

## **Sacroiliac joint palpation**

Traditionally the palpatory area of the sacroiliac joint is assumed to lie directly posterior to the joint. The most inferior aspect of the joint lies relatively close to the surface. Joint movement and restrictions in joint movement can be found from this area up to the posterior superior iliac spine or PSIS.

The inferior aspect of the joint is traditionally referred to as the “lower pole” and the area around the PSIS as the “upper pole”.

Traditionally this is where palpation of the sacroiliac joint stops.

However there are two major distinct palpatory points that relate to the upper part of the sacroiliac joint which up until recently have not been recognised as such.

The first of these major points is at the juncture of the ilium and sacral base and the second is at the junction of the iliolumbar ligament and the ilium.

Restrictions of movement are very common in these two areas. As these points represent ligamentous attachments that lie superior to the joint it has been assumed that they are not a source of joint palpation.

However these points represent a very significant source of palpation of the joint which is not traditionally assessed. Also this is a very significant area relating directly and indirectly to pain in the lower back and pelvis.

If we accept these new areas of palpation, it can be appreciated that a new system of nomenclature must be devised. On the basis of the apparent relationship to the sacral vertebrae I would like to denote what is traditionally known as the “lower pole” as being “S2/3” and the “upper pole” as S2. The point at the sacral base can be denoted as S1 and the point at the iliolumbar ligament as Lateral S1.

Lateral S1 is a distinct point located roughly where the ilio-lumbar ligament attaches to the Iliac crest. The location of this point varies significantly from person to person. There is often a slight

angulation on the crest of the Ilium at the attachment point. This point may be anything from 3-4 cm up to 10-12cm from the sacral base in an adult pelvis. These greater distances are often seen in female pelvises.

**S2/3, S2, S1 and lateral S1 represent the 4 major areas of palpation and are a good starting point for anyone using this new schema.**

However there are 3 other minor points that need to be discussed: **S3, S1/2 and Intermediate S1.**

**S3 lies at the most caudal aspect of the joint where there is no overhang of the Ilium on the sacrum. As such it is easy to stop palpating before arriving at this point and is easy to miss. In this sense S3 lies up to 1cm beyond where the joint appears to end.**

**S1/2 lies between the PSIS and the sacral base. Intermediate S1 is a rare point between S1 and Lateral S1.**

For greater specificity, **S2 can be divided into 3 points: Supra S2, S2 and Infra S2.**

It may be beneficial to focus initially on palpating the 4 key points but ultimately there are 9.

To get an idea of the frequency of these different points I analysed my own findings with a sample of 320 patients.

This diagram represents these findings where the area of the red dots corresponds to the number of lesions found at that point.

Overall there seems to be a significantly greater number of right sided sacroiliac joint lesions than left. 60-70% of the lesions are on the right and 30-40% are on the left.

If we focus on the 4 main points I found the ratio of right sided to left sided lesions to be 95:62 at Lateral S1, 63:31 at S1, 74:58 at S2 and 77:41 for S2/3.

The only exception to this sidedness would appear to be at S1/2 and S3 where the propensity is reversed but the numbers are small and may not be significant.

**There does also seem to be a greater number of lumbar lesions on the left compared to the right. This skewing to the left seems to increase from the L/S to L4/5 to L3/4. At the lumbo-sacral junction I found 103 lesions on the left compared to 85 on the right, at L4/5 59:39 and at L3/4 21:8.**

**As the diagram indicates approximately half the sacroiliac lesions are found in the S1 complex and as such are being missed in the traditional model of sacroiliac joint palpation.**

**Obviously these findings are completely subjective and specific only to my palpation. However, anecdotally, my colleagues that work in a similar way have similar findings.**