

Manual Techniques for Sacroiliac Joint Dysfunction

6

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In this chapter, manual techniques for right sacroiliac joint (SIJ) are presented. The left side is simply a mirror image of the right side.

6.1 The Superior Distraction (Fig. 6.1)

The superior distraction refers to the dilating technique for the superior part of the SIJ.

Procedures

1. The therapist stands with his feet apart at a distance less than the width of his/her shoulders.
2. The left hand is used for operating the ilium, in order to treat the right SIJ.



Fig. 6.1 The superior distraction of right sacroiliac joint

3. The wrist joint is in the neutral position (do not perform a palmar flexion of the wrist joint). The wrist joint should maintain the ulnar abduction.
4. The left-hand ring finger is used.
5. Keep extending the DIP and PIP joints while slightly flexing the MP joint of the ring finger.
6. The ulnar side of the DIP joint of the ring finger (Fig. 6.2) touches the cranial portion of the posterior superior iliac spine (PSIS) (Fig. 6.3a, b).



Fig. 6.2 The ulnar side of the DIP joint of the ring finger (black circle)

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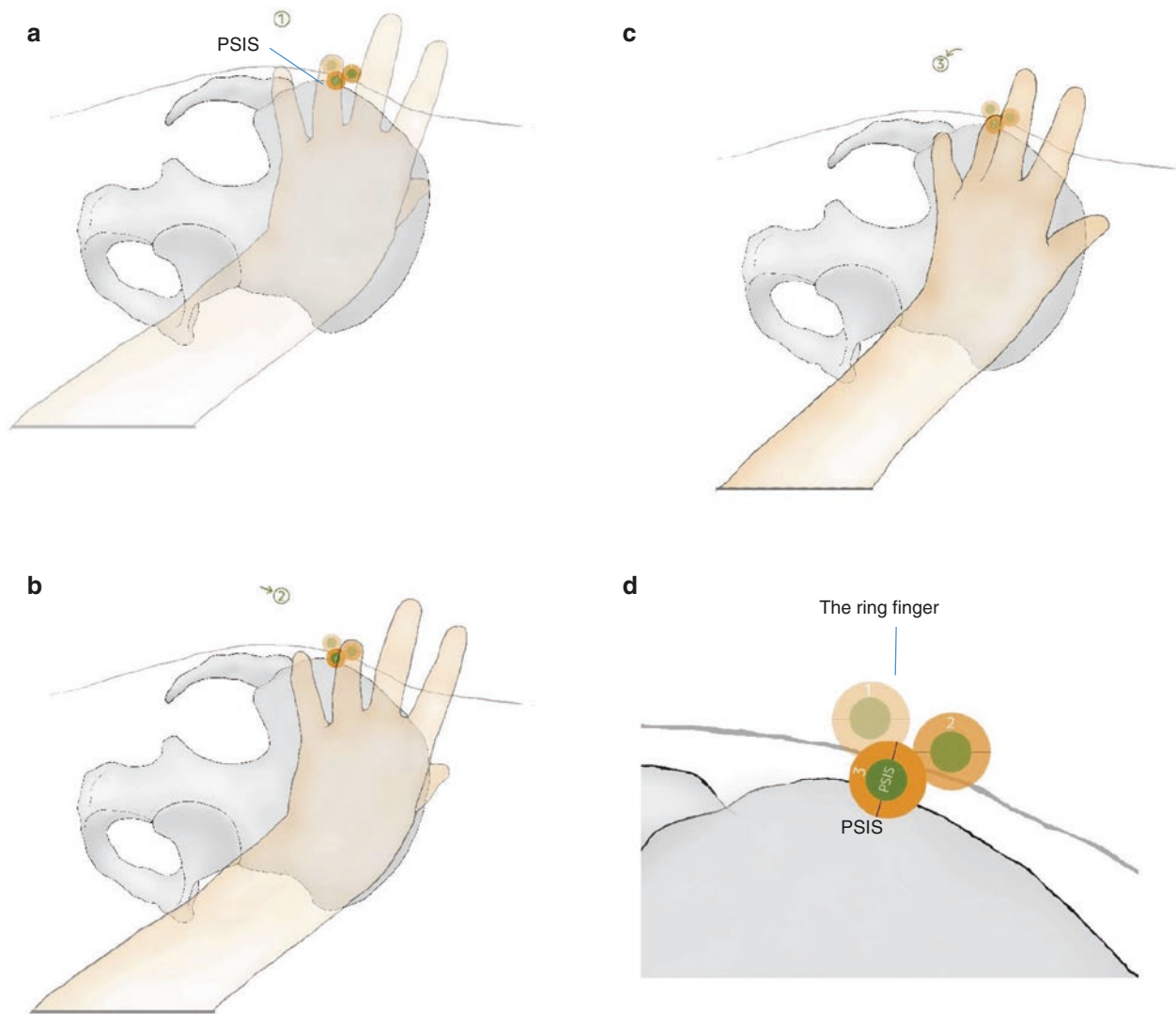


Fig. 6.3 Techniques to gently approach the cranial portion of the PSIS. (a) Check the location of the bone processes of the PSIS. (b) Move the left hand slightly toward the cranial portion of the PSIS. (c) Supination

of the forearm. The ulnar side of the DIP of left ring finger touches the cranial portion of the PSIS firmly. (d) The location of the ring finger during this procedure

7. Using supination of the forearm, the ulnar side of the DIP of the ring finger touches the cranial portion of the PSIS firmly (Figs. 6.2 and 6.3c, d).
8. The middle and ring fingers are set firmly together (Fig. 6.3).
9. The index finger and the little finger are slight extended (Fig. 6.2).
10. Place the thumb lightly on the iliac crest.
11. Touch the first spinous tubercle of the sacrum (S1) with the palmar side of the right thumb.
12. The force generated by the abductor of the upper arm provides the power to move the ilium caudally by using the ring finger, which touches the cranial portion of the PSIS.
13. Additionally, the therapist transfers his/her weight from right to left (Fig. 6.4).
14. The direction to move the ilium caudally is along the axis of the therapist's forearm. (Fig. 6.5).

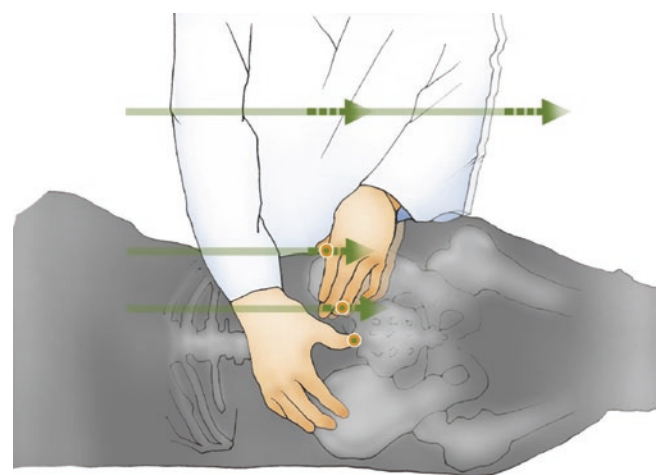


Fig. 6.4 Superior distraction of the right sacroiliac joint. The therapist transfers his/her body weight from right to left, by placing body weight on tiptoes

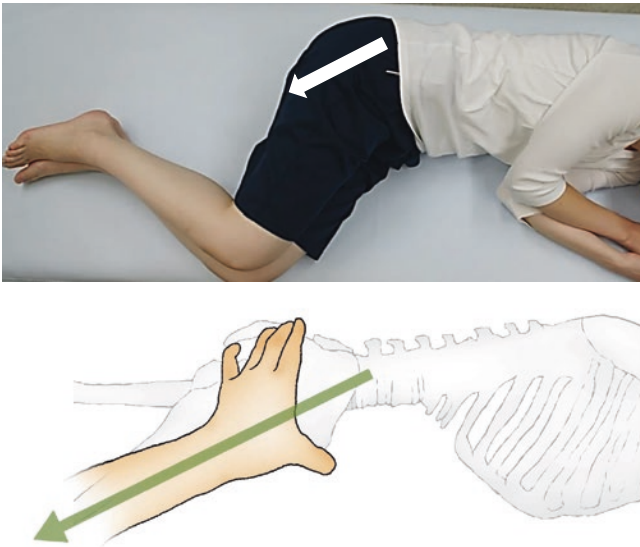


Fig. 6.5 The force direction to move the ilium caudally is slightly dorsal (about 20°) of the femur axis. This direction can provide good movement of the ilium

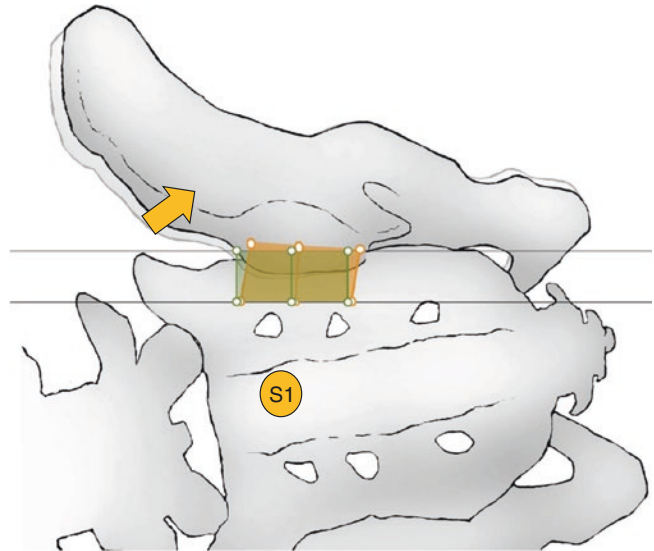


Fig. 6.7 The movement of right sacroiliac joint in superior distraction

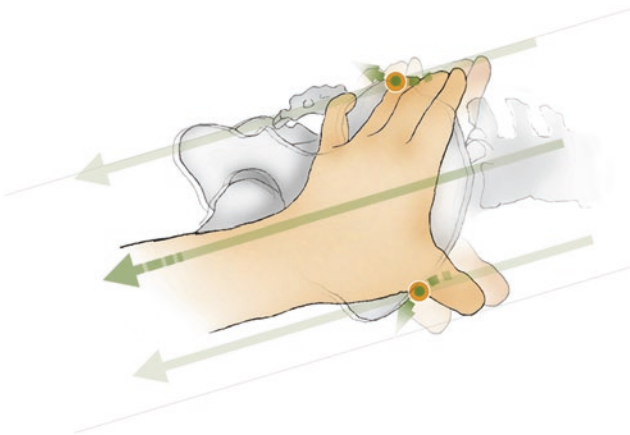


Fig. 6.6 The therapist’s fingers should not grasp the bone processes. To be able apply a force to the bone processes in the tangential direction, their should be a wide distance between the thumb and ring finger

15. When moving the ilium caudally, the therapist’s fingers should not grasp the bone processes, to avoid causing an arthrostatic reflex. The therapist should keep or slightly widen the distance between the thumb and ring finger to be able to apply a force to the bone processes in the tangential direction (Fig. 6.6).
16. During the procedure, the therapist senses the motion of the ilium with the left ring finger and the motion of the sacrum with the right thumb (Fig. 6.7).

6.2 The Inferior Distraction (Fig. 6.8)

The inferior distraction is the dilating technique for the inferior part of the SIJ. The ilium is moved cranially mainly by using the right thumb, which touches the anterior superior iliac spine (ASIS).



Fig. 6.8 Inferior distraction of the right sacroiliac joint. The right thumb touched the recess below the anterior superior iliac spine (black circle). The right ring finger touches the place near the PSIS

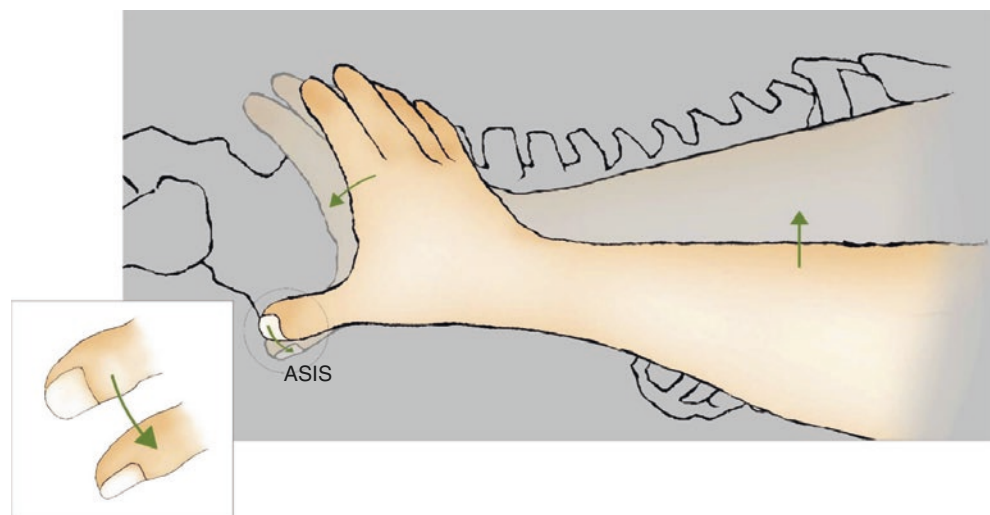
Procedure

1. The right hand is the operating hand for the right SIJ (the left hand for the left SIJ).
2. The main finger is the right thumb. The right ring finger is used in a supportive role. The other fingers or palm should not be used.
3. Place the distal phalanx of the right thumb on the ASIS, and the right ring finger near the PSIS (Fig. 6.9).
4. The therapist's elbow slightly pushes in the anterior while maintaining the position of the thumb and ring finger. The therapist's forearm and thumb are pronate (Fig. 6.10). In this position, the radial side of the thumb makes contact with the ventral side of the ASIS (Fig. 6.11).
5. Lift the wrist up while keeping the tips of the thumb and ring finger in the same place (Fig. 6.11). Then, the distal phalanx of the thumb glides into the ventral side of the recess below the ASIS (Fig. 6.12). Here, the thumb



Fig. 6.9 Place the distal phalanx of the thumb on the recess below the ASIS (white dots line) and the ring finger near the PSIS (white arrow head)

Fig. 6.10 The therapist's elbow slightly pushes in the anterior while maintaining the position of the thumb and ring finger. The therapist's forearm and thumb are pronate. Then, the radial side of the thumb makes contact with the ventral side of the ASIS



touches the ilium firmly and the ilium moves cranially in this procedure (Fig. 6.13).

6. Touch the third spinous tubercles of the sacrum (S3) with the left thumb.
7. The force generated by the shoulder abductors and by the transfer of the therapist's weight from his/her left leg to right provides the force to move the ilium cranially (Fig. 6.14).
8. The direction to move the ilium cranially is along the axis of the therapist's forearm (Fig. 6.15).
9. During the procedure, the therapist senses the motion of the ilium with the right thumb and the motion of the sacrum with the left thumb (Fig. 6.16).

6.3 The Gliding Method

There are two gliding methods: the upward gliding method and the downward gliding method.

6.3.1 The Upward Gliding for the Right SIJ (Fig. 6.17)

Procedure

1. The right hand is placed in the ilium.
2. The distal phalanx of the left index finger is placed on S1, with the thumb, middle finger, and index finger arranged together.
3. The thumb of the right hand is placed on the ASIS and the distal phalanx of the ring finger on the PSIS.
4. The therapist turns his/her hand while turning the pelvis in a clockwise direction (Fig. 6.18).

Fig. 6.11 Contact point. Showing the contact point of the thumb (black circle). The radial side of the distal phalanx makes firm contact with the recess of the ASIS . Lift the wrist up while keeping the tips of the thumb and ring finger in the same place

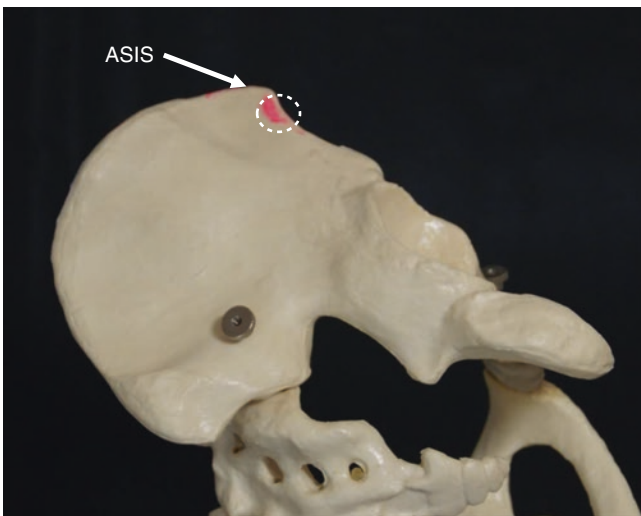
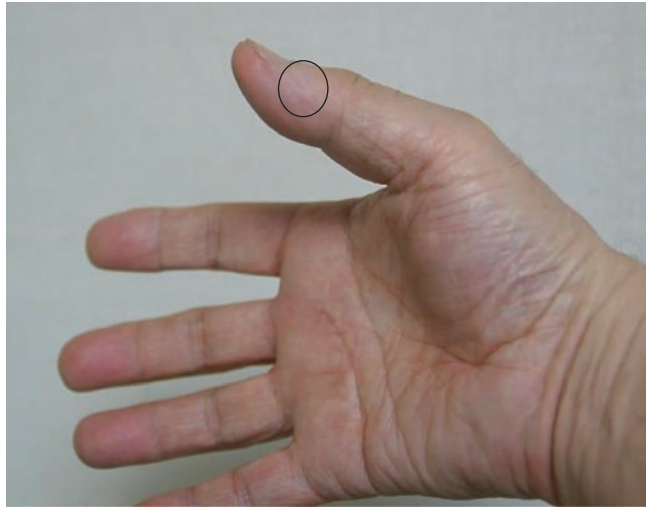


Fig. 6.12 Contact position in the recess below the ASIS (white bow)

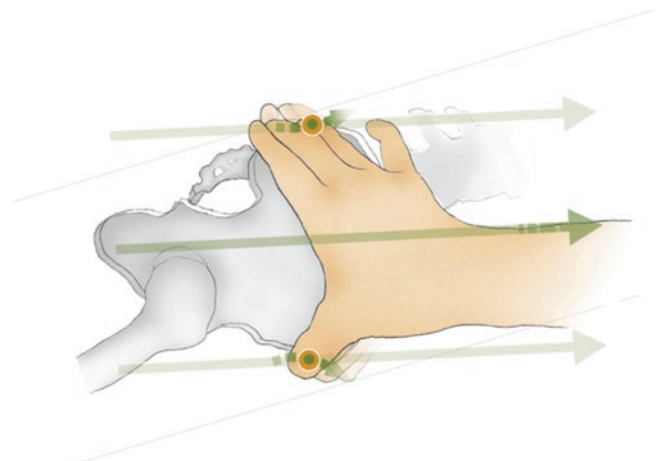


Fig. 6.13 The thumb touches the ilium firmly and the ilium moves cranially. As same as the procedures of the superior distraction, therapist's fingers should not grasp the bone processes

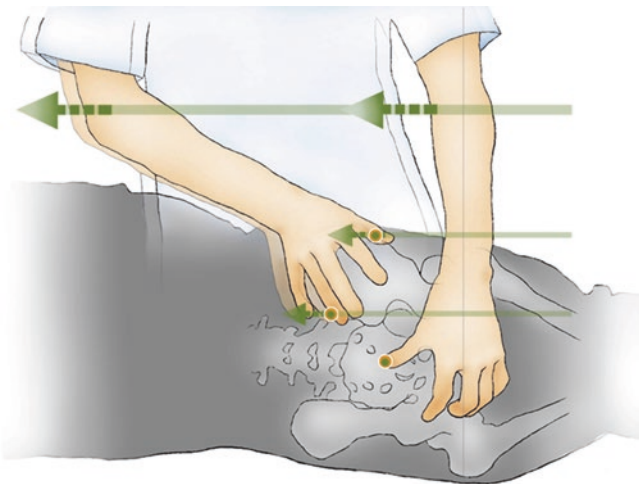


Fig. 6.14 Inferior distraction of the right sacroiliac joint. The therapist transfers his/her body weight from left to right, by placing body weight on tiptoes

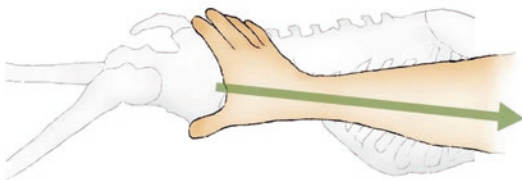


Fig. 6.15 The force direction to move the ilium cranially is slightly dorsal of the trunk axis. This direction can provide good movement of the ilium

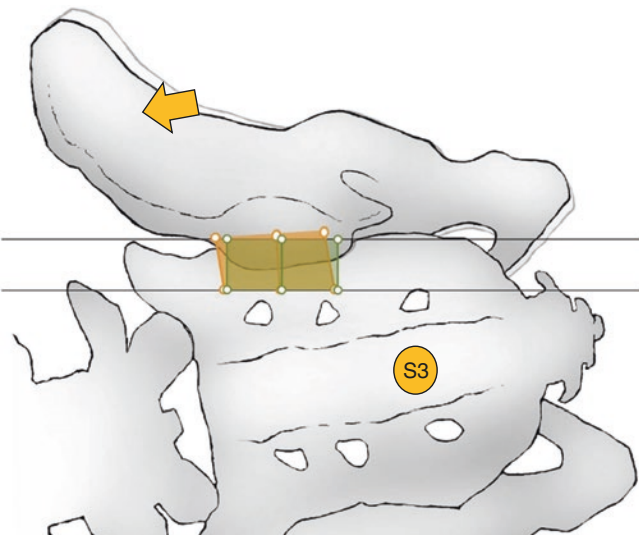


Fig. 6.16 The movement of right sacroiliac joint in inferior distraction



Fig. 6.17 The upward gliding for right sacroiliac joint

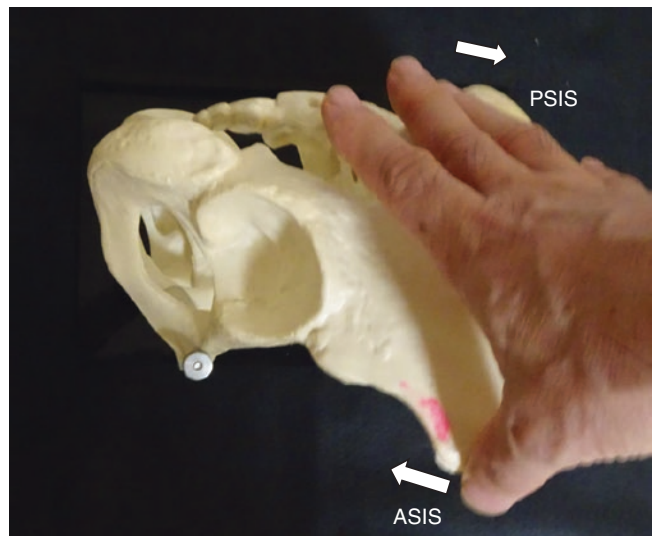


Fig. 6.18 Direction of turning. Turn the ilium in a clockwise direction

5. When the ilium moves, the index finger of the left hand pushes S1 slightly, moving it upward (cephalad), almost simultaneously (Fig. 6.19).
6. The sacrum moves with anterior rotation and ventral gliding (Fig. 6.20).

6.3.2 The Downward Gliding for the Right SIJ (Fig. 6.21)

Downward gliding is performed in the same way, using the index finger of the left hand to push the third spinous tuber-

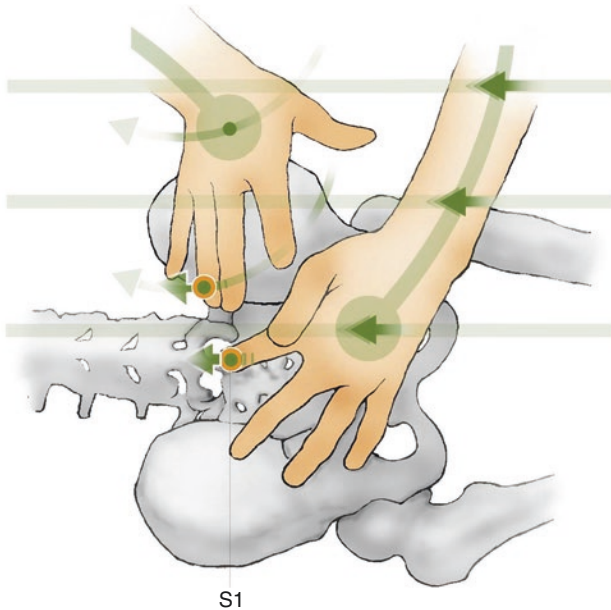
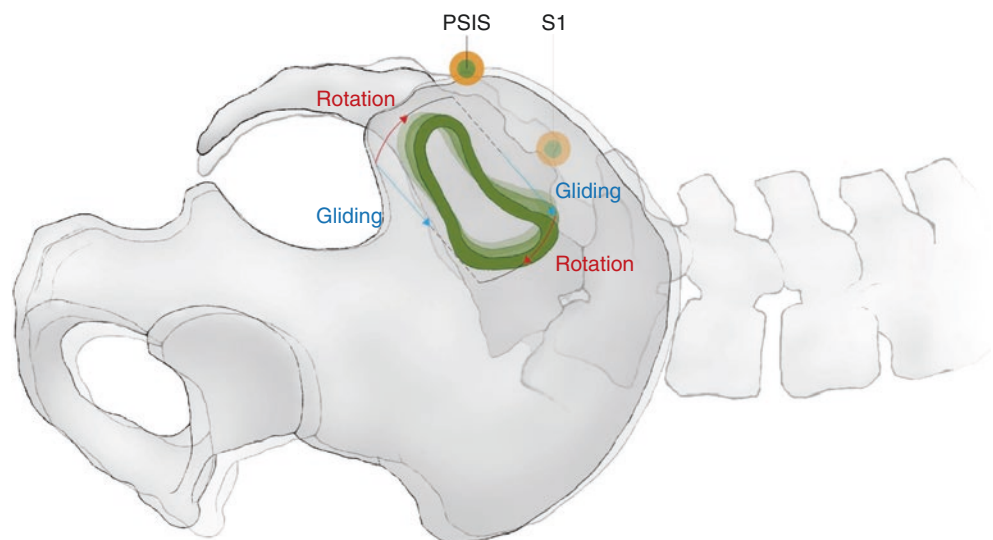


Fig. 6.19 Upward gliding for the right sacroiliac joint. When the ilium moves, the index finger of the left hand pushes S1 slightly, moving it upward (cephalad)

Fig. 6.20 Therapist's view of upward gliding technique. The sacrum moves with anterior rotation and ventral gliding



cle of the sacrum (S3) slightly, moving it downward (caudal) (Figs. 6.22 and 6.23).

The gliding method for the left SIJ is described as follows because it is not a complete mirror image of the right SIJ.



Fig. 6.21 The downward gliding for right sacroiliac joint

6.3.3 Upward and Downward Gliding for the Left SIJ (Fig. 6.24)

The procedures are basically the same as for the right SIJ, using the right hand to move the ilium and the left hand to glide the sacrum upward or downward.

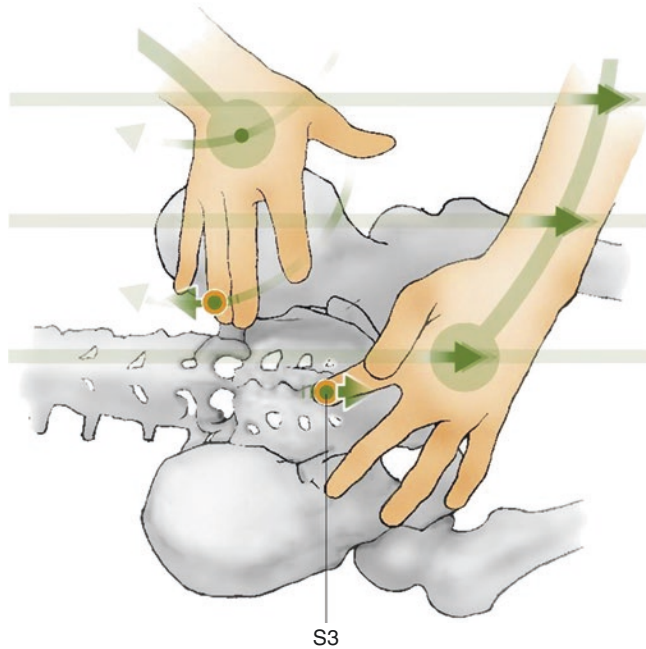
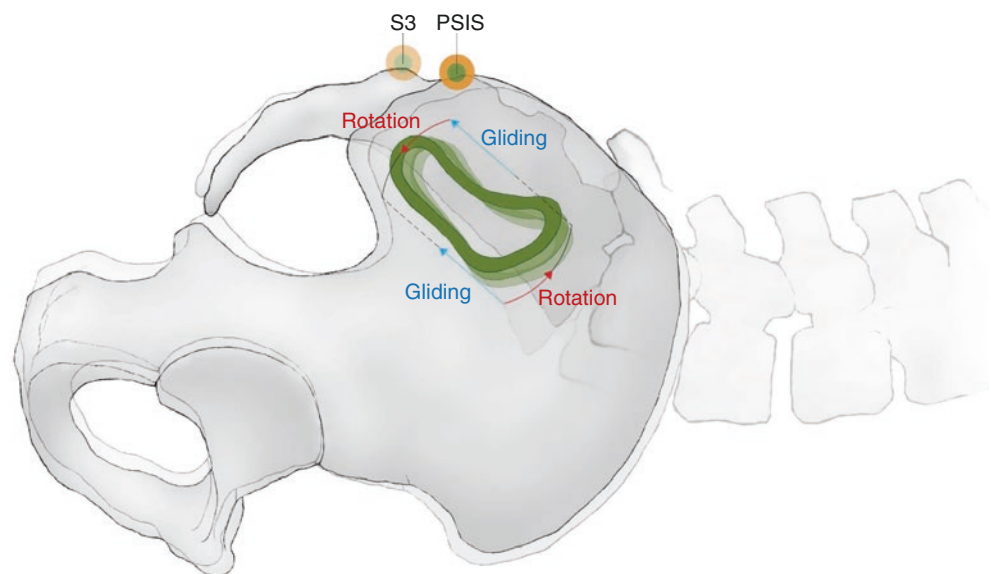


Fig. 6.22 The downward gliding for the right sacroiliac joint. When the ilium moves, the index finger of the left hand pushes S3 slightly, moving it downward (caudal)



Fig. 6.24 Upward gliding for the left sacroiliac joint

Fig. 6.23 Therapist's view of downward gliding technique. The sacrum moves with posterior rotation and dorsal gliding



1. The right thumb is placed on the ASIS, and the right ring finger is on the PSIS.
2. The distal phalanx of the left index finger is placed on S1, with the thumb, middle finger, and index finger arranged together.
3. The therapist turns his/her hand while turning his/her pelvis in a counter-clockwise direction (Fig. 6.25).
4. When the ilium moves, the index finger of the left hand pushes S1 slightly upward (cephalad), almost simultaneously.
5. When downward gliding is performed, the index finger of the left hand pushes S3 slightly downward (caudal), almost simultaneously (Figs. 6.26 and 6.27).

6.4 Points Requiring Extra Attention During the Procedure

Regarding the application of the accessory movement of the SIJ, there are several points that should be noted.

1. Do not grasp the bone.
2. Do not press on the bone using vertical force.
3. The maneuver utilizes only the thumb and ring finger.
4. Loosen the finger tips and operate with the shoulder and the waist.
5. The therapist stands on the patient's ventral side with his feet at a distance shorter than his shoulder-width. The

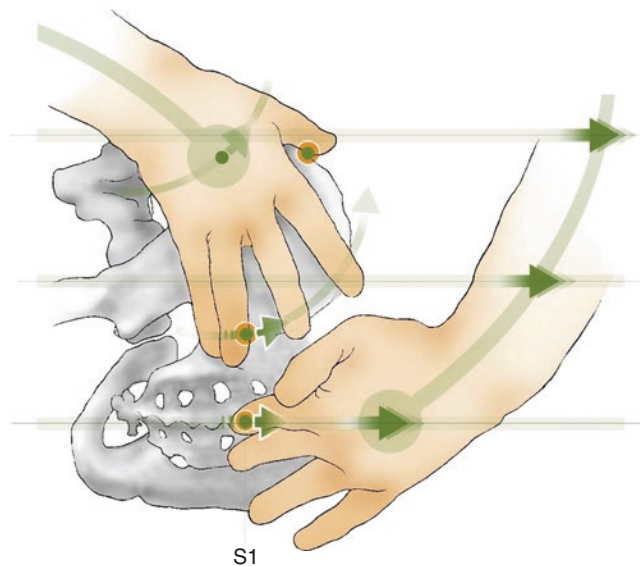


Fig. 6.25 Upward gliding for the left sacroiliac joint. The ilium is rotated with the right hand in a counter-clockwise direction and the left index finger pushes the S1 upward for upward gliding

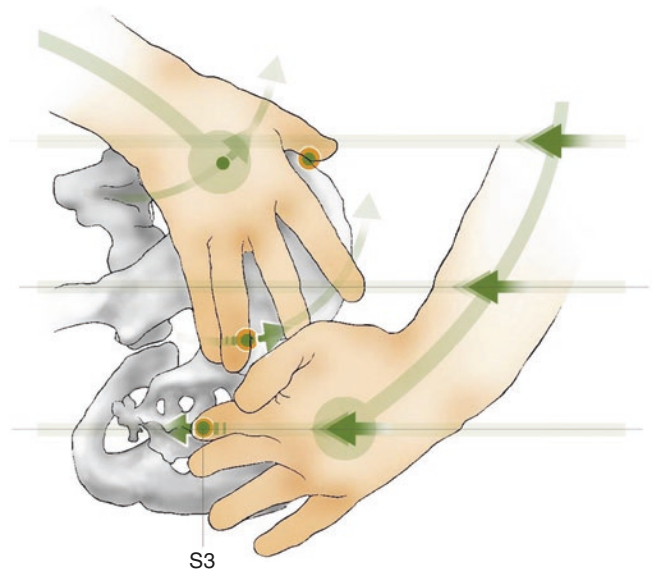


Fig. 6.27 Downward gliding for the left sacroiliac joint. Using the same gliding method and rotating the ilium in the same way as with upward gliding, the left index finger slightly pushes the S3 downward



Fig. 6.26 Downward gliding for the left sacroiliac joint

therapist's umbilicus should be at the same position as the patient's iliac crest (Fig. 6.28).

6. Place the toes 2–3 cm under the edge of the treatment table. The maneuver is performed while standing on the tiptoes (Fig. 6.29).

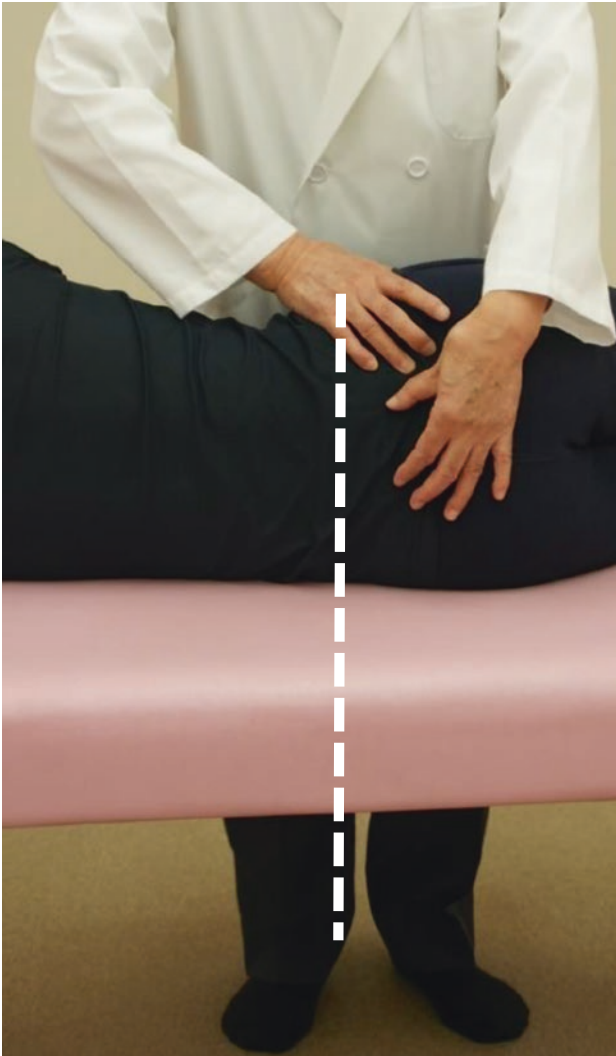


Fig. 6.28 Regarding the therapist's standing position, his center should come to the same position as the patient's iliac crest. His feet should be at a distance shorter than his shoulder-breadth

7. The therapist assumes a posture so that his hip joints are flexed at about 20° and his lumbar spine is extended. In this way, the therapist can perform the maneuver on the SIJ using only the motion of his hip (Fig. 6.30).

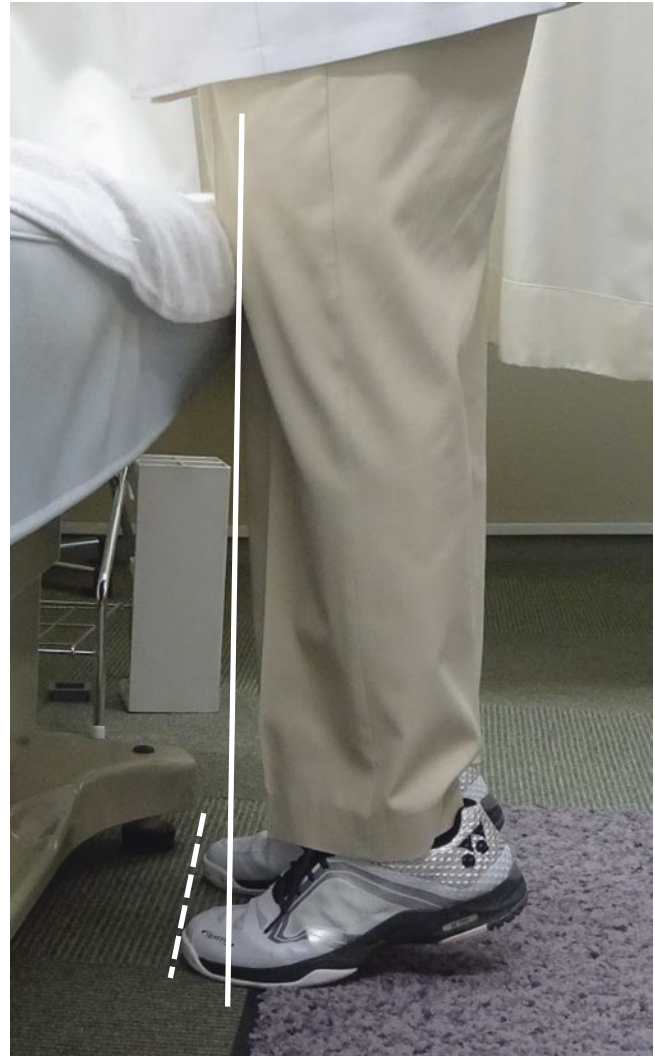


Fig. 6.29 The feet should be positioned slightly under the edge of the treatment table, and the maneuver performed while standing on tiptoes. The maneuver cannot be controlled from the hip if one's weight is placed on the heels



Fig. 6.30 The therapist stands with his hip joints flexed at about 20° and with the lumbar spine extended

6.5 Summary of Each Technique

6.5.1 Distraction Method

Table 6.1 Use of fingers for each technique

| | | Superior distraction | Inferior distraction | Upward gliding | Downward gliding |
|-----------|------------|-------------------------------|-------------------------|---|---|
| Right SIJ | The ilium | Left ring finger to the PSIS | Right thumb to the ASIS | Right ring finger (ulnar side) to the PSIS | Right ring finger (ulnar side) to the PSIS |
| | The sacrum | Right thumb to S1 | Left thumb to S3 | Left index finger to S1 | Left index finger to S3 |
| Left SIJ | The ilium | Right ring finger to the PSIS | Left thumb to the ASIS | Right ring finger (radial side) to the PSIS | Right ring finger (radial side) to the PSIS |
| | The sacrum | Left thumb to S1 | Right thumb to S3 | Left index finger to S1 | Left index finger to S3 |

It should be noted that the procedures for the superior distraction and for the inferior distraction are completely different. The operative fingers used to move the ilium and the sacrum are summarized in Table 6.1.

6.5.2 The Gliding Method

The right hand is always used, in order to rotate the ilium. The direction of rotation for the right and left ilium is different. The sacrum is glided either upward or downward by the index finger of the left hand.

In order to treat SIJ dysfunction effectively, it is necessary to master all eight techniques summarized in Table 6.1. Treatment of the SIJ should be routinely completed in 5–10 min for each patient. The treatment begins with the afflicted side, then the non-afflicted side, and finally with the afflicted side again. The intensity of the manual procedures is as follows:

A “strong” grade of intensity for the manual procedures in the same direction is acceptable to be performed up to three times. However, the final procedure should be performed at a “weak” grade in any technique.