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## "What causes SPD?"

This is the million-dollar question, but unfortunately there doesn't seem to be a straightforward answer. Traditionally it has been assumed that it is all down to hormones, however more recent thinking has suggested that a bio-mechanical dysfunction or asymmetry in your pelvis is a more likely cause. There are lots of other theories too – some of them pretty outlandish. We have heard all of the following cited as possible causes of SPD<sup>1</sup>: poor posture, a sedentary lifestyle, having one leg longer than the other, having been on the pill, eating too much processed food contaminated by hormones, even not drinking enough milk. In this article we will look at the research into SPD to date and see if we can pick out the truth from the myths.

There is a distressing tendency by some to regard SPD as a "new and trendy" condition – one that didn't exist until recently. In fact SPD was first recognised by Hippocrates and was described in detail by Snelling in 1870, so we can discount that theory straight away. There are no official statistics on how many women have SPD but it does seem that it is increasing. We are not sure of the reason why.

**Hormones.** Traditionally pregnancy hormones have been blamed for SPD. It was thought that relaxin, produced to allow the pelvis to stretch during labour, causes the pelvic ligaments to relax prematurely, thereby allowing the pelvic joints to move and making the pelvis unstable. This in turn causes the pain that we are all so familiar with. However if we look at the research in detail we can see that the situation is not so simple. Early research that linked relaxin to loosened pubic ligaments was actually based on experiments with guinea pigs rather than women<sup>2</sup>. A later study that made a link between relaxin and SPD was poorly designed and therefore cannot be deemed as reliable<sup>3</sup>. In more recent studies 3 out of 4 researchers found no link between pain and the levels of relaxin. One study injected high levels of relaxin into pregnant women – they did not develop pelvic pain<sup>4</sup>. Researchers also found that the most common time for the symptoms of SPD to appear did not correspond to the maximum levels of relaxin produced. Only one recent study has established a link between hormones and pain<sup>5</sup>.

There is a suggestion that pregnancy hormones (oestrogen and progesterone) can affect the way pain is perceived, this interesting hypothesis has yet to be proved experimentally but it might explain why a pre-existing mechanical dysfunction can result in such high levels of pain during pregnancy<sup>6</sup>. The fact that there is not a clearly defined link between hormones and SPD can be seen as quite encouraging. Professionals have often assumed that there is no point in giving any manual treatment whilst the woman is still pregnant (i.e. still at the mercy of her hormones). If this is not the case, there is no reason why SPD cannot be treated as soon as it occurs.

**Lax Joints.** As stated previously, it has been thought that pain occurs because the hormones increase the laxity of the ligaments. Again this is not clear-cut. A range of studies have looked at the relationship between lax or stiff joints and have concluded that there is no definite link between the degree of laxity and the severity of the symptoms. Some women have a lot of movement in their joints yet do not experience pain, others have severe pain but no significant laxity. However, there does seem to be a link between asymmetry and pain. It seems that the joints need to be equally mobile to function normally (either equally stiff or lax), but that pain is significantly greater where there are distinct differences between the left and right joints<sup>7</sup>. This contradicts the common assumption that hypermobility (very bendy joints) is a major cause of SPD pain. In 1999 a study concluded that the majority of women did not have pain due to laxity but due to mechanical dysfunction<sup>8</sup>.

**Separation of the Symphysis Pubis.** Many women with SPD report that they can feel movement in their symphysis pubis and it would seem logical to conclude that the more the ligament was separated the greater the pain. However four studies have shown that there is no simple relationship between the degree of separation and the magnitude of SPD symptoms<sup>9</sup>. One of these studies measured the degree of separation in three women who had severe and disabling pain, all three measured within the normal range of separation.

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So – what causes SPD and why do some women get it but not others?

Whilst hormones and laxity do undoubtedly play a part it would seem that they alone do not cause pain. In some women however they can lead to a change in mobility in one of the pelvic joints, (basically a weak point somewhere in your system, such as a stiff hip, damage from a previous injury or very bendy joints). This asymmetry of movement through the pelvis puts a strain on the whole system and results in pain. This has implications for the way SPD is treated – if the problem is due to a mechanical dysfunction then it will only get better if this dysfunction is treated, simply having the baby or waiting for it to get better of its own accord is unlikely to help. This completely opposes the traditional "It's your hormones, it will get better when you have the baby" approach. (According to one study<sup>10</sup> only a small sub-set of women have "symphysiolysis" – pain just in the Symphysis pubis due to a true hormonal effect on the ligaments and minimal mechanical dysfunction. Only these women will spontaneously get better after delivery).

Thank you to Lucy Townsend for kindly letting us reproduce her literature review into SPD research for this article. Lucy is a chartered physiotherapist who has lots of experience in treating women with SPD. She holds clinics in Abingdon and the Cotswolds and runs an exercise class for women with SPD. Lucy, together with Clare Woodward and Sarah Fishburn, runs the SPD Workshops for Physiotherapists. We are very grateful for her expertise.

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1 all of these theories have been suggested by various GPs or midwives to women with SPD

2 Hishaw 1926

3 MacLennan et al 1986

4 Bjorkland et al 2000

5 high serum concentrations of relaxin combined with low serum concentrations of PIIINP early in pregnancy indicates an increased risk. Kristiansson et al. 1999

6 Stuesson et al 1997

7 Damen et al. 2001, Bruyuk et al. 1999, Stuesson et al, 2000

8 Hansen et al. 1999

9 Bjorkland et al. 1999, Scriven et al. 1995, Schwartz et al, Wist

10 Albert et al. 2001, supported by finding of Bjorkland et al. 1999

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## Join The Pelvic Partnership

By joining The Pelvic Partnership you will receive our newsletter with all the latest information about how to treat, cope and live with SPD, it also has a list of useful contact numbers, dates of support groups, lectures and events that could be a real benefit to you.

We are a registered Charity run by volunteers and we rely on your donation for our existence. This allows us to pay for regular newsletter production and postage, production, printing and postage costs for our information leaflets for those who do not have internet access, and to improve awareness of SPD among healthcare professionals. Please help us to continue with these activities by joining or making a donation.

### The cost of membership is:

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