliminating muscle spasm and restoring normal motion.

He argues that before discectomy or facet rhizotomy is attempted, with the all-too-frequent 'failed disc-syndrome surgery' outcome, attention to the soft tissues and articular separation to reduce the spasm should be tried, to allow the bulging disc to recede and/or the facets to resume normal relationships. (See Chapter 9 on the McKenzie approach for another alternative to surgery in many cases.)

Clearly, osseous manipulation often has a place in achieving this objective. However, the evidence of clinical experience indicates that a soft-tissue approach may also be employed in order to allow restoration of functional integrity.

If, for example, joint restriction were the result of muscle hypertonicity, then complete or total release of this heightened tone would ensure a greater freedom of movement for the joint.

If, however, other intra-articular factors were causing the joint restriction then, although improvement of soft-tissue status, produced by a reduction in hypertonicity, would ease the situation somewhat, the basic restriction would remain unresolved.

Focus on soft-tissue or joint restriction using FPR

Schiowitz suggests that FPR can either be directed towards local, palpable soft-tissue changes, or be used as a means of modifying the deeper muscles that might be involved in joint restriction:

It is sometimes difficult … to make a clear diagnostic distinction as to which is the primary somatic dysfunction, changes in tissue texture or motion restriction. If in doubt, it is recommended that the palpable tissue changes be treated first. If motion restriction persists, then a technique designed to normalize deep muscles involved in the specific joint motion restriction should be applied.

In order to appreciate the way in which FPR is used, examples of its application will be explained.

Treatment of soft-tissue changes in the spinal region

Schiowitz follows Jones's guidelines, which state that soft-tissue changes on the posterior aspect of the body should be treated in part by taking them into a backward-bending direction, while those on the anterior aspect of the body require a degree of flexion to assist in their normalization using FPR.

However, he also reminds us that some muscles have a contralateral side-bending function or a rotary component or both. These muscles must be placed in their individual shortened positions. Schiowitz suggests that careful localization of the component motions of compression, forward- or backward-bending, and side-bending/rotation to the area of tissue texture change allows a faster and more accurate result.

FPR for soft-tissue changes affecting spinal joints

- After placing the patient into a relaxed position, the first requirement is that the sagittal posture should be modified to create a flattening of the anteroposterior spinal curve in whichever spinal

region needs treating; 'thus a mild reduction of the normal cervical and lumbar lordosis or the thoracic kyphosis is established', inducing a softening and shortening of the affected muscle(s).

- Following this, additional elements of fine-tuning might involve compression and/or torsion (Fig. 7.1), in order to place dysfunctional tissue (or the articulation) in such a manner that 'it moves freely or is pain-free, or both'.
- The position of ease achieved by this fine-tuning is then held for 3–4 seconds, before being released so that the area can be re-evaluated.
- The component elements that comprise the various facilitating forces, i.e. crowding or torsion, can be performed in any order.

Intervertebral application of FPR

When dealing with restrictions and dysfunctional states of the intervertebral (soft tissue) structures, Schiowitz suggests that the associated vertebrae be placed into 'planes of freedom' of motion.

For this to be successful, the directions of 'ease' and 'bind' of a given segment need first to be evaluated.

If, for example, there is a restriction of a cervical vertebra in which it is found that, in relation to the vertebrae below, it cannot easily extend, side-bend right and rotate right, it would be logical, in order to establish a position of ease, to take it into flexion, side-bending left and rotation left, in relation to the vertebrae below, as a first stage of application of FPR.

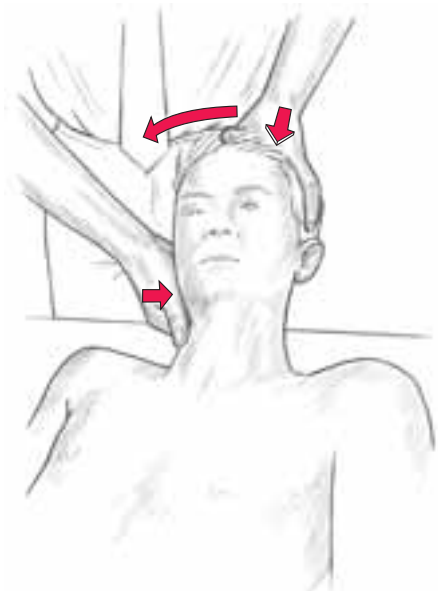

Figure 7.1 FPR treatment of anterior cervical dysfunction involves introduction of a reduced cervical curve followed by compression, side-bending and some slight torsion to achieve a sense of ease in palpated tissues.

Cervical restriction – FPR treatment method

If, in such an example, there were obvious discomfort/pain or tissue changes palpable posterior to the articular facet of the third cervical vertebra, the following procedure (which needs to involve backward-bending because the tissues are on the posterior aspect of the body) might be suggested.

- The patient would be supine on the table, the practitioner either standing, or seated at the head of the table with a cushion on his lap.
- The patient would have previously moved to a position in which the head was clear of the end of the table.
- Contact would be made with the area of tissue texture alteration (right articular facet, third cervical vertebra in this case) by the practitioner's left index-finger pad, while at the same time the head (occipital region) was being well supported by the right hand of the practitioner (Fig. 7.2A).
- It is via the activity of this right hand that further positioning would mainly be achieved.
- As noted previously, the first priority in FPR is to reduce the sagittal curve and this would be achieved by means of a slight flexion movement, introduced by the left hand.
- The second component, compression, would then be introduced by application of light pressure through the long axis of the spine towards the feet (Fig. 7.2A).
- The changes in tissue tone thus induced should be easily palpable by the contact finger ('listening finger') as a reduction in the sense of 'bind'.
- No more than 0.5 kg (1 lb) of force should be involved in this compressive effort
- The next component of FPR – in this instance – would be the introduction of rotation/torsion, and this could be achieved by slight extension and side-bending to the right over the practitioner's contact resting on the dysfunctional tissue, the right index finger.
- Cervical spinal mechanics dictate that side-bending is impossible without some degree of rotation taking place towards the same side.
- Therefore, rotation to the right would automatically occur as the neck was being side-flexed over the finger, so further easing and softening the tissues being treated (Fig. 7.2B).

Figure 7.2A FPR treatment of posterior cervical dysfunction involves introduction of a reduced cervical curve followed by compression, as palpating hand monitors tissues for a sense of ease.

Figure 7.2B Additional fine-tuning involves introduction of extension side-bending and some slight rotation until a sense of ease in palpated tissues is noted, and held for 4–5 seconds.

- This final position would be held for 3–4 seconds, before slowly returning the neck and head to neutral for reassessment of the degree of tissue change/release achieved by the procedure.

Spinal joint – FPR treatment

The only difference between treating a soft-tissue change that is affecting a spinal joint and treating the spinal joint itself using FPR is the degree of precision required in the positioning process.

Where the individual mechanics of restriction have been identified, the joint needs to be placed in 'all three planes of freedom of motion', into the directions of 'ease', using 'careful localization of the component motions'; in other words, in flexion, side-bending and rotation, having taken care to start from a position in which the normal sagittal curves have been somewhat reduced or neutralized.

Slight movement only for top cervical articulation

It is important to recall that in regard to the atlanto-occipital joint, flexion should require a slight degree of movement only, and that atlanto-occipital mechanics involves contralateral directions of motion; i.e. side-flexion and rotation of the atlas are in opposite directions, unlike the rest of the cervical spine where side-flexion and rotation are towards the same side.

FPR treatment of thoracic region dysfunction

- The patient should be seated for treatment of thoracic soft-tissue dysfunction.
- The example described here relates to tissue tension in the area of the sixth thoracic vertebral transverse process, on the right.
- The practitioner stands behind and to the right, having placed a contact, palpating or 'listening', (left index) finger on the area to be treated (Fig. 7.3).
- The practitioner places the right hand across the front of the patient's shoulders so that the practitioner's right hand rests on the patient's left shoulder and the practitioner's right axilla stabilizes the patient's right shoulder.
- In order to reduce the anteroposterior curves, the patient is then asked to sit up straight.
- In a controlled manner the patient is then told to 'lift the sternum towards the ceiling', so introducing a slight extension motion that is monitored by the contact (left index) finger in order to assess changes in tension/bind.
- This extension movement is slightly assisted, but not forced, by the practitioner's right hand/arm.
- When some ease is noted, the practitioner uses compressive effort through the right shoulder (via his own right axilla). The suggestion given by Schiowitz is that, 'this compressive motion should be applied as close to the patient's neck as possible,

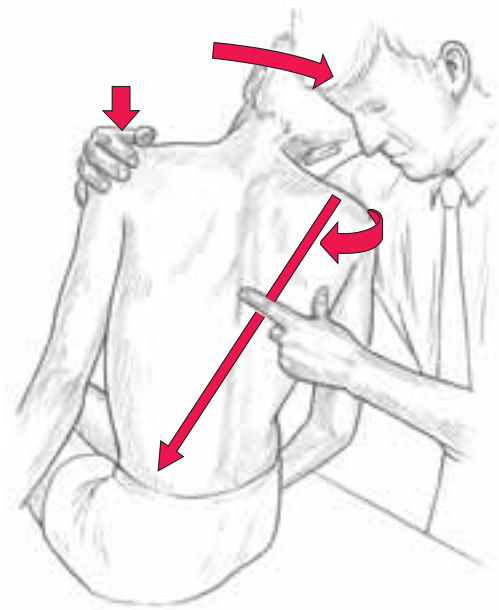

Figure 7.3 FPR treatment of thoracic region dysfunction (in this example 'tissue tension' to the right of the sixth thoracic vertebrae). One hand monitors tissue status as the patient is asked to 'sit straight' and to then slightly extend the spine. The practitioner then introduces compression from the right shoulder towards the left hip, which automatically produces right side-flexion at T6, and probably rotation to the left. Whatever the precise positional changes are, if ease is noted in the palpated tissues, the position is held for 4–5 seconds.

and directed downwards towards the patient's left hip'.

- Once again there is a monitoring, at the site of soft-tissue tension, of the effects of this compressive effort.
- In spinal structures other than the cervical spine (excluding C1), side-flexion is commonly (but not always) accompanied by contralateral rotation.
- In this case compressive force applied through the right shoulder, towards the left hip, would introduce both right side-flexion and left rotation at the area being palpated.
- If this produces a significant palpable softening, or 'ease', of the previously tense tissues, the position would be held for 3–4 seconds before returning to a neutral position for reassessment.

Thoracic flexion restriction and FPR

Schiowitz gives the example of a sixth thoracic vertebra which is free in its motions on the seventh vertebra when it moves easily into extension, side-bending right and rotation to the right.

The directions of restriction, therefore, which would engage the barrier would be into flexion, side-bending left and rotation left, and it is these directions of movement that would be utilized were a direct method (such as high-velocity thrust) being used to overcome that barrier, possibly involving the right articular facet joint.

However, since FPR is an indirect method, it is towards the directions of ease that we need to travel in order to achieve release.

- The starting positions (patient, practitioner, palpating digit at the right sixth articular facet, shoulder contacts) should be precisely as described in the previous example (above) for tissue release.
- This time, however, the compressive force would be applied straight downwards (inferiorly) from the shoulder towards the monitoring finger.
- No increase in movement into extension is suggested, as this would reduce the chances of facet release.
- When some ease was noted at this contact point from the compressive effort, a torsional side-bending and rotation movement to the right would be introduced until the freedom of motion was noted in the facet contact.
- This would be held for 3–4 seconds, then released.
- After repositioning into neutral, the range of motion which was previously restricted should be reassessed.

Prone treatment for thoracic flexion dysfunction

- For the same restriction (difficulty in moving into flexion and side-bending rotation to the left) the patient could be lying prone with the practitioner standing beside the table on the side opposite the dysfunctional vertebral restriction (Fig. 7.4).
- The prone position would tend to introduce a mild degree of extension which can be enhanced by placement of a thin cushion under the patient's head/neck area.
- In this example, standing on the left of the patient, the practitioner's left (monitoring) index finger would be placed on the right articular joint between the sixth and seventh thoracic vertebrae.
- The practitioner's right hand would cup the area over the acromion process, easing this towards the patient's feet, parallel to the table, until a desirable 'softening' of the tissues was noted by the palpating digit.
- This effort should be maintained as the practitioner leans backwards, in order to initiate a slight backward movement (towards the ceiling) of the patient's right shoulder, so adding a further degree of extension, together with side-flexion and rotation of the thoracic

Figure 7.4 FPR treatment of thoracic flexion dysfunction.

- The patient lies prone with a pillow under the abdominal area, the purpose of which is to reduce the anterior lumbar curve.
- The practitioner stands to the right of the table, having marked the area of tissue tension with the right index finger.
- The practitioner's right knee is placed on the table at the level of the right hip joint, in order to offer a fulcrum over which the patient can be side-bent to the right (Fig. 7.5).
- The practitioner's left hand draws the patient's legs towards the right side of the table, which effectively side-flexes the patient to the right.
- This motion is continued slowly until tissue change (softening) is monitored by the index finger.
- At this time, the practitioner changes the position of the left hand so that it grasps the anterior of the thigh, in order to be able to raise it into extension, at the same time introducing external rotation, until greater 'ease' is noted at the palpated monitoring point.

spine, up to the palpating finger, all the while maintaining the compression effort (light but firm).

- A sense of increased ease should be noted in the palpated region, at which time the various positions and directions of pull and pressure may be fine-tuned in order to enhance ease to an optimal degree.
- After holding the final position for 3–4 seconds, a return to neutral is allowed before reassessment of the dysfunctional area.

Thoracic extension restriction treatment

In the previous example there was difficulty moving into flexion, and therefore part of the treatment protocol involved increasing extension.

If we change this to an example of someone with difficulty moving into extension (but with freedom moving into flexion) the same sequence would be used:

- reduction of anteroposterior curves
- slight increase of flexion, into 'ease'
- followed by the other components of side-flexion and rotation to induce and increase ease in the palpated tissue
- all other elements remain the same.

FPR treatment for lumbar restrictions and tissue change

This example is of an area of exaggerated tissue tension located on the right transverse process of the fourth lumbar vertebra.

Figure 7.5 FPR treatment for lumbar restriction and tissue changes. Note that a pillow is used to reduce the anteroposterior curve of the lumbar spine while the practitioner introduces fine-tuning by positioning the legs to produce extension, side-flexion and rotation, until the palpating hand indicates that ease has been achieved. This is held for 3–4 seconds.

- This is held for 3 to 4 seconds before a return to neutral is allowed, followed by reassessment.

Variations

Depending upon the nature of specific spinal restrictions, the same general rules would be applied.

The basic requirements involve:

- a reduction in the anteroposterior curve
- a degree of crowding (or sometimes distraction)
- plus the spinal (or other) joint being taken to a combined position of freedoms of motion, away from the direction(s) of bind and into ease.

The examples given for thoracic and cervical normalization using FPR should make the general principles clear.

Muscular corrections using FPR

Schiowitz has described FPR application in treatment of piriformis and gluteal dysfunctions.

- The distinctive FPR feature is introduced first – the patient is prone with a cushion under the abdomen to neutralize the lumbar curve.
- The practitioner is positioned (possibly seated) on the side of dysfunction (right side in this example) facing cephalad.
- The practitioner's left hand monitors a key area of tissue dysfunction (Fig. 7.6A).
- The patient's flexed right knee and thigh are taken over the edge of the table and allowed to hang down, supported at the knee by the practitioner's right hand.
- Flexion is introduced at the hip and knee by the practitioner, until an ease is sensed in the palpated tissues.
- The patient's thigh is then either abducted or adducted towards the table until further ease is noted in the palpated tissues.
- The patient's knee is used as a lever to introduce either internal or external rotation at the hip, whichever produces the greatest reduction in tension under the palpating hand/finger (Fig. 7.6A).
- Once a maximal degree of ease has been achieved, light compression is introduced through the long axis of the thigh towards the monitoring hand, where a marked reduction in tissue tension may be noted.
- This is held for 3–4 seconds before release, a return to neutral and reassessment (Fig. 7.6B).

Figure 7.6A and B FPR for piriformis and gluteal dysfunction involves the patient lying prone with a cushion under the abdomen. For right-sided dysfunction the right leg is flexed at both hip and knee, and abducted over the edge of the table while internal or external rotation of the thigh (whichever produces greater 'ease' in the palpated tissues) is used to fine-tune a position of ease. Light compression through the long axis of the femur is the applied to facilitate ease.

Similarities and differences between FPR and SCS

The similarities and differences that exist when FPR and SCS are compared, should by now be clear (see the summary in Table 7.1).

One major advantage of FPR seems to lie in its reduced (hence 'facilitated') time for holding the position of ease.

Another is of course the fact that no pain is induced in tender points, merely a palpation of ease (as in functional technique).

Note There is of course no good reason to avoid using facilitating compression in application of SCS, and indeed the author strongly recommends that this be done, as long as (when using SCS) pain in the tender point reduces and no additional pain is caused.

Table 7.1 Similarities and differences between SCS and FPR

	SCS	FPR
Indirect approach	Yes	Yes
Monitoring contact	Pain point	Tissue tension
Find position of ease	Yes	Yes
Holding time	30–90 seconds	3–4 seconds
Uses facilitating crowding	No	Yes

Contraindications

There are no contraindications to FPR, except that its value lies most profoundly in acute and subacute problems, with its ability to modify chronic tissue changes being limited to the same degree as other positional release methods.

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